AN EMPIRICAL STUDY OF THE IMPACT OF CO-CREATION IN ENHANCING NPD COMPETENCES

A focus on the role of social media in enabling co-creation in consumer goods

A thesis submitted for the degree of Doctor of Philosophy

by

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Declaration

I hereby declare that the thesis is based on my original work, except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Brunel University or other institutions.

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Abstract

The aim of this research is to explore the interconnected relationships between co-creation, NPD and social media. Examining co-creation as a competence enhancing approach to NPD projects, and social media as an enabler of co-creation. The research provides a practical framework guiding the design of social media enabled co-creation experiences, to deliver a high-level impact on NPD competences. The exploratory study conducts an empirical investigation into the consumer goods market (non-durables and semi-durables). It maintains a focus on the meta-theoretical principles of co-creation, providing a mid-range perspective of how to implement these principles in practice.

The methodology involves a single case study with the perspectives of brands and consumers included as embedded units. Data are collected through qualitative interviews and document analysis, and analysed using a combination of content analysis and morphological analysis principles.

The key findings guide the design of effective co-creation experiences. This is achieved through an in-depth knowledge of the fundamental driving and inhibiting factors both brands and consumers face; the specific characteristics of social media that enable co-creation; and several contextual contributions. Additionally, the findings contribute a deep understanding of the high-level relationship between co-creation and NPD competences, and categorise the role of social media in enabling co-creation. The results enrich the existing literature and provide practical contributions to guide the implementation of a co-creation approach in NPD.

Despite the proliferation of the term co-creation since its emergence over a decade ago, a large portion of prior research deviates from the meta-theoretical principles of co-creation. Moreover, there remains a lack of frameworks guiding the implementation of co-creation in a real-life NPD scenario. This study makes an original contribution by exploring the meta-theoretical principles of co-creation in context, contributing a deep understanding of the interconnected relationships between co-creation, NPD and social media, and providing a practical framework to guide the implementation of social media enabled co-creation experiences.

Key words: *Co-creation, social media, New Product Development, Consumer goods industry, Innovation management, Value creation*

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Chapter 1: Introduction

1.1 Background

New product development (NPD) is a critical driver of corporate growth and profitability (Sorescu, Chandy and Prabhu 2003; Wind and Mahajan 1997). New product development is widely regarded as a risky and inexact process (Thomke and von Hippel, 2002) with most new products failing to deliver on their objectives (Christensen 1997). Studies show that the majority of new product concepts do not make it to market, those that do face a failure rate in the order of 25-40% (Crawford, 1987; Cooper, 2001). For every seven new product concepts, roughly four enter development, one and a half are launched, while only one succeeds (Booz, Allen & Hamilton, 1982). Consequently, marketing scholars and practitioners have devoted substantial attention toward improving NPD processes.

Successful NPD relies on a deep understanding of consumer's needs, and product development efforts that meet those needs (Hauser, Tellis and Griffin, 2006). This is characterised by two essential types of information: (1) information about customer needs and (2) information about how best to solve these needs (Thomke and von Hippel 2002; von Hippel 2005). Typically, consumers possess the most accurate and comprehensive knowledge about their needs, whilst organisations possess the most accurate and comprehensive knowledge about how to solve these needs. This disparity is characterised by a condition of information asymmetry, traditional market research methods cannot always identify complex consumer needs and this is often a key factor in new product failure (Ogawa and Piller, 2006; O'Hern and Rindfleisch, 200; von Hippel 2005).

Traditional approaches to new product development (NPD) view the process as an internal, firm-based activity in which consumers are relatively passive users and buyers (OHern and Rindfleisch, 2010). The brand is responsible for creating value, whereas the consumer is merely a recipient of value. Value is embedded in the production process of the value chain, interactions between the brand and consumer are not recognised as a source of value creation, and the consumer and brand adopt distinct roles in the marketplace (Normann and Ramirez, 1994; Wikstrom, 1996; Porter, 1985).

This company-centric system of value creation is being challenged by a new frame of reference for value creation. This signals the core focus of this research, the co-creation of value in NPD. The co-creation paradigm is grounded on the principle that the brand

and consumers should collaborate in the co-creation of value. As vital collaborators in value-creation, markets are characterised by interdependence between brand and consumer in value creation. Production and consumption are inseparable components of value and the market as a whole becomes inseparable from the value creation process (Prahalad and Ramaswamy, 2004).

The growth of the Internet and social media platforms has spurred this shift, changing the role of the consumer from isolated to connected, from unaware to informed, and from passive to active (Prahalad and Ramaswamy, 2004). Consumers now have access to unlimited amounts of information, and the ability to interact with consumers and organisations on a global level (Hoyer et al., 2010). This has provided consumers with a sense of 'empowerment' and they now desire to play a greater role in the process of value creation (Ernst, Hoyer, Krafft and Soll, 2010; Bolton and Saxena-Iyer, 2009). The changing role of consumers signifies that organisations can no longer act autonomously in the creation of value, consumers want to interact with organisations and thereby co-create value (Prahalad and Ramaswamy, 2004).

Alongside this growth of consumer empowerment, the way in which value is both created and perceived is shifting, challenging the foundations of traditional approaches to NPD. This is challenged by the emergence of the service-dominant logic and co-creation paradigm where value is experience-based, and interactions between the brand and consumer are the locus of value creation (Vargo and Lusch, 2006). In the co-creation paradigm, the market is viewed as a forum for co-creation experiences, with the roles of the brand and the consumer converging. The brand and the consumer are both necessary collaborators in creating value, and competitors for the extraction of economic value (Prahalad and Ramaswamy, 2004). In this paradigm, value is not limited to the products or services organisations offer, but the co-creation experience of the consumer itself is the basis of value (Prahalad and Ramaswamy, 2004).

In the forum of NPD, consumers are able and willing to provide ideas for new goods that may fulfil needs that have not yet been met, or might improve on existing offerings (Ernst, Hoyer, Krafft and Soll 2010). By actively involving consumers in the NPD process, new ideas can be generated, risk can be reduced, product quality can be improved and market acceptance increased (Business Wire, 2001). Co-creation in NPD can boost the success of new products; organisations that effectively manage this process can achieve and sustain a competitive advantage over their competition (Prahalad and Ramaswamy, 2004). In addition to delivering superior products, co-creation allows consumers to

construct their own unique experiences, a critical source of value specified in the co-creation paradigm (Prahalad and Ramaswamy, 2002). Both the product and experience are inseparable sources of value and must be co-created together.

Co-creation is built on ongoing and intense interactions between brands and consumers. The growth of social media over the past decade is seen as a key factor in shifting innovation management strategies towards co-creation. The pervasiveness and reach of social media platforms enables brands and consumers to connect and communicate on an unprecedented scale (Hoyer et al., 2010). Brands can leverage the timeliness and immediacy of social media to connect, contact, exchange information, share messages and build relationships with consumers (Kaplan and Haenlein, 2010). By leveraging the features of social media, brands can connect to vast numbers of consumers with the aim of both improving their product offerings and providing valuable co-creation experiences (Kaplan and Haenlein, 2010). Social media can be utilised in co-creation to strengthen the dialogues and connections between consumers and the brand, offer unique experiences, and provide an interactive environment for brands and consumers to co-create value (Gallaugher and Ransbotham, 2010; Kao et al., 2016).

1.2 Research Problem

This study is characterised by three research elements, co-creation, NPD and social media. The research focuses on the relationship between co-creation and NPD and the impact of social media on this relationship. NPD is at the centre of this research – this is the process of developing and delivering a value-proposition to market – and its importance to firm survival and prosperity is widely stressed. Co-creation is viewed as the value maximising approach to NPD, delivering greater value to both brands and consumers through effective products and unique experiences. Social media is regarded as an enabler of co-creation; its ability to foster interaction and engagement has enabled the connecting of brands and consumers on an unprecedented level. The interaction between these research elements, however, is characterised by an incomplete state of knowledge. There is little prior research addressing this area. This research seeks to capture a greater understanding of the interconnected relationships between co-creation, NPD and social media.

A specific focus is placed on NPD in the consumer goods sector (nondurables and semi-durables). This sector is characterised by high rates of incremental innovation and is a sector displaying an increasing trend of brands co-creating with consumers. The specific social media platforms of focus are Digitally Enabled Social Networks (DESNs) and

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Virtual Consumer Communities (VCCs) (collectively referred to as social media). This study seeks to explore the role of co-creation in enhancing brands' NPD competences and the role of social media platforms in enabling co-creation.

As co-creation is built on the premise that the brand and consumer are integral to value creation, it is important to explore this research topic from both perspectives. The term 'brand' is used to refer to an organisation that is responsible for ideating a product concept, developing it and bringing it to market. This is a deliberate choice rather than using the term 'producer'. Brands that deliver product solutions to market often outsource their production processes. However 'brands' maintain control over the direction and strategy of their NPD process, right from the start of the product definition, to the launch and commercialisation of the product. The following discussion outlines the research gap, research aims and objectives, and the structure of this thesis.

1.2.1 Research Gap

This research seeks to explore the interconnected relationships between co-creation, NPD and social media (research elements). Co-creation, NPD and social media have been widely researched as standalone concepts. However, the interaction of the research elements and the potential outcomes of using social media to enable co-creation in NPD are typified by a dearth in the literature. Co-creation is widely supported as the value maximising approach to NPD, enhancing brands' competences and delivering effective product solutions and unique experiences. However, the existing literature is ineffective in detailing how and why co-creation can deliver an impact in NPD. The research gap is signified by a lack of consensus regarding the specific ways that co-creation enhances NPD competences, and how to implement a co-creation approach in an NPD context. The use of a co-creation approach in NPD is termed the 'co-creation-NPD relationship'. This research seeks to explore the co-creation-NPD relationship to contribute to a profound understanding of the specific ways in which co-creation can deliver an impact in NPD. Moreover, a focus is placed on the steps leading to a high-level impact of co-creation on NPD, providing guidance to brands on how to implement a co-creation approach.

When considering the implementation of a co-creation approach, social media is stressed as a key enabler. The literature in respect to social media provides a deep understanding of the structure of DESNs and VCCs and the behaviours of social media users. However, there is a lack of research exploring the link between the features of social media and their impact on the co-creation-NPD relationship. This is signified by a

lack of guidance on the specific features of social media that brands should seek to leverage to positively impact this relationship. Accordingly, this research seeks to contribute a greater understanding of how social media positively impacts the co-creation-NPD relationship. This is driven by the aim to understand how to implement a co-creation approach using social media, and the potential outcomes of this approach.

In order to address this research gap, this study breaks each element into fundamental components, characteristics and factors. This provides the basis on which to explore the specific relationships and impacts between each research element. Moreover, the majority of prior research focuses on this topic at a theoretical level. Whilst this is useful in identifying the relationships between the research elements, this provides little guidance in real-life NPD scenarios. This research places a strong focus on the importance of context, and uses contextual knowledge to explore and understand the relationships between the research elements in real-life NPD scenarios.

1.2.2 Research Aim

The research aim is to explore the role of co-creation in enhancing NPD competences and the impact of social media in enabling co-creation. In addition, this study intends to propose a framework for social media enabled co-creation experiences.

1.2.2.1 Research Objectives

The purpose of this research is to deliver a greater fundamental understanding of the interconnected relationships between co-creation, NPD and social media. The specific objectives of this research are summarised as follows:

1. *To review the literature on NPD, co-creation and social media in the context of value creation, critically examining the various approaches and models used by organisations with the intention to deliver unique products and services to their customers/consumers.*

2. *To develop a framework based on focal theory to explore the design of effective co-creation experiences and the high-level impact of co-creation on NPD.*

3. *To produce a research design, capable of exploring the interaction of co-creation, NPD and social media from both the brand and consumer perspectives in the consumer goods sector*

4. *To conceptualise a practical framework for implementing social media enabled co-creation experiences in consumer goods.*

1.3 Novelty and Contribution

This research adopts a novel stance and contributes to knowledge in the following ways:

- It critically analyses three distinct schools of thought (NPD, co-creation and social media) creating meaningful linkages between existing bodies of literature and exploring their interconnected relationships.

- It extracts generic lists of co-creation factors that impact the decisions of both brands and consumers in respect to participating in co-creation.

- It identifies social media characteristics based on their potential to enable co-creation experiences.

- It designs a conceptual framework to explore the relevance and applicability of generic co-creation factors and social media characteristics, and high-level relationships between the research elements in the consumer goods industry.

- The research design utilises social media in the sampling and collection of data from both the brand and consumer perspectives. This allows data collection on a global level to explore the relevant aspects of the research topic.

- It documents how the various co-creation factors and social media characteristics impact the relationship between co-creation and NPD in consumer goods through a case study approach.

- In line with the meta-theoretical principles of co-creation, the research conceptualises a 'value-creation network', enriching existing value creation theory and signifying the fundamental shift in how value is co-created.

- It proposes a practical framework for the implementation of social media enabled co-creation experiences in the consumer goods industry.

1.4 Thesis Overview

The thesis will be divided into eight chapters (see Figure 1.1). The following is a brief description of the content of each chapter.

Chapter 1 provides an overview of the study, the reason for the study, aims and objectives of the study, and provides a background to the subsequent chapters in the thesis.

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Chapter 2 reviews the relevant literature from a number of sources. This chapter is concerned with mastering the literature in regards to new product development (NPD), co-creation and social media.

Chapter 3 provides a deeper review of specific literature relating to the research elements (NPD, co-creation and social media). In addition, a review of secondary examples of 'brands' co-creating with consumers is used to gain a contextual understanding of the research setting. The outcome of the discussion is a conceptual framework to guide the research. Research questions are used to support the framework in guiding the data collection and analysis.

Chapter 4 provides a detailed discussion of the research design and also the research methodology to be used. In addition to this, the chapter also discusses any issues the researcher had to deal with. The reasons for selecting specific methods of data collection are discussed and the exact data collection instruments are discussed, described and justified.

Chapter 5 is the first chapter to discuss the findings of the research. This chapter discusses and analyses the results regarding the data collected from the brand perspective. The qualitative analysis validates and expands taxonomies of co-creation factors and social media characteristics, and identifies key themes regarding the high-level impacts between the research elements.

Chapter 6 discusses and analyses the results regarding the data collected from the consumer perspective. The main focus of this chapter is validating and expanding the taxonomies of consumer co-creation factors and exploring the data to provide design recommendations to brands regarding effective co-creation experiences.

Chapter 7 provides an in-depth discussion of the implications of the research findings. This includes a focus on the design of effective co-creation experiences, the role of social media in enabling co-creation and the high-level impact of co-creation on NPD. Through mobilising the results of the brand and consumer perspectives, the researcher develops a framework for implementing social media enabled co-creation experiences.

Chapter 8 discusses the conclusions drawn and derived from the findings of the research. Furthermore, the limitations of these findings, as well as the study's

contribution to the literature, are discussed and suggestions will be offered for new directions of future research.

Figure 1.1: Thesis overview

Chapter 1	• Introduction
Chapter 2	• Literature Review
Chapter 3	• Conceptual Framework
Chapter 4	• Research Methodology
Chapter 5	• Analysis: Brand perspective
Chapter 6	• Analysis: Consumer perspective
Chapter 7	• Discussion
Chapter 8	• Conclusions and Reccomendations
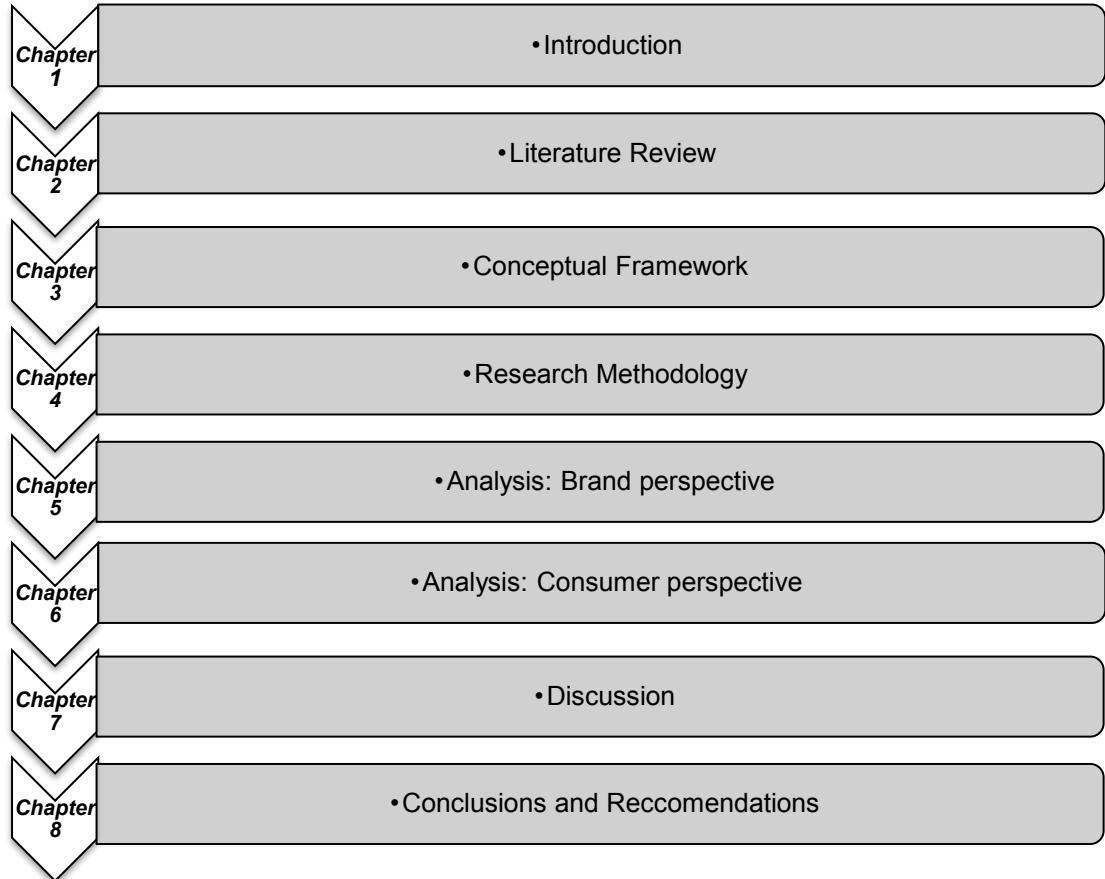
1.5 Summary

This chapter introduced the research topic by describing the background to the study. The research gap was considered, outlining a need for this type of study. The purpose of the study was noted to concern resolving the interconnected relationships between NPD, co-creation and social media, and providing a greater fundamental knowledge of the research topic in hand. The research objectives were outlined, providing direction for the research, and finally the outline of the thesis was explained. The following chapter provides a comprehensive review of the relevant literature upon which this thesis is based.

Chapter 2: Literature Review

2.1 Introduction

The previous chapter introduces the research and in particular three 'research elements' (NPD, co-creation and social media). Of particular significance is the lack of existing research exploring the interconnected relationships between these research elements. Accordingly, this presents significant consequences on the approach to the literature review, as the interaction of these elements is signified by an incomplete state of knowledge.

The aim of the literature review and indeed the research as a whole is to unify these three diverse schools of thought, contributing an in-depth knowledge of the relationships between NPD, co-creation and social media. In respect to the literature review, the aim is to refine and distil what has been done in previous research and develop an in-depth understanding of each research element. To explore the relationships between each element and the research gaps, the literature review attempts to make meaningful linkages between the different areas through an interpretivist philosophy. This approach is effective in both providing the foundational knowledge on which an empirical investigation can be carried out, but also clearly identifies gaps in the existing literature and refines the research direction.

The focus of this research is co-creation, both in its application and impact as an approach to NPD, and the role of social media in enabling this approach. Accordingly, from the onset it is vital to define co-creation to maintain a clear direction and focus of the research. Most recently, Ramaswamy and Ozcan (2018) redefine co-creation to provide a focus for co-creation research to ensure that any enquiry is done so in line with the core principles and theoretical foundations of co-creation. In the context of this research, co-creation is defined as:

> *"Enactment of interactional creation across interactive system- environments [afforded by interactive platforms] entailing agencing engagements and structuring organizations" (Ramswamy and Ozcan, 2018)*

The above definition of co-creation provides a clear focus on 'interactional creation'. A significant notion guiding the literature review is in the fact that whilst the term co-creation has proliferated since its emergence, there is a lack of clarity and consensus about what co-creation actually is (Ramaswamy and Ozcan, 2018). This is evidenced by Ranjan and

Read (2014) who classify 149 co-creation focused papers, 71 of which consider "co-production" only, 46 consider "value-in-use" only, and 32 consider both. The results leading them to posit "value co-creation" as a third-order construct with two dimensions each, viz., co-production and value-in- use. Accordingly, this research focuses on unifying these dimensions with a focus on interactional creation.

Additionally, Vargo and Lusch (2016) call for more mid-range theory development in respect to co-creation to aid with the implementation of the meta-theoretical principles. Accordingly, the literature review focuses on the meta-theoretical principles of co-creation to provide a theoretical foundation on which to base this investigation. The lack of existing theory results in an interpretivist philosophy, with a focus on developing a foundational knowledge of each research element, and a theory building approach by attempting to make meaningful linkages between three distinct schools of thought.

When looking to explore the interaction between co-creation, NPD and social media, it is firstly important to explore the relevant literature to gain an in-depth understanding of each research element. The approaches with which brands engage with consumers and enhance their new product development (NPD) competences are of the upmost importance with regards to this research. The review of the extant literature seeks to build an in-depth understanding of the NPD process. This is vital in defining NPD in the context of this research. Following this, greater consideration is given to how co-creation as an approach to NPD, and social media as an enabler of co-creation, can impact brand competences in respect to NPD.

NPD as a function of innovation is regarded as one of the most important antecedents of firm performance, competitive advantage and ultimately survival. Schumpeter (1942) states:

> *"Innovation strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives." [p.84]*

This stresses the importance of successful NPD for a brand's prosperity. This chapter will firstly define the NPD lifecycle in respect to this research, focusing on the activities and stages that underpin the NPD lifecycle. Additionally, the review of the NPD literature outlines the shifting nature of the brand-consumer relationship and the reasons why co-creation has emerged as an effective approach to NPD.

Following this, the narrative focuses on mastering the co-creation literature. It is widely argued that brands that are able to manage the co-creation-NPD process effectively will ultimately achieve a sustainable competitive advantage (Prahalad and Ramaswamy 2004). This prompts the focus on co-creation as the value-maximising approach to NPD. The review of the literature focuses on building a fundamental understanding of the co-creation approach and the guidance given to brands on how to implement a co-creation approach in NPD.

Finally, the literature pertaining to social media is explored with respect to the role of social media platforms in enabling co-creation. The growth and emergence of social media is regarded as a key factor in shifting innovation management strategies towards a co-creation approach (Hoyer et al., 2010). Moreover, the definition of co-creation at the start of this chapter explicitly states that interactive platforms afford interactional creation. The review of the literature focuses on the characteristics and nature of Digitally Enabled Social Networks (DESNs) and Virtual Consumer Communities (VCCs), and their role in enabling co-creation. The outcome of this chapter is an in-depth understanding of each research element (co-creation, NPD and social media), and an early indication of the interconnected relationships between them.

2.2 New Product Development (NPD)

New product development is an important process in innovation, in which firms transform market opportunities into new products and bring them to market (Ulrich, 2001; Khan, 2013). Introducing successful new products is vital to the growth and prosperity of brands. A survey by the American Product & Quality Centre (APQC) on executive opinion revealed 'enhancing innovation abilities' to be the number one driver of corporate growth and prosperity (Edgett, 2011). However, the NPD process is plagued by high risks and a high probability of failure (Cooper, 1984; Crawford, 1979). The same study reports that just over half (53.2%) of NPD projects achieve their financial objectives, and only 44.4% are launched on time. This stresses the importance of NPD to a brand's competitive performance, but also the difficulties associated with successful NPD.

According to Prahalad and Hamel (1990), firms do not compete on new products, but on the capacity to develop these new products. This view proposes the notion that it is not the product per se which drives firm success. It is the ability to access the most valuable resources and possess the competences to adapt to ever-changing market circumstances (Wernerfelt, 1984; Barney, 1991; Teece and Pisano, 1994). NPD encompasses both internal and external factors relative to a brand, such as capabilities

and competences, know-how, business environment and competition. Successful NPD is vital in creating and maintaining a competitive advantage. This advantage relies on developing distinctive processes that are ultimately shaped by a path dependent approach of asset positions (Barney, 2002; Teece and Pisano, 1994). A firm's innovative ability is based on their ability to obtain and adapt these competences (Fuchs et al., 2000).

NPD in the context of this research is the complete process of bringing a value-proposition to market (Crandall, 2015). The outcome of NPD, i.e. the product, is a set of benefits offered for exchange and can be tangible (something physical which one can touch) or intangible (like a service, experience or belief) (Crandall, 2015). NPD is defined as follows:

> *"The transformation of a market opportunity into a product available for sale"* (Krishnan and Ulrich, 2001).

NPD is characterised by the activities carried out by brands when ideating, developing and launching new products. New product offerings evolve over a sequence of stages, beginning with an initial product concept or idea that is evaluated, developed, tested and launched to the market (Booz, Allen and Hamilton, 1982). As these stages progress, brands becomes increasingly knowledgeable (or less uncertain) about the product and can assess and reassess the decision to undertake development or launch. Effective NPD processes differ between industries and firms; they should be adapted to each brand in order to meet strategies, resources and needs (Booz, Allen and Hamilton, 1982).

The emergence of the co-creation paradigm is deemed to significantly enhance the competences of brands with respect to their NPD efforts. High failure rates and the uncertainty associated with NPD are key factors in focusing on co-creation as an approach to boost the success of NPD. The first stage in exploring the co-creation-NPD relationship is to develop a clear understanding of the NPD lifecycle. This categorises the activities and processes that brands and consumers can and should collaborate on.

2.2.1 NPD Lifecycle

The term NPD lifecycle refers to the series of activities adopted by a brand in generating ideas, developing product concepts and launching product solutions. Co-creation is signified by a collaborative approach to NPD. It is vital to understand the undertakings

and stages that underpin the NPD lifecycle. These represent the activities that both brands and consumers collaborate on when co-creating.

Booz, Allen and Hamilton (1982) state that brands that successfully launch new products are more likely to have a structured NPD lifecycle. A number of models capturing the relevant stages of the NPD lifecycle have been developed over time (Ulrich & Eppinger, 2011; Wind, 2001; Cooper, 2001 & 2011; Crawford, 1987; Scheuing, 1974; Booz, Allen and Hamilton, 1982). A review of the various models of the NPD lifecycle outlines a number of similarities; it appears that most NPD systems encompass a consistent set of basic stages. In the context of this research, the stages of the NPD lifecycle are outlined in Figure 2.1.

Figure 2.1: NPD lifecycle

Figure 2.1 outlines the NPD lifecycle in the context of this research, encompassing the findings of previous literature based on extensive surveys, in-depth interviews, and case studies (Booz Allen and Hamilton, 1982). The following discussion outlines the NPD lifecycle through six stages: Upfront Homework, Ideation, Feasibility, Development, Testing and Launch.

Upfront Homework: The initial stage of the NPD lifecycle is characterised by a thorough market and competitive analysis. This includes research on consumers' wants and needs, concept testing, and technical and operations feasibility assessments (Cooper and Edgett, 2006). This stage explores potential problems and looks to build an early understanding of consumer needs. Khan (2012) proposes that a good understanding of consumer wants and needs, the competitive environment and the nature of the market represents the top required factor for the success of a new product.

Accordingly, this stage includes market research (a consumer needs and wants study to identify requirements for the ideal product, a competitive analysis, and concept testing to confirm purchase intent); detailed technical and manufacturing assessments; and detailed financial and business analyses (Cooper and Edgett, 2006). The upfront homework activities build the requirements for the NPD project, and boost the efficiency of the NPD lifecycle by reducing delays downstream (Cooper and Kleinschmidt, 1994).

Ideation: This stage is characterised by the search for product ideas that are compatible with the goals and objectives of a brand (Booz, Allen and Hamilton, 1982). The systematic search for new product ideas includes self-assessment to determine product categories that are of primary interest. This is vital to discover opportunities and generate new product ideas (Booz, Allen and Hamilton, 1982; Cooper and Edgett, 2010). The fundamental purpose of idea generation is to produce a wealth of ideas; in turn, every idea should be welcomed and initially considered on a 'can do' basis (Booz, Allen and Hamilton, 1982).

Feasibility: This stage involves analysis of the ideas generated in the previous stage to pare these down to those that are worth pursuing. Ideas are envisioned as products in the market and evaluated on their potential contribution (Booz, Allen and Hamilton, 1982). The internal team evaluates the product idea and its scope with the goal of deciding whether the idea is viable and can present a market opportunity (Edgett, 2015). Brands can only afford to develop ideas that possess the greatest potential for success in the market (Booz, Allen and Hamilton, 1982).

Development: At this stage, product ideas that have successfully passed through the prior stages are translated into actual product offerings (Booz, Allen and Hamilton, 1982), through carrying out the plan formulated in the previous stages and building a product prototype (Cooper, 2014). In addition, once the prototype is developed, the product undergoes in-house testing and the manufacturing processes and requirements are mapped out (Cooper and Edgett, 2006). At this stage, the full cross-functional project team (marketing, technical, manufacturing, quality assurance, purchasing, sales and finance) is in place (Cooper and Edgett, 2006).

Testing: The primary purpose of this stage is to test product prototypes and collect feedback to improve prototypes. This seeks to validate the earlier projections associated with new offerings through experimentation (Booz, Allen and Hamilton, 1982). In particular, this includes the verification and validation of the proposed new product, its marketing, and production (Cooper and Edgett, 2006).

The product concepts are readied for market entry by testing to determine market place suitability and to generate feedback regarding product improvements (Booz, Allen and Hamilton, 1982). This is achieved through extensive in-house product testing, consumer field trials or trials in the marketplace, pilot or preproduction trials in the plant, and even

test marketing or a trial sell. The outcome is a fully tested product and production process, ready for commercialisation (Cooper and Edgett, 2006).

Launch: Launch is characterised by the full-scale ramp-up of production, rollout of marketing and promotions, and the introduction of the newly developed product to the market. This stage sees the implementation of the marketing launch plan, the production plan and the post-launch activities, including monitoring and adjustment (Cooper and Edgett, 2006). During this stage, ongoing consumer feedback should be actively sought to ensure products meet the needs of the market and to ensure that product 'bugs' can be identified and remedied (Booz, Allen and Hamilton, 1982).

Whilst the NPD lifecycle may vary from one brand to another, the actions that underpin each of the above stages remain relatively constant across NPD projects. Table 2.1 (overleaf) summarises the six stages of the NPD lifecycle and the key processes involved in each stage.

An understanding of the NPD lifecycle and the various activities that support each stage is vital in creating an in-depth picture of the NPD landscape. From this, greater consideration can be given to the role of co-creation, and the collaboration of brands and consumers in respect to this lifecycle. Moreover, defining the NPD lifecycle provides a systematic framework on which the impact of the co-creation paradigm can be explored.

Table 2.1 NPD lifecycle

NPD Stage	Activity	Description
Upfront Homework	Initial screening	• The initial go/no go decision where it is first decided to allocate funds to the proposed new product idea
	Preliminary market assessment	• An initial, preliminary, but non-scientific, market assessment; a first and quick look at the market
	Preliminary technical assessment	• An initial, preliminary appraisal of the technical merits and difficulties of the project
Ideation	Self-assessment	• Self-assessment to determine product categories of interest
	Idea generation	• Discovery and uncovering of business opportunities and generation of new ideas • Solicit ideas from any source to produce a wealth of ideas
Feasibility	Detailed market study, market research	• Detailed investigation involving primary research (customer, market and technical)
	Business/financial analysis	• Financial or business analysis leading to a go/no go decision prior to product development
	Screening and evaluation	• Evaluation of potential products on their potential to contribute/those with the greatest potential
Development	Product development	• The actual design and development of the product, resulting in a prototype or sample product
Testing	In-house product testing	• Testing the product in the lab or under controlled conditions (as opposed to in the field or with customers)
	Customer test of product	• Testing the product under real-life conditions, e.g. with customers and/or in the field
	Test market/trial sell	• Trying to sell the product but to a limited or test set of customers
	Test production	• A trial production run to test the production facilities
Launch	Pre-commercialisation analysis	• A financial or business analysis, following product development but prior to full-scale launch
	Production start-up	• The start-up of full-scale or commercial production
	Market launch	• The launch of the product, on a full-scale and/or commercial basis: an identifiable set of marketing activities specific to this product

Source: Cooper and Edgett (2006); Booz, Allen and Hamilton (1982); Cooper and Kleinschmidt (1986); Edgett (2011 & 2015)

2.2.2 NPD Critical Success Factors

The initial discussion of NPD focuses on the activities involved in taking an idea and translating it into a commercial product. Following this, an important aspect of NPD in relation to the research aim is an understanding of the factors that underpin NPD success. This research focuses on the role of co-creation and social media in impacting NPD competences. Implicit in this is that the use of social media to enable co-creation experiences is likely to deliver a competitive impact for the results of NPD. As a consequence, it is vital to determine the fundamental factors that determine NPD success. Following this, the ways in which co-creation and indeed social media can contribute to this can be explored.

Over the last two decades, several studies have examined the determinants of NPD success and identified many factors that distinguish successful products from unsuccessful ones. Factors that are necessary and guarantee commercial success are termed as critical success factors (CSFs). Brands must understand how they can benefit from NPD CSFs and how they can be translated into an operational aspect of the NPD process. Daniel (1961) and Rockart (1979) propose that organisations need to identify factors that are critical to the success of that organisation, and they suggest that the failure to achieve goals associated with those factors would result in organisational failure.

In fact, it is even suggested that NPD itself is a CSF for many organisations. Given this, the idea is to determine what factors in NPD are essential for success, and how to measure the extent of this success. The challenge is to design a process for successful product development, whereby new product projects can move quickly and effectively from the idea stage to a successful launch and beyond. It is important to identify critical success factors of NPD outlined in the literature in order to understand how and where consumers can contribute value through co-creation. Reengineering the NPD process is an ongoing challenge faced by brands as they seek to improve their new product success rates and improve the efficiency of the process (Cooper and Kleinschmidt, 1995).

The review of NPD CSFs is prompted by the significance of product innovation in business strategy and the poor innovation results exhibited by many firms (Khan, 2012). Understanding the factors that underpin NPD success is central to the management of the NPD lifecycle and approach. This is particularly relevant, as the research will seek to explore the role of co-creation in enhancing NPD competences, and boosting NPD success.

The review of NPD CSFs centres on those that are most relevant for managing individual new-product projects (project level). A focus is maintained on the impact of co-creation in delivering a tangible end product, rather than as an organisation-wide approach to NPD. An understanding of the impact of co-creation at the project level provides the foundation on which a co-creation approach can be adopted across organisations as a whole.

Cooper (2013,2017 & 2018) outlines eight critical success drivers that distinguish successful new products from unsuccessful ones at the project level. These are outlined in Table 2.2 below, and discussed thereafter:

Table 2.2: Critical success drivers of NPD

NPD CSFs	
Critical Success Driver	**Description**
Striving for unique superior products	A differentiated product that delivers unique benefits and a compelling value proposition to the customer or user—is the number one driver of new product profitability.
Creating market-driven products and building in the voice of the consumer (VoC)	A market-driven and customer-focused new product process—is critical to success.
Predevelopment work – the homework	Doing the homework and front-end loading the project is key to success: due diligence done before product development gets underway pays off!
Sharp, early, stable and fact-based project and product definition	Getting sharp and early product and project definition and avoiding scope creep and unstable specs—means higher success rates and faster to market.
Spiral development – build, test, feedback and revise	Build, test, obtain feedback and revise—putting something in front of the customer early and often gets the product right.
The world product – a global orientation	A global or 'glocal' product (global concept locally tailored) targeted at international markets—is far more profitable than the product designed to meet one-country needs.
Planning and resourcing the launch	A well-conceived, properly executed launch is central to new product success. As is a solid marketing plan at the heart of the launch.
Speed	There are many good ways to accelerate development projects, but not at the expense of quality of execution.

Source: Adapted from: Cooper (2013, 2017 & 2018)

Striving for unique superior products: Delivering unique and valuable products is vital in separating winners from losers, and is regarded as the most significant CSF of new

product success (Cooper, 2017). Superior products have five times the success rate, over four times the market share, and four times the profitability of 'me too', copycat, reactive, and ho-hum products with few differentiated features (American Productivity & Quality Center, 2003; Cooper, 2011; Cooper, Edgett, and Kleinschmidt, 2003; McNally, Cavusgil, and Calantone, 2010).

The performance of a superior product lies in a product advantage, this refers to the consumer's perception of product superiority in regards to quality, cost-benefit ratio, or function relative to competitors (Cooper and Kleinschmidt, 1995). The antecedents of a product advantage include product meaningfulness (the benefits that consumers receive from buying and using a product) and product superiority (the extent to which a new product outperforms competing products) (Rijsdijk, Langerak, and Jan, 2011). Cooper (2013) outlines the key features of superior products as:

- Being good value for money for the consumer, reducing the consumer's total costs (high value in use), and possessing excellent price/performance characteristics.

- Providing excellent product quality relative to competitors' products and in terms of how the consumer perceives quality.

- Being superior to competing products in terms of meeting consumers' needs, offering unique features not available on competitive products or solving a problem the consumer has with a competitive product.

- Offering product benefits or characteristics easily perceived as valuable by the customer and benefits that are highly visible.

The significance of superior products as the most significant CSF of NPD is supported by an AQPC benchmarking study (2003). The results demonstrate that the best performing organisations are much stronger in terms of offering important benefits, a superior value proposition, and better value for the consumer in their new products (see Figure 2.2, overleaf) (American Productivity & Quality Center, 2003; Cooper, Edgett, and Kleinschmidt, 2003).

Figure 2.2: The number one driver of new product success
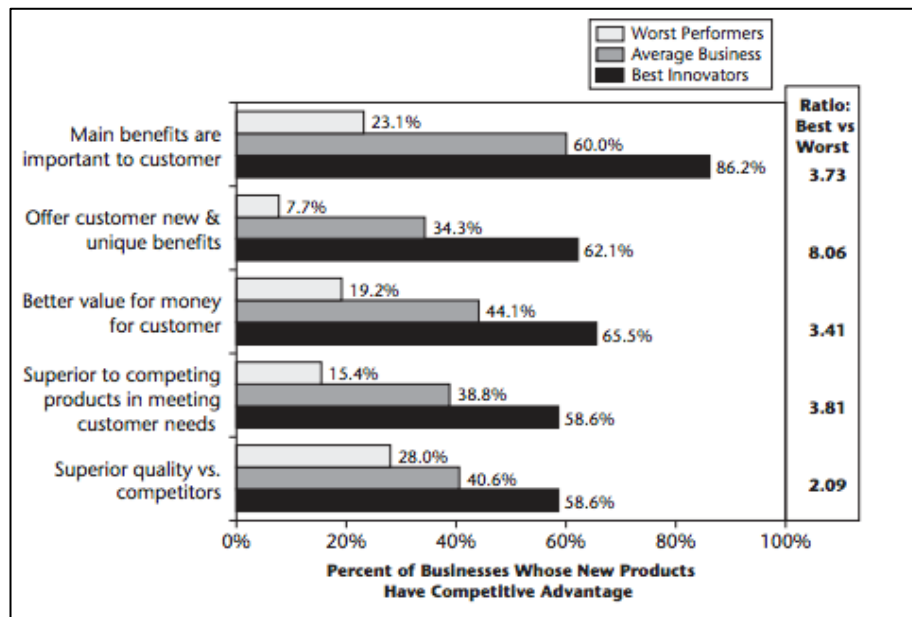
The 'best performers' were identified as organisations whose product innovation performance results were superior over a number of metrics: new product profitability, meeting sales and profit objectives, time efficiency and on-time performance, and the ability to open up new windows of opportunity (Cooper, 2011). In effect, these metrics are the ingredients of a superior product (Cooper, 2013).

Creating market-driven products and building in the voice of the customer (VoC): It is widely recognised that successful NPD resides in a deep understanding of consumers' needs and wants, the competitive situation, and the nature of the market (Khan, 2012). A strong customer focus is regarded to improve success rates, profitability and reduce time to market (Cooper and Edgett, 2002).

In order to incorporate the voice of the customer, Griffin and Hauser (1996) propose the following best practices:

- *Idea generation:* The best ideas are regarded as coming from consumers. Accordingly, brands should implement market-oriented idea generation activities. This includes focus groups and VoC research (ethnography, site visits) to determine consumers' generic needs and/or their problems, leading to superior ideas (Cooper and Dreher, 2010).

- *The design of the product:* Determine consumer needs prior to the design of the product. Conduct VoC research (user needs-and-wants study) to inform the product design (Cooper, 2017). By incorporating the voice of the consumer, the brands

internal team will have a clear picture of the products consumers truly desire, and the product can be designed accordingly.

- *Prior to development*: Test the product concept with the consumer by presenting a representation of the product—via models, mock-ups, protocepts, computer-aided design (CAD) drawings, and even virtual prototypes. Adopt a test and learn approach prior to development (this is much cheaper) and gauge the consumer's interest, liking and purchase intent (Cooper, 2011).

- *Throughout the entire NPD lifecycle:* Stay close with the consumer and iterate throughout the NPD lifecycle. Bring the consumer into the process to review facets of the product via a series of concept tests, rapid prototyping and tests, consumer trials, and test markets, verifying all the assumptions about the product design (Cooper, 2013).

Predevelopment work – the homework: This CSF promotes the need to ensure that an NPD project is well informed, through extensive research. An array of studies reveal that the steps prior to the actual product design and development make the difference between winning and losing (Cooper, 2011, Edgett, 2011). Successful organisations spend around twice as much time and money as unsuccessful organisations as a percent of total project costs on the following front-end activities (Cooper, 2013 & 2017):

- Initial screening—the first decision to begin the project (the idea screen)

- Preliminary market assessment—the initial market study

- Preliminary technical assessment—the first and quick technical appraisal of the project

- The detailed market study, market research, and VoC research

- The business and financial analysis just before the decision to go to development

Investing in early stage activities (front-end loading the project) ensures that no significant project moves into the development stage without the actions listed above (Morgan, 2005). The result of this is a higher likelihood of product success, a better project definition and a reduction in the overall time from idea to launch (Cooper, 2013).

Sharp, early, stable and fact-based project and product definition: A well-defined project and product (prior to the development stage) is a major success factor. This is deemed to impact positively on both profitability and speed-to-market (Cooper, 2011). A well-defined project and product eliminates the risk of project scope creep and unstable product specs. The key components of a product definition include (Cooper, 2013):

- Definition of the project's scope (e.g., domestic versus international; line extension versus new product, item versus platform development).

- Specification of the target market: exactly who the intended consumers are.

- Description of the product concept and the benefits to be delivered to the consumer (including the value proposition).

- Delineation of the positioning strategy, including the target price.

- A list of the product features, attributes, requirements and specifications.

Building a definition places greater emphasis on the front-end (homework activities) and serves as a guide for the cross-functional teams involved in the project. Moreover, a clear definition provides clear objectives on which the development stage can be assessed (Cooper, 2011).

Spiral development – build, test, feedback, and revise: Spiral development refers to an iterative approach to NPD whereby a series of loops are built into the process to seek feedback from consumers (Cooper, 2006). These loops ensure the product prototype meets consumer needs (Cooper, 2011). In essence, this denotes an approach whereby the brand stays close to consumers throughout prototype development to ensure the product prototypes are verified by consumers and evolve through consumer feedback. This highlights the notion that consumers may not be able to articulate what they want, or in fact do not know what they're looking for until they see or experience it (Cooper, 2013). However, their input and feedback is vital in ensuring effective product solutions are developed. This iterative approach proposes the following series of loops (Cooper, 2011):

- Build something: even if it's only a model or representation of the product.

- Test it: get it in front of the consumer and gauge interest, preferences and purchase intent, likes and dislikes.

- Get feedback: find out the consumer's reactions first hand and, most importantly, what must be fixed or changed.

- Revise: update the product definition based on this feedback, and get set for the next iteration of build-test-feedback-and-revise, but this time with a product version one-step closer to the final product.

The world product – a global orientation: Cooper (2013) states: 'The world is the business arena today'. Consequently, corporate growth and profitability depend on a globalisation strategy married to product innovation. In global markets, product development plays a principal role in achieving a sustainable competitive advantage (Kleinschmidt, de Brentani, and Salomo 2007). Most commonly, multinational organisations that take a global approach to NPD outperform those that concentrate their research spending in their home market (de Brentani and Kleinschmidt, 2004; de Brentani, Kleinschmidt, and Salomo, 2010; The Economist, 2008; Kleinschmidt, de Brentani, and Salomo, 2007).

This implicates that NPD objectives must focus on designing for the world and marketing to the world (Cooper, 2011). The market is defined as an international one, resulting in global products (one version for the entire world) or a glocal product (one development effort, one product concept or platform, but perhaps several product variants to satisfy different international markets) (Cooper, 2013 &2017). This signifies the undertaking of VoC research, concept testing, and product testing in multiple countries, launching in multiple countries concurrently or in rapid succession, and relying on a global project team (de Brentani, Kleinschmidt, and Salomo, 2010; Kleinschmidt, de Brentani, and Salomo, 2007).

Planning and resourcing the launch: An effective product launch is strongly linked to new product profitability, and effective after-sales service is essential to the successful launch of the new product (Di Benedetto, 1999; Montoya-Weiss and Calantone, 1994; Song and Parry, 1996). Brands should avoid the assumption that good products sell themselves, and not underestimate the importance of the product launch (Cooper, 2013).

A cohesive and properly targeted launch is the result of a fine-tuned marketing plan, properly supported, resourced and executed (Cooper, 2011). There are five requirements for an effective market launch plan (Cooper, 2017):

1. The development of the market launch plan is an integral part of NPD. It is as essential to the new product process as the development of the product itself.

2. The development of the market launch plan must begin early in the NPD project. It should not be left as an afterthought to be undertaken as the product approaches commercialisation.

3. A market launch plan is only as good as the market intelligence upon which it is grounded. Market studies intended to yield information crucial to marketing planning must be built into the NPD project.

4. The launch must be suitably resourced—in terms of both headcount and money.

5. The people responsible for executing the launch should be engaged in the development of the market launch plan. This ensures valuable input and insight into the design of the launch effort, readiness of resources when needed, and buy-in by those who execute the launch—elements critical to a successful launch (Hultink and Atuahene-Gima, 2000).

Speed – but not at the expense of quality of execution: Speed is widely acknowledged to yield a competitive advantage. The first product on the market means less likelihood that the market or competitive situation has changed. This results in quicker realisation of profits (Cooper, 2013). Whilst it is important to reduce the development cycle time (speed and profitability are connected) brands must ensure that the method used to reduce the development time are not at odds with sound management practices (Cooper and Edgett, 2002; Crawford, 1992). An over emphasis on speed can lead to the trivialisation of product development, too many product modifications and line extensions and not enough 'real' new products (Cooper, 2005). Sound principles in order to reduce time to market include (Cooper, 2017):

- Do the front-end homework and develop early and stable product and project definitions based on facts rather than hearsay and speculation.

- Build in quality of execution at every stage of the project. The best way to save time is to avoid having to cycle back and do it a second time.

- Employ effective cross-functional teams:

    "Rip apart a badly developed project and you will unfailingly find 75 percent of slippage attributable to: 'siloing' or sending memos up and down vertical organizational 'silos' or 'stovepipes' for decisions; and sequential problem solving" (Peters, 1988).

- Use parallel processing: The relay race, sequential, or series approach to product development is out-dated and unsuitable for today's fast-paced projects.

- Use spiral development, e.g. build-test-feedback-revise iterations.

- Prioritise and focus – undertake fewer projects but higher-value ones. Focus resources on the truly deserving projects. Not only will the work be done better, it will be done faster.

The NPD CSFs discussed above provide a clear description of the criteria underpinning NPD success. This provides the baseline knowledge upon which the role of co-creation in enhancing NPD competences can be explored. Whilst co-creation represents an altogether new approach to NPD, the factors that underpin NPD success are likely to remain constant irrespective of the innovation management approach. As a result, when considering successful NPD, brands should seek to adopt an approach that supports the attainment of goals associated with each NPD CSF, in the pursuit of new product success. In this vein, the current study must seek to explore the role of co-creation in not only enhancing NPD competences, but explore any potential link with the NPD CSFs.

2.2.3 Innovation Management Approaches to NPD

The discussion to this point outlined the NPD lifecycle and the factors that underpin NPD success. This narrative now explores the reasons as to why traditional approaches to NPD are no longer considered effective, and the underlying factors in shifting innovation management approaches towards co-creation.

Innovation management aims to help organisations grasp an opportunity and use it to create and introduce new ideas, processes, or products (Kelly and Kranzburg, 1978). In the context of this research, the term innovation management (IM) is used to refer to a brands approach to an NPD project. The goal of said project is to develop new concepts and successfully bring them to market (Trott, 2008). Evolving business environments and technological breakthroughs, amongst other factors, have led to a number of contrasting perspectives regarding approaches towards NPD.

The core practice of successful innovation management is managing the uncertainty surrounding the NPD process. Thomke and Von Hippel (2002 & 2005) describe the process as 'risky' and 'inexact'. Thomke (2003) identifies the uncertainties of innovation as: technical, production, need and market uncertainty. In order to reduce these uncertainties, i.e. successfully innovate, brands must access and transfer multiple types of information (Cassiman and Veugelers, 2006). Successful NPD requires two types of information: (1) information about customer needs, and (2) information about how best to solve these needs by utilising technology (Piller and Ihl, 2009). Typically, the solution information regarding customer-needs resides with consumers, and the solution

information (technical) on how to solve these needs resides with brands. This information asymmetry plays a large role in the success or failure of new products. The efficiency of the NPD process is in accessing the solution information and tailoring innovative solutions to meet these requirements.

Ideally, approaches to innovation management are proactive, acting on the future needs of the market whilst utilising the most up-to-date technologies. This approach requires an abundance of solution information, both technical and consumer-need. Conventionally, brands sought to access this information through traditional market research where brands shared iterative communications with a minority of consumers who they believed to be representative of the majority of the market. However, early discussion of the NPD literature outlines the high failure rates associated with NPD (products that make it to market face a failure rate in the order of 25-45%, Crawford, 1987; Cooper, 2001). This suggests that traditional methods are ineffective in providing brands with access to valuable information, in reducing the uncertainty surrounding the needs of consumers, and ultimately in delivering successful products.

The final attention of this discussion contrasts closed and open approaches to NPD, while outlining the underlying reasons for the growth of the co-creation paradigm.

2.2.4 Traditional Approaches to NPD

This discussion highlights contrasting approaches to NPD, focusing on the changing nature of NPD, the marketplace and the brand-consumer relationship. Early models of NPD focus on the firm creating value through internal competences and capabilities. Von Hippel (2005) states:

> *"The idea that novel products and services are developed by manufacturers is deeply ingrained in both traditional expectations and scholarship"* (von Hippel, 2005).

This approach is termed the 'manufacturer active paradigm', employing a 'speak only when spoken to' approach to consumers (Von Hippel, 1978). In this paradigm, the brand and the consumer are considered as two separate entities with the brand acting autonomously in developing new products and processes. The consumer's role only becomes apparent at the point of exchange, as a recipient of value (Prahald and Ramaswamy, 2004). Kotler (2002) argues that the market, as a locus of exchange, is

separate from the value creation process. This is defined as (Prahalad and Ramaswamy, 2004):

"A locus of exchange where firms trade goods with consumers".

The traditional view of the market is outlined in Figure 2.3 (below). In this 'traditional' market structure, the brand and the consumer are separate entities. The brand is responsible for creating value, whereas the consumer is merely a recipient of value. Value is embedded in the production process of the value chain, interactions between the brand and consumer are not recognised as a source of value creation (Normann & Ramirez, 1994; Wikstrom, 1996; Porter, 1985).

Figure 2.3: The traditional view of markets
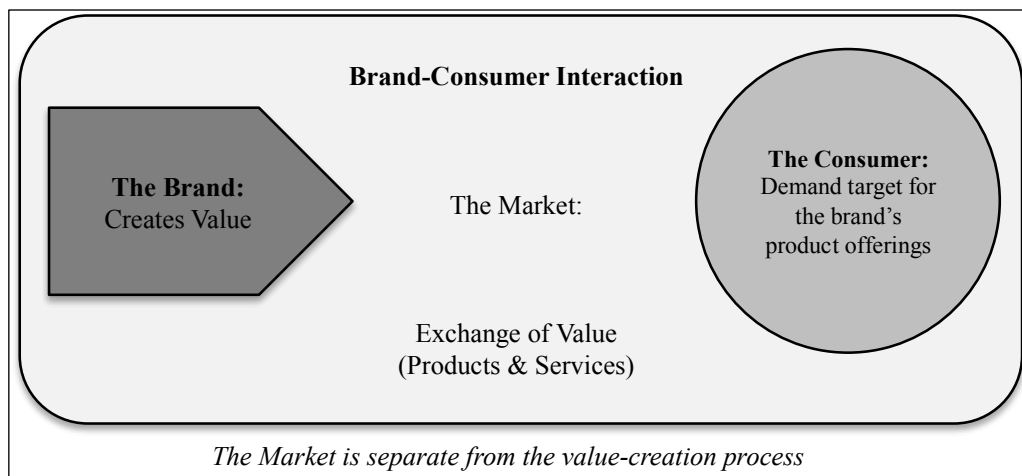
Source: Adapted from: Prahalad and Ramaswamy (2004)

The traditional view of markets exhibits a one-way relationship in terms of value from brand to consumer. Studies carried out by Hamel and Prahalad (1994), and Christensen (2003), suggest that listening to the consumer might actually stifle technological innovation, with consumers *'notoriously lacking in foresight'* (Hamel and Prahalad, 1994). Christensen (1997) highlights that this is evident especially in the case of 'disruptive innovations' that represent technologies. This is due to their radical nature and the consumer's lack of technological knowledge.

Chesbrough (2003) termed the traditional innovation process as 'closed'. This propriety model takes the view that internal R&D leads to products and services that are developed and distributed by the firm (Chandler, 1990). The traditional 'closed process' is based on the view that innovation requires control (Chesbrough, 2003). In this paradigm, the brand

is self-reliant and innovative success is seen as a combination of internal factors. The logic behind this is embodied below (Chesbrough, 2003):

"If you want something doing right, do it yourself."

Closed innovation models are built on a foundation of R&D and technological breakthrough with little or no market focus. This firm-centric approach relies exclusively on internal competences to develop new products. Harvard President James Bryant Conant (2002) proposed that the way to manage this process was:

"*Picking a man of genius, giving him money, and leaving him alone."*

This Schumpeterian view of technological breakthrough or 'creative destruction' represents a dated view on innovation. Figure 2.4 (below) displays Chesbrough's virtuous circle framework, illustrating how the closed approach is managed:

Figure 2.4 Chesbrough's virtuous circle
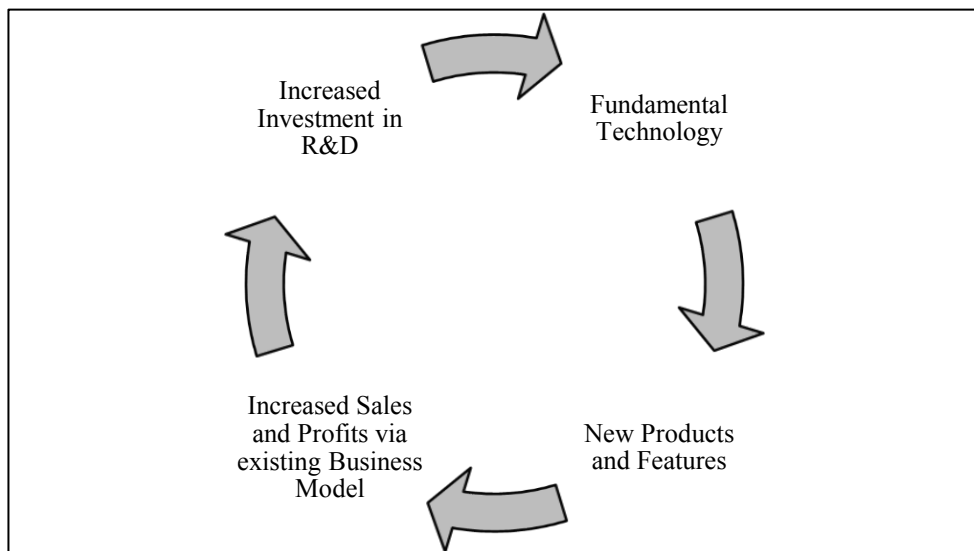
Source: Adapted from: Chesbrough (2006)

Chesbrough's framework denotes a focus of investing in internal R&D; this is considered the source of technological breakthrough. These discoveries allow brands to bring new products and services to market, increasing sales and margins, in turn allowing more capital. The result is ongoing investment in R&D and more breakthroughs. Intellectual property is assigned to technological breakthroughs, and as a result, competitors are unable to exploit these technologies (Chesborough, 2006).

Although this framework presents a simplified approach to NPD, it is effective in illustrating the key notion behind closed innovation. There is no recognition or link to any external bodies in this framework. In this framework, R&D is at the hub of introducing novel products. This framework was successful for much of the 20th century, however, changes in the business environment towards the end of the 20th century resulted in several factors 'eroding' the foundations of the closed innovation approach. Accordingly, these include: increased mobility of skilled labour, the growing presence of private venture capital, and increasingly fast times to market for innovations (Chesbrough, 2003). The existence of 'erosion' factors break the circle and closed innovation is no longer sustainable. The breakdown of the closed innovation paradigm spurred increasing recognition of the value of external resources and knowledge, and the growth of open approaches to NPD.

2.2.4.1 Limitations of traditional approaches to NPD

The traditional NPD paradigm generally views consumers as passive bodies who depend on brands to satisfy their needs (Carpenter, Glazer, and Nakamoto 1994; Simonson, 2005). Traditionally, consumers lacked the technical skills and knowledge required in NPD (Christensen, 1997; Randall, Terweisch, and Ulrich, 2005; Simonson, 2005). However, successful NPD is centred on a deep understanding of consumer needs. Hauser et al., (2006) state that:

> *"Successful innovation rests on first understanding customer needs and*
> *then developing products to meet those needs." [p.3]*

Under the traditional (closed) NPD approach, brand-consumer interactions are a function of marketing, and needs are assessed through techniques such as focus groups and retrospective feedback. A key criticism of the traditional NPD approach is the inability of traditional market research to accurately identify and portray consumer needs. Large numbers of new product failures are attributed to brand inability to accurately measure and meet these needs (Ogawa and Piller, 2006).

Studies have shown that a brand's inability to successfully introduce new products is due to a lack of a market understanding and orientation (Drew, 1995; Martin and Horne, 1995). In a Booz Allen Hamilton survey of European senior executives, almost half highlighted that they were dissatisfied with their company's innovative performance. Of particular concern was NPD success, and hit-to-miss ratio. Out of 12 potential steps their

firms could take to improve their success, they ranked 'understanding their customers better' as the most important step to maximise the value of innovation in the NPD process (Jaruzelski et al., 2005).

Von Hippel (2005) argues that whilst consumers possess 'high fidelity' (complex) needs, traditional market research methods often provide firms with a 'low fidelity' (cursory) signal of consumers' wants or needs and are largely ineffective. Consumer needs are often idiosyncratic and tacit in nature. These 'high fidelity' needs are hard for the consumer to accurately articulate, and it is often difficult for brands to accurately measure and implement coherent solutions (Franke and Piller, 2004; Simonson, 2005). This inability to understand or access the information regarding consumer needs is a key limitation of the traditional NPD approach. The apparent lack of information regarding consumer needs or the inability of traditional methods in capturing this information suggests that external input is required to drive NPD success.

2.2.5 Open Innovation Approaches to NPD

The limitation of 'closed' approaches coupled with changes to business environments has led to a rise in the growth of 'open' approaches to NPD. A notable shift occurred as a result of the growth of Web 2.0 and social media technologies in enabling 'a global marketplace'. Consequently, previous barriers such as time and distance are no longer relevant, and consumers are now empowered to communicate, quickly form and change their opinions, and ultimately define brands by themselves (Pires et al., 2006). The digital era has redefined consumption, transforming consumers from a passive recipient of value to an empowered group, seeking greater input and control of the NPD process (Law et al., 2003, Seybold, 2006).

The open innovation paradigm focuses on integrating external knowledge into innovation processes and architectures. Early work by von Hippel (1998) classifies users as 'innovators'. This recognises the benefits of incorporating external bodies, sources such as consumers, rivals and universities into the NPD lifecycle. This is signified by the consumer-active paradigm (CAP). The CAP necessitates the role of the consumer as an active contributor in NPD, particularly in the idea generation stage (von Hippel, 1978). This extends to interaction with 'lead users' who are representative of the needs of the general marketplace (von Hippel, 1986).

Open innovation is the antithesis of the closed model as it recognises that a brand can and should maximise their innovative activities by loosening their control over the

process (Chesbrough, 2003, 2006). West and Gallaugher (2006) define open innovation as:

> *"Systematically encouraging and exploring a wide range of internal and external sources for innovation opportunities, consciously integrating that exploration with firm capabilities and resources, and broadly exploiting those opportunities through multiple channels."* [p. 320]

This approach is driven by the actions of enhancing a brand's asset position and competences in respect to NPD. In an open system, the innovation process can be seen as continuous interaction between the brand and external users (periphery). The aim of which is to enlarge the knowledge base of the firm (Allen, 1983; Berthon et al., 2007; Blazevic and Lievens, 2008; Brown and Eisenhardt, 1995; Chesbrough, 2003; Freeman and Soete, 1997; Reichwald and Piller, 2009; Szulanski, 1996). This approach denotes that both internal capabilities and openness towards knowledge sharing are important for increasing innovative performance (Caloghirou et al., 2004).

Closed approaches are characterised by the risk of 'local search bias', as only information possessed by the brand can be used as creative input for the innovation process. In an open system, the need and solution information can be accessed from both the internal knowledge base and external sources, and this risk is eliminated (Lakhami et al., 2007; Stuart and Podolny, 1996).

Table 2.3 (overleaf) summarises a number of common advantages and disadvantages associated with open innovation approaches towards NPD. These include the value of accessing external information, cost reductions, marketing advantages and productivity gains (West and Gallagher, 2006). The disadvantages are mainly concerned with the issue of secrecy, the complexity of managing open innovation approaches and the risk of loss of control.

Table 2.3: Open innovation advantages and disadvantages

Open Innovation	
Advantages	**Disadvantages**
• Reduced cost of conducting research and development • Potential for improvement in development productivity • Incorporation of customers early in the development process • Increase in accuracy for market research and customer targeting • Potential for synergism between internal and external innovations • Potential for viral marketing	• Possibility of revealing information not intended for sharing • Potential for the hosting organisation to lose their competitive advantage as a consequence of revealing intellectual property • Increased complexity of controlling innovation and regulating how contributors affect a project • Devising a means to properly identify and incorporate external innovation • Realigning innovation strategies to extend beyond the firm in order to maximise the return from external innovation

Source: Adapted from: West and Gallagher (2006); Schutte et al. (2010)

Table 2.3 outlines the various recognised strengths and criticisms of the open innovation approach. The growth of the open innovation approach is linked to changing market characteristics and trends. This evolution (from closed to open) signifies the need for brands to adapt their approach to NPD in response to changes in the business environment.

Understanding the basic principles of the open innovation paradigm is vital in laying the groundwork to explore co-creation. In effect, co-creation is an open approach to NPD, albeit the value and reliance of the brand on external sources (consumers) is significantly greater. The term 'periphery' has been used to describe external parties in respect to NPD. However, a trend towards a greater dependency on external sources is now seeing consumers as an integral and necessary component of successful NPD (Prahalad and Ramaswamy, 2004).

The integration of consumers into NPD processes aims to increase the solution information and reduce market uncertainty (Piller and Ihl, 2009). Nambisan (2002) identifies three consumer contribution roles in NPD: as a resource, as a co-creator and as a user. As a resource, consumers contribute to the ideation stage, identifying and evaluating opportunities for new ideas. As a co-creator, consumers design and improve product offerings. Finally as a co-marketer, consumers support the ramp up and rollout stages of commercialisation (Nambisan, 2002).

Additionally, Chesbrough et.,Al. (2014) recognise the importance of external channels in taking internal ideas to market (downstream), with both internal and external paths being held at the same level of importance. This signifies the potential for consumers to be involved in both the upstream stages (upfront homework, ideation, feasibility, development) and the downstream stages (testing and launch) of NPD. The open innovation paradigm recognises the value of increasingly active and empowered consumers to NPD. This is apparent through the emergence of consumer value chain involvement (CVCI). CVCI is the competitive experience of co-creating the product with an organisation, with the consumer co-producing and co-owning the process (Prahalad and Ramaswamy, 2003; Lengnick-Hall, 1996).

Typically, value chain studies begin with a review of assets and capabilities and end with customer requirements (Oswald et. al., 2004). A CVCI approach prioritises consumer's wants and needs, in turn dovetailing its assets and capabilities to fit customer requirements (Oswald et. al., 2004). Moreover, consumers can be used to increase a firm's assets and capabilities. This state-of-the-art approach introduces a 'designing with x' methodology to maximise value and new product success. This signifies a downstream shift in power, whereby consumers are involved throughout the product value chain to reduce market uncertainty and increase the success of new products (Ishii, 2001; Herrmann et al., 2004). CVCI builds on the notion that consumers should be exposed to the brand's value chain with the key difference that the consumers actively participate with all players and stages of the value chain (Oswald et Al, 2004).

An additional consideration is the focus of the open innovation literature in respect to the importance of devices/platforms that provide access and communication between brands and consumers. Ease of interaction and communication is considered beneficial to open innovation processes (Chesbrough, 2003). This was corroborated by von Hippel (2005), who describes web 2.0 technologies as 'democratizing' NPD. This presents the early foundations on which the suitability and role of social media in enabling co-creation can be explored. The transition from 'designing for consumers' (closed) to 'designing with consumers' (open) is evident through the ease of communication facilitated by social media (Sigala, 2012). The ongoing growth of social media is likely to have a significant impact on the ways brands approach their NPD projects both now and in the future.

The above discussion on approaches to NPD considered the contrasts between closed and open approaches, and outlined the fundamental reasons behind the shift. Brands are now operating in a fast-paced global marketplace. They need to be flexible in terms

of their innovation processes and they need to utilise external sources. The emergence of the co-creation paradigm is a significant evolution of the open innovation approach. This discussion laid the groundwork in understanding how consumers, co-creation and social media impact value-creation in NPD. Table 2.4 provides a summary of the key principles of the closed and open approaches.

Table 2.4: Contrasting principles of closed and open approaches to NPD

Contrasting Principles of Closed and Open Innovation	
Closed Innovation Principles	**Open Innovation Principles**
• The smart people in our field work for us • To profit from R&D, we must discover it, develop it, and ship it ourselves • If we discover it ourselves, we will get it to market first • The company that gets the innovation to market first will win • If we create the most and the best ideas in the industry, we will win • We should control our IP, so that our competitors don't profit from our ideas	• Not all the smart people work for us. We need to work with the smart people inside and outside our company • External R&D can create significant value; internal R&D is needed to claim some portion of that value • We don't have to originate the research to profit from it • Building a better business model is better than going to market first • If we make the best use of internal and external ideas, we will win • We should profit from others' use of our IP, and we should buy others' IP whenever it advance our own business model

Source: Adapted from: Chesbrough (2003, 2014 & 2017)

2.2.6 NPD Summary

The initial review of the NPD literature defined NPD in the context of this research. It categorised the stages of the NPD lifecycle and identified the factors that underpin NPD success. Following this, emphasis was placed on exploring the transition from closed to open NPD approaches as a precursor to the co-creation approach.

The discussion of NPD thus far has highlighted the value of external knowledge to a firm's innovative success. Consumers are the external party of interest with both their needs and valuable potential knowledge resources for the brand. Social media provides a platform to enable communication between consumers and brands. Brands can utilise social media platforms to search, connect and communicate with individuals or masses of consumers. Structuring these interactions effectively is vital to ensure the capture of solution information. Further to this, the role of consumers as active contributors to each stage of NPD is of significance, recognising them not only as a resource but also as co-creators of value.

2.3 The Service-Dominant Logic

This research focuses on co-creation as an approach to enhance NPD competences and maximise value creation. In the context of this research, the S-D logic is considered an integral antecedent of co-creation, outlining the core values and philosophical assumptions of the co-creation paradigm. The S-D logic embodies the philosophical underpinnings of the co-creation approach; accordingly it is important to examine the literature regarding the S-D logic.

2.3.1 S-D Logic: An Introduction

This discussion explores the relevance of the service-dominant (S-D) logic as a vital precursor to co-creation. The S-D logic outlines the shifting nature of value, the brand-consumer relationship and a number of key philosophical underpinnings of the co-creation paradigm. The term logic signifies a focus on the underlying principles in respect to value creation. In this regard, the discussion will outline the core values of S-D logic.

A service-dominant logic (Vargo and Lusch, 2004) is in tune with postmodern trends, mirroring the transition of markets into networks and converging entities. It is built on a collaborative approach between brand and consumer.Over time the S-Logic literature has evolved and advanced, however the core principles remain the same (Vargo and Lusch, 2004, 2011 & 2016). It differentiates from the traditional goods-dominant (G-D) logic, which focused around tangible resources, embedded value and transactions (Cova and Salle, 2008). The S-D logic considers the basis of exchange between the brand and consumer as the service embedded in the technological outcome, and the enhanced innovation capability to solve future needs. Whilst this places a focus on service, in the context of NPD, this service can be embedded in the form of tangible products (Cova and Salle, 2008).

In this paradigm, value is co-created through the service exchange process (Lusch and Vargo, 2014, Vargo and Lusch 2016). Consumers are considered resource integrators; brands only create the resources or means to make it possible for the consumer to create value for themselves (Grönroos, 2006). NPD is regarded as a service-based economy, with the objectives of creating knowledge to solve problems, increase efficiency and productivity, and satisfy needs (Cova and Salle, 2008). NPD solutions are no longer seen as the assembly of products and services which are bundled together, they now appear as a unique combination of numerous elements which contribute to producing value for the consumer (Stremersch, Wuyts and Frambach, 2001). Rather than a focus on the unit of output (i.e. tangible product), service is the unit of exchange. In order to create value,

users (brands and consumers) engage in interdependent and reciprocally beneficial service exchange (Lusch and Vargo, 2014).

The S-D logic stipulates that brands cannot create and deliver value alone. Brands can only offer value propositions that create the service, following the consumer's acceptance, participation and consumption (Cova and Salle, 2008). This downstream swing in the locus of power is emphasised by Olivia and Kallenberg (2003) who state:

> *"There is a shift in the focus of the value proposition to the end-user from product efficacy to the product's efficiency and effectiveness within the end-user's process"* (Olivia and Kallenberg, 2003)

This shift in the focus of value is embodied by contrasting the traditional goods-dominant logic with the service-dominant logic.

2.3.1.1 Goods-dominant logic versus service-dominant logic

The S-D logic highlights the shifting nature in value and exchange over time. This is signified by the transition from a 'goods-dominant logic' to a 'service-dominant logic'. This is important as in order to deliver successful NPD solutions, brands must understand the changing nature of value and the implications this has in NPD.

The S-D logic seeks to provide 'solutions' to the market, with all exchanges based on services. Tangible goods are seen as the 'tools for the delivery and application of resources' (Vargo et al., 2006; Vargo and Lusch, 2016). The S-D logic focuses on *operant* resources such as skills and knowledge as key in creating and sustaining a competitive advantage (Johnson et al., 2005). The goods-dominant logic focuses on *operand* resources, with the basis of exchange being the key difference between the two approaches. Vargo and Lusch (2004) outline the evolution of various schools of thought influencing marketing, and the transition from a G-D logic towards an S-D logic (Table 2.5 overleaf).

Table 2.5 Schools of thought that influence marketing

Transitioning to a S-D Logic		
Timeline	**Stream of Literature**	**Fundamental ideas or propositions**
1800-1920	*Classical and Neoclassic Economics*	-Value embedded in 'matter' through manufacturing -Goods become commodities -Wealth in society created by acquisition of stuff
1900-1950	*Early/Formative Marketing*	-Commodities/institutions/functions -Focus on transaction and output -Adding value to commodities -Marketing provides utility
1950-1980	*Marketing Management*	-Marketing mix, optimises performance -Value 'determined' and 'embedded' -Focus on 'satisfying' customers
1980-2000+	*Marketing as a Social and Economic Process*	-Services marketing -Market orientation -Relationship marketing -Quality management -Value and supply chain management -Network analysis

Source: Vargo and Lusch (2004)

Table 2.5 outlines the chronological shift from a G-D to S-D logic. This shift parallels the growth of open innovation approaches and the changing nature of innovation management. Fundamentally, this highlights that value creation is no longer intrinsic to the brand, service is the unit of exchange and external sources are necessary in value creation. This downstream shift in marketing activities is summarised by Wise & Baumgartner, (1999):

> *"They've moved beyond the factory gate to tap into the valuable economic activity that occurs throughout the entire product life."* [p. 133]

According to S-D logic, brands must increasingly incorporate services and transform their organisation to move from a product-dominant logic (G-D) to a customer-centric (S-D) logic (Galbraith, 2005). The most effective product solutions are now as a result of a collaborative approach to NPD, with the brand providing services in order to internalise consumer knowledge and maximise value for both parties. The key differences between the two are summarised in Table 2.6 overleaf (Vargo and Lusch, 2004):

Table 2.6: Goods-dominant logic versus service-dominant logic

G-D Logic Vs. S-D Logic		
Resources	**Goods-Dominant**	**Service-Dominant**
Primary Unit of Exchange	People exchange for goods. These goods serve primarily as *operand resources*	People exchange to acquire the benefits of specialised competences (knowledge and skill) or services*: operant resources.*
Role of Goods	Goods are *operand resources* and end products. Marketers take matter and change its form, place time and possession.	People exchange to acquire the benefits of specialised competences (knowledge and skill) or services: *operant resources.*
Role of Customer	The customer is the recipient of goods. Marketers do things to customers (segment, penetrate, distribute, promote) customer is an *operand resource.*	The customer is a co-creator of service. Marketing is a process of interaction with the customer. Customer is primarily an *operant resource* (occasionally *operand*).
Determination and Meaning of Value	Value is determined by the brand. It is embedded in goods and defined in terms of 'exchange-value'.	Value is perceived and determined on the basis of *value in use*. Value results from beneficial application of resources. Firms make value 'propositions only'.
Brand-Customer Interaction	The customer is an *operand resource.* Customers are acted upon to create transactions with resources.	Customers are active participants in relational exchanges and co-production.
Sources of Economic Growth	Wealth is obtained from surplus tangible resources and goods. Wealth consists of owning, controlling and producing *operand resources*.	Wealth is obtained through the application and exchange of specialised knowledge and skills, representing the right to the future use of *operant resources.*

The transition towards an S-D logic illuminates the changing nature of the marketplace and value creation, where brands need to adapt their approach to NPD in line with this shift. Of particular importance is the notion that value arises from the proper application of operant resources. This supports the significance of the knowledge and information possessed by consumers with respect to value creation. Consumers are no longer recipients of value but highly involved in the creation of value.

2.3.2 S-D Logic: Foundational Premises

The early discussion of S-D logic outlined the shift from the G-D logic and the changing nature of how value is perceived and created. In order to further explore S-D logic, the following narrative focuses on the seminal literature outlining the philosophical keystones. This is important in exploring the underlying mind-set of the S-D logic and co-creation.

The original S-D logic introduced by Vargo and Lusch (2004) was based on eight foundational premises, which was further extended to 11 premises (Vargo and Lusch, 2004, 2008 & 2016) (see Table 2.7). The foundational premises (FPs) form the cornerstone of S-D logic theory.

Table 2.7: Service-dominant logic: foundational premises

	S-D Logic, Foundational Premises	
	Foundational Premise	**Comment/explanation**
FP1	*Service is the fundamental basis of exchange*	The application of operant resources (knowledge and skills), 'service', as defined in S-D logic, is the basis for all exchange. Service is exchanged for service.
FP2	*Indirect exchange masks the fundamental basis of exchange*	Because service is provided through complex combinations of goods, money and institutions, the service basis of exchange is not always apparent.
FP3	*Goods are distribution mechanisms for service provision*	Goods (both durable and non-durable) derive their value through use – the service they provide.
FP4	*Operant resources are the fundamental source of strategic benefit*	Operant resources, especially 'know-how' are the essential component of differentiation.
FP5	*All economies are service economies*	Service (singular) is only now becoming more apparent with increased specialisation and outsourcing.
FP6	*Value is co-created by multiple users, always including the beneficiary*	Implies value creation is interactional.
FP7	*Users cannot deliver value but can participate in the creation and offering of value propositions.*	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but cannot create and/or deliver value independently.
FP8	*A service-centred view is inherently beneficiary oriented and relational.*	Because service is defined in terms of customer-determined benefit and co-created, it is inherently customer oriented and relational.
FP9	*All social and economic users are resource integrators*	Implies the context of value creation is networks of networks (resource integrators).
FP10	*Value is always uniquely and phenomenologically determined by the beneficiary*	Value is idiosyncratic, experiential, contextual and meaning laden.
FP11	*Value co-creation is coordinated through user-generated institutions and institutional arrangements*	Institutions are humanly devised rules, norms and beliefs that enable and constrain action and make social life predictable and meaningful (Scott 2001). Institutions enable users to accomplish an ever-increasing level of service exchange and value co-creation under time and cognitive constraints in service ecosystems (Vargo and Lusch, 2016).

The FPs provide a framework on which the S-D logic is built. A number of FPs assume significance in the context of this research. Of particular relevance are the premises that highlight the central role of the consumer as both a resource and co-creator of value (FPs 6, 8 & 9). Additionally, FP 4 stresses the importance of consumer knowledge as an operant resource on which the brand can build a strategic competitive advantage. The

changing nature of value is stressed by FPs 1, 3 and 10, outlining the notion that value is embedded in the experience (service) surrounding the product.

The FPs signify the role of consumers in developing need-reducing product solutions, and also the requirement to deliver valuable experiences alongside products. The FPs provide a framework of core values outlining the changing nature of the market place and shift towards a partnership approach in value creation. This consumer-centric focus and collaborative approach to value creation displaces the generic value chain to that of a value creation network or constellation of users. Essentially, the mind-set outlined by the S-D logic opens the marketing activities of a brand to other users involved in the creation of value. It is the 'customer and supply chain partners that are collaborators in the entire marketing process' (Lusch and Vargo, 2006). This value creation network/constellation characterises the S-D logic in which 'users come together to co-produce value' (Norman and Ramirez, 1994).

The key learning point taken from the S-D logic is that brands are no longer able to operate independently in the creation of value. Consumers possess valuable knowledge (a vital operant resource) on which effective, need-reducing product solutions can be built. Moreover, delivering a tangible product is no longer sufficient in maximising value. The locus of value is the interaction between brand and consumer, and the experience co-created alongside the tangible product. The implications of the S-D logic in respect to NPD are explored in the next section.

2.3.3 S-D Logic: NPD Implications

Shifting from G-D logic to S-D logic represents a fundamental shift in the mind-set with which brands approach NPD projects. Difficulty lies in both adopting this mind-set but also operationalising it in real-life NPD scenarios. This final discussion of S-D logic outlines the implications in respect to NPD and the guidelines proposed by the literature in implementing this approach.

The value of a new product solution is as a result of the individual products and services that make up the solution, the value of marketing and operational integration provided by the solution vendor, and the value of customisation for the consumer's specific needs and context (Sawhney, 2006). Service delivery must be integrated alongside the tangible product, with value being created and maximised by the overall process and service rather than exclusively as a tangible good. This is in stark contrast to the G-D logic, which views solutions as assembly of products and services.

In the case of NPD, this results in the transfer of goods (Vargo and Lusch, 2004). Brands act as intermediaries to the value creation process through the proposition of value and provision of service (Vargo et al., 2008). The nature of value has fundamentally shifted, value is realised once a product offering is used – therefore experience and perception are essential to value determination (Vargo and Lusch, 2006 & 2016). This implies that in NPD, product offerings must be integrated with other market facing and, more importantly, non-market facing (consumer) resources in order for value to be created (Vargo et al., 2008). Production and consumption are parts of a continuous process rather than separate activities. This denotes the importance of collaboration between a brand and consumer throughout the NPD lifecycle (Lusch, et al., 2007).

In order to operationalise this, and enable the co-creation of value throughout the NPD lifecycle, it is suggested that brands implement brand-consumer relational processes. These comprise of four stages and are outlined in Table 2.8.

Table 2.8 Brand-consumer relational processes

Brand-Consumer Relational Processes	
Stage	Practitioner Guidelines
1	The brand should be transparent and make all information symmetric in the exchange process. Because the consumer is someone to collaborate with, anything other than complete truthfulness will not work
2	The brand should strive to develop relationships with customers and should take a long-term perspective
3	The brand should view goods as transmitters of operant resources (embedded knowledge); the brand should focus on selling service flows
4	The brand should support and make investments in the developments of specialised skills and knowledge that are the fountainhead of economic growth

Source: Vargo and Lusch (2006)

The four guidelines are based around creating long-term relationships and empowering consumers to result in the optimum solution provision. This provides general guidelines for brands to enhance their solution delivery process. Consumers are regarded as both operant resources and proactive collaborators. The four stages (Table 2.8) provide an effective base for structuring brand-consumer interactions in NPD. This is vital as interaction is considered the locus of value. A central role is placed on creating and sharing knowledge to not only enhance the brand's competences, but also the consumer's in respect to the NPD project. These steps also reiterate the notion that the outcome of NPD is no longer just the tangible product; the service around the offering is key in maximising value.

2.3.4 S-D Logic: Summary

The discussion of S-D logic above outlined the changing nature of how value is both perceived and created, and demonstrated the fundamental shift towards a greater focus on interaction and service as the locus of value. S-D logic represents the underlying mind-set associated with the co-creation approach. This discussion presented a vital insight into the core-values of co-creation and the implications this is likely to have on NPD. It outlined the role of consumers in value creation, and also explained why collaboration is necessary in value creation. It stipulated that brands must fundamentally shift their mind-set and adapt their value creation activities.

The following sections review the co-creation literature, based on the knowledge gained from the above discussion.

2.4 Co-creation

Co-creation refers to a set of processes or activities in creating value, hence the term 'creation'. The S-D logic outlines the core principles strongly linked to the co-creation paradigm. Co-creation is the process of acting on the mind-set of the S-D logic. The discussion of co-creation explores the process of value creation, in respect to the mind-set outlined in the S-D logic.

2.4.1 The Co-creation Paradigm

In the context of this research, the term 'co-creation paradigm' is used as an overarching term to refer to the concept of a collaborative approach to NPD. Co-creation seeks to maximise value through consumer contributions to NPD, delivering relevant products alongside valuable experiences. The co-creation paradigm is signified by consumers actively engaging in the development of new products and taking over processes previously carried out by the brand (Fuchs and Schreier, 2011; Nambisan and Baron, 2009; O'Hern and Rindfleisch, 2010; Piller and Ihl, 2009; von Hippel, 2005). In the context of this research, co-creation is defined as:

> *'A collaborative approach to NPD (afforded by interactive platforms), in which both brands and consumers are considered necessary contributors to value creation'* (Wikstroem 1996; Piller, 2004; Prahalad and Ramaswamy, 2004, Ramaswamy and Ozcan, 2018).

The increasing recognition of the potential value of consumers in NPD is being paralleled by a cultural shift to a more proactive consumer. Consumers are increasingly informed

and connected on an unprecedented scale. According to Prahalad and Ramaswamy (2004), consumers as current and potential buyers are the most important external source of knowledge for the NPD process. Additionally, consumers now desire to extract value at the traditional point of exchange (Prahalad and Ramaswamy, 2004). In other words, they attribute value to interaction and involvement with a brand.

The growth of social media coupled with blurring 'brand-consumer boundaries' has led to an increasingly 'empowered' consumer. New technologies have allowed consumers access to unparalleled amounts of information, facilitating both consumer-consumer and brand-consumer interactions. This consumer empowerment has led to a desire to play a greater role in the value-creation process (Ernst, Hoyer, Krafft and Soll, 2010). The importance of co-creation in transforming innovation processes is validated by its status as a research priority for the Science of Service (Ostram et al., 2010) and the Marketing Science Institute between 2008 and 2010 (MSI).

From the outset, it is important to outline the key characteristics of co-creation. A large portion of existing co-creation research fails to maintain a focus on unifying the focus on developing effective products alongside valuable experiences. There is a clear trend of research focusing on either 'co-production' (product focus) or 'value-in-use' (experience focus (Ramaswamy and Ozcan, 2018). This is corroborated by Ranjan and Read (2014) who in their review of the value co-creation literature, classify 149 papers thus: 71 consider "co-production" only, 46 consider "value-in-use" only, and 32 consider both, leading them to posit "value co-creation" as a third-order construct with two dimensions each, viz., co-production and value-in-use (Ramaswamy and Ozcan, 2018).

Co-creation is often used incorrectly as an overarching term to denote consumer engagement strategies. A common misconception is that co-creation is an adaption of the traditional firm-centric view, and involves the staging of consumer events around the firm's existing offerings (La Salle and Britton, 2002; Peppers and Rodgers, 1993; Schmitt, 1999; Seybold, 1998). However, co-creation surpasses previous consumer active methods such as co-marketing or co-design. It is the emergence of a new market structure where the market as a whole becomes inseparable from the value creation process (Prahalad and Ramaswamy, 2004; Ramaswamy and Ozcan, 2018). Accordingly, the review of the co-creation literature focuses on contributing a deep understanding of the meta-theoretical principles to ensure the study remains focused on co-creation.Table 2.9 (overleaf) outlines a number of common misconceptions

associated with co-creation (what co-creation is not), and the fundamental principles of co-creation (what co-creation is).

Table 2.9: The concept of co-creation

The Concept of Co-creation	
WHAT CO-CREATION IS NOT	**WHAT CO-CREATION IS**
• Customer focus • Customer is king or customer is always right • Delivering good customer service or pampering the customer with lavish customer service • Mass customisation of offerings that suit the industry's supply chain • Transfer of activities from the firm to the customer – self-service • Customer as product manager or co-designing products and services • Product variety • Segment of one • Meticulous market research • Staging experiences • Demand-side innovation for new products and services	• Co-creation is about *joint* creation of value by the company and the customer. It is not the firm trying to please the customer • Allowing the customer to co-construct the service experience to suit her context • Joint problem definition and problem solving • Creating an experience environment in which consumers can have active dialogue and co-construct personalised experiences; product may be the same (e.g., Lego Mindstorms) but customers can construct different experiences • Experience variety • Experience of one • Experiencing the business as consumers do in real time • Continuous dialogue • Co-constructing personalised experiences • Innovating experience environments for new co-creation experiences

Source: Prahalad and Ramaswamy (2004)

Table 2.9 outlines the co-creation paradigm, contrasting common misconceptions with the core principles of co-creation. Through the understanding of 'what co-creation is, co-creation is clearly a partnership between a brand and consumer, and not simply the engagement of consumers or a function of marketing. In a co-creation system, the brand and consumer are considered as both collaborators and competitors. They collaborate in term of co-creating value and compete on the extraction of economic value (Prahalad and Ramaswamy, 2004; Ramaswamy and Ozcan, 2018). Both parties are necessary in order to maximise value, accordingly, consumers should be seen as a vital resource for enhancing competences, rather than an unpaid workforce.

To reinforce this point, Figure 2.5 (overleaf) displays a number of consumer engagement strategies often incorrectly termed co-creation. The 'co-creation matrix' creates a clear distinction between co-creation and other consumer engagement strategies based on their attributes.

Figure 2.5: Co-creation matrix
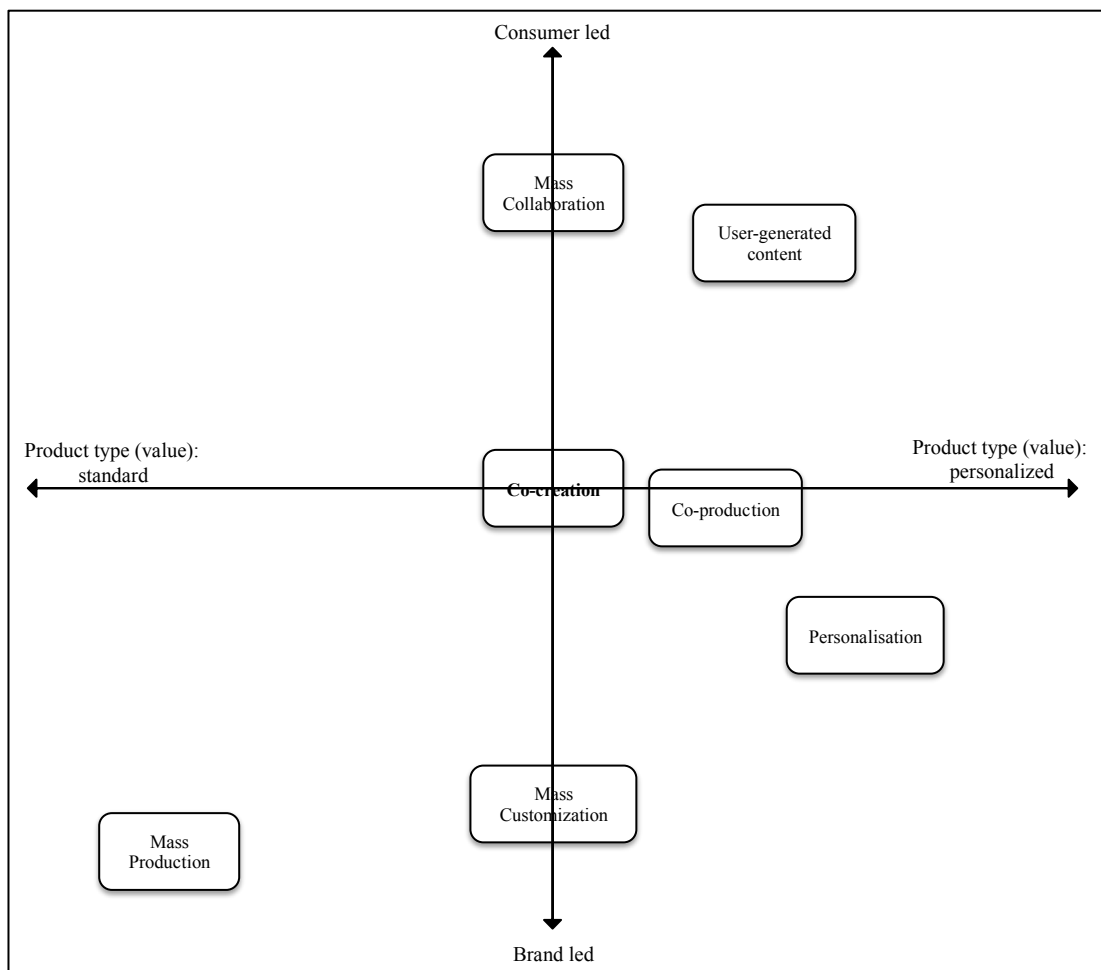
Source: Adapted from: Humphreys et al. (2009)

Figure 2.5 reinforces that co-creation is neither brand led nor consumer led; it is a collaboration approach in which both the brand and consumer are interdependent. Other strategies such as mass customisation, co-production and personalisation are more brand led i.e. not fully empowering the consumer. The meeting of the axes is where a true co-creation approach is seen, and this is where value is maximised (Prahalad and Ramaswamy, 2004). This discussion deliberately establishes a separation between co-creation and other consumer engagement strategies in line with the research aim, specifically focusing on co-creation in enhancing the NPD competences.

Co-creation in the context of this research is regarded as the value-maximising approach to NPD, enhancing the competences of brands in respect to NPD projects. The discussion of the co-creation literature firstly explores the foundations of the co-creation paradigm, and the underlying principles on which it is based. Starting by defining the market as viewed in the co-creation paradigm, then placing focus on the co-creation

approach. A co-creation is the implementation of the concept of co-creation in an NPD scenario. Greater consideration is given to the role of co-creation in enhancing NPD competences, and the guidelines in implementing a co-creation approach. Developing a fundamental understanding of co-creation, and exploring the relationship between co-creation and NPD (hereinafter, the co-creation-NPD relationship) is vital in achieving the research aim.

2.4.1.1 *Changing nature of the brand-consumer relationship*

The role of the consumer in the industrial system has fundamentally changed from isolated to connected, from unaware to informed, from passive to active (Prahalad and Ramawamy, 2004). The co-creation paradigm creation displays prosumerism, as in this paradigm, a person can seamlessly shift from consumer to contributor and creator (Humphreys, 2008). There are no longer clear roles in the marketplace for brand and consumer, co-creation recognises this shift and aims to adapt NPD processes in order to match a brand's competences with the competitive environment.

The discussion of NPD highlights the significance of consumer's unique and valuable knowledge about their preferences, and the difficulty of transferring this through traditional market research processes (e.g. Poetz and Schreier, 2012; Prahalad and Ramaswamy, 2004). This information represents an operant resource; brands that are able to access this information can leverage their internal competences and capabilities, potentially increasing new product success (Alam, 2002; Lau, Tang, and Yam, 2010; Joshi and Sharma, 2004).

The value of consumer knowledge assumes greater significance when considering the impact of the growth of technology. This is providing consumers with access to unlimited amounts of information, and an ability to communicate with other consumers and companies anywhere in the world (Hoyer et al., 2010). The Internet is considered a key 'liberator' of information to consumers (Prahalad and Ramaswamy, 2002). The growth and pervasiveness of social media has fuelled the rise of the connected, informed and active consumer, providing them with a sense of 'empowerment', such that they desire a greater role in exchanges with brands (Ernst, Hoyer, Krafft and Soll, 2010). The changing role of the consumer is considered a result of key impacts of digital technologies: information access, global view, networking, experimentation, activism and the growth of interactive platforms. These are summarised in Table 2.10 overleaf.

Table 2.10: The changing nature of the consumer

Impact	Premise
Information Access	With access to unprecedented amounts of information knowledgeable consumers can make more informed decisions.
Global View	Consumers can also access information on firms, products, technologies, performance, prices and consumer actions and reactions from around the world.
Networking	"Thematic consumer communities", in which individuals share ideas and feelings without regard for geographic or social barriers, are revolutionising emerging markets and transforming established ones. The power of consumer communities comes from their independence from the firm. Thus, consumer networking inverts the traditional top-down patterns of marketing communications.
Experimentation	Consumers can also use the Internet to experiment with and develop products, especially digital ones.
Activism	As people learn, they can better discriminate when making choices; as they network, they embolden each other to act and speak out.
Interactive Platforms	Instantiations of agencial assemblages, composed of heterogeneous relations of artefacts, processes, interfaces, and persons, affording a multiplicity of interactive system-environments

Source: Prahalad and Ramaswamy (2004); Ramaswamy and Ozcan (2018) & DeLanda (2016).

Table 2.10 highlights the impact of the web and consumer communities in transforming value creation processes. Brands can no longer act autonomously in the development of product solutions, with consumers desiring an active role in the co-creation of value (Prahalad and Ramaswamy, 2004). Brands cannot create anything of value without engaging consumers. In this regard, co-creation supplants the exchange process (Prahalad and Ramaswamy, 2004). The shifting nature of the marketplace, coalescing of roles, and downstream swing in power (S-D logic) signifies a fundamental shift in the brand-consumer relationship. This has prompted a change in the way brands and consumers interact to collaborate in the creation of value. Table 2.11 outlines the changing nature of the brand-consumer relationship:

Table 2.11: Transformation of brand-consumer relationship

Transformation of the Relationship between Brands and Consumers	
FROM	TO
One-way	Two-way
Brand to consumer	Consumer to brand
Controlled by the brand	Consumer to consumer
Consumers are "prey"	Consumer can "hunt"
Choice buy/not buy	Consumer wants to/can impose her view of choice
Brand segments and targets consumers; consumers must "fit into" brand's offerings	Consumer wants to/is being empowered to co-construct a *personalised experience* around herself, with a brand's experience environment

Source: Prahalad and Ramaswamy (2004)

There is a notable swing in power from brand to consumer, signifying the rise of the 'empowered' consumer. Co-creation places a large emphasis on the potential value created from a brand-consumer partnership. In order for this value to be realised, there must be a loosening of control by the brand to empower the consumer. The co-creation approach is a learning process for both parties. After implementing the processes in order to build effective collaborations, brands must learn to extract the maximum value from consumers as resources. This involves learning to harness competence, manage personalised experiences, recognise customers as competitors and prepare the organisation for change (Prahalad and Ramaswamy, 2004). In this regard, co-creation provides brands access to resources (consumers) from which they can extract economic value. Moreover, the interaction and collaboration between brand and consumers is also a source of experiential value for the consumer. This signifies that brands that must maintain both a product and experience focus. Through co-creation, brands are able to maximise the economic value they can extract from consumers, but also deliver valuable NPD solutions through products and experiences in tandem.

2.4.1.2   The new frame of reference for value creation

The discussion of the S-D logic highlights the notion that value is experiential and is embedded in the experience delivered alongside tangible products (Vargo and Lusch, 2008). This signifies that brands must efficiently innovate 'experience environments' that enable a variety of co-creation experiences (Prahalad and Ramaswamy, 2004). Consumers must be able to co-construct and personalise their experiences through experience networks. This outlines the fundamental shift in how value is both created and perceived.

In the context of this research, this presents serious implications in the ways in which brands approach NPD. The criteria in developing superior products have shifted from a focus on functions and features to a focus on perceptions and experiences. This shift in the nature of value creation is signified by the contrast in the 'traditional system of value creation' with the 'new frame of reference for value creation' (Prahalad and Ramaswamy, 2004). The traditional system of value creation denotes that the brand creates value, autonomously determining that value is provided through its choice of products. Consumers represent demand for the brand's offerings (Prahalad and Ramaswamy, 2004). This is displayed in Figure 2.6 (overleaf).

Figure 2.6: Traditional system of value creation

	Brand	Product	Consumer	Experience
Premise	1. Value is created by the brand	2. Products are the basis of value	3. Consumers represent demand for the brand's offerings	
Implication	1. Brand-consumer interface is the locus of value extraction	2. Creating and delivering a variety of offerings	3. Customizing offerings	
Manifestation	1. Focus on value chains and quality of internal processes	2. Focus on innovation of technology, products and processes	3. Focus on innovation of technology, products and processes	

Source: Adapted from: Prahalad and Ramaswamy (2004)

The relationships between the rows and columns in Figure 2.6 depict the internal consistency of the traditional logic of value creation. The brand-consumer interface (market) is considered the locus for extracting economic value from the consumer. Traditionally, brands have developed multiple approaches to extract this value, including increasing the variety of offerings, efficiently delivering those offerings, and by customising them for individual consumers.

This denotes a product-led approach and a focus on the value chain. Innovation is concerned with technology, products and processes. The role of the brand in creating value signifies that value creation is separate from the market. This approach indicates a focus on efficiency and matching supply with demand as the foundation of value creation (Prahalad and Ramaswamy, 2004). There is no recognition of the need to deliver value through experience; products are considered the mechanism to deliver value. However, the changing nature of the marketplace, the consumer, and value specifies that the co-creation experience itself is the basis of value. Value creation is centred on individuals and their co-creation experiences. This is the new frame of reference for value creation (Figure 2.7, overleaf).

Figure 2.7 embodies the discussion of the S-D logic and co-creation to this point. The individual and experiential nature of value implies that the value creation processes must accommodate a variety of co-creation experiences. Context and consumer involvement underwrite the meaning of a given experience to the individual and to the exclusivity of the value co-created. This specifies the need for a focus on 'interactional creation', unifying the dimensions of co-production (product focus) and 'value-in-use' (experience focus) (Ramaswamy and Ozcan, 2018). This ensures that the focus of value creation shifts from activities to interactions in line with the meta-theoretical principles of co-creation (Ramaswamy and Ozcan, 2018; DeLanda, 2016 & Van Dijk, 2013).

The emergence of this new frame of reference for value creation bears significant implications on approaches to NPD. This premise suggests new competences for brands. They must focus not only on the quality of products and processes, but on the quality of co-creation experiences (Prahalad and Ramaswamy, 2004). Value is idiosyncratic, experiential, contextual and meaning laden. In order to provide superior products, brands must offer unique and valuable co-creation experiences (Vargo and Lusch, 2008). Consumers do not obtain value directly from the product, but from its use, processing or consumption and by interacting with other entities interested or involved in the process (Katzan, 2008). This is a fundamental shift in value creation, towards the co-

creation of value through personalised interactions. The co-creation experience is the basis of unique value. The market represents a forum structured around individuals and their co-creation experiences, rather than around passive pockets of demand for the brand's offerings (Prahalad and Ramaswamy, 2004).

Figure 2.7: New frame of reference for value creation

	Brand	Consumer	Product	Experience
Premise	*1. Value is co-created by the brand and consumer*	*3. Individual is central to the co-creation experience*		*2. Co-creation experiences are the basis of value*
Implication	*1. Consumer-firm interaction is locus of value creation*	*3. Personalization of the co-creation experience*		*2. Variety of co-creation experiences through heterogeneous interactions*
Manifestation	*1. Focus on the quality of brand-consumer interactions*		*3. Focus on experience networks*	*2. Focus on innovating experience environments*

Source: Adapted from: Prahalad and Ramaswamy (2004)

The new frame of reference for value creation highlights the fundamental shift in value, the brand-consumer relationship and how markets are viewed in the co-creation paradigm. This results in a new market structure, whereby markets are considered forums for co-creation experiences.

2.4.1.3   The market as a forum

In line with the shifting nature of value and the brand-consumer relationship, the marketplace in the co-creation paradigm has fundamentally shifted. Of particular relevance are the shifting roles of the brand and consumer from separate entities to a coalescing of roles.

In contrast to the view of markets adopted by the closed approach (Figure 2.3), Prahalad and Ramaswamy (2004) propose a 'new' market structure (Figure 2.8). This derives from increasingly knowledgeable and empowered consumers combined with an increasing recognition of their value by brands (denoting an open approach).

Figure 2.8: New market structure

Brand-consumer interaction
(1)   Interaction is the locus of *co-creation of value* and economic value extraction by the brand and consumer
(2) *Co-creation experiences* are the basis of value

The Brand:
Collaborator in co-creating value and competitor in extracting economic value

The Market:
Co-creation Experiences of unique value in the context of an individual at a specific moment

The Consumer:
Collaborator in co-creating value and competitor in extracting economic value

The market is integral to the value creation process

Source: Prahalad and Ramaswamy (2004)

The new market structure is characterised by interdependence between brand and consumer. Co-creation surpasses previous consumer active methods such as co-marketing or co-design; it is the emergence of a new market structure where the market as a whole becomes inseparable from the value creation process (Prahalad and Ramaswamy, 2004). This emphasises the shift in the consumer's role from passive recipient to proactive collaborator and a necessary component of value creation.

The market is now viewed as a forum for co-creation experiences. Brands still produce a tangible product, however the focus shifts to the total experience environment (Prahalad and Ramaswamy, 2004). The market is considered a space of potential co-creation experiences in which individual constraints and choices define the consumer's willingness to pay for experiences (Prahalad and Ramswamy, 2004). Table 2.12 summarises the key differences of the traditional view of markets and the market as a forum of exchange.

Table 2.12: Traditional markets Vs. forums of exchange

The market as a target for the firm's offerings Vs. a forum for co-creation experiences	
The market as a target	**The market as a forum**
The firm and the consumer are separate, with distinct predetermined roles.	The firm and the consumer converge; the relative "roles of the moment" cannot be predicted.
Supply and demand are matched; price is the clearing mechanism. Demand is forecast for products and services that the firm can supply.	Demand and supply are emergent and contextual. Supply is associated with facilitating a unique consumer experience on demand.
Value is created by the firm in its value chain. Products and services are exchanged with consumers	Value is co-created at multiple points of interaction. Basis of value is co-creation experience.
The firm disseminates information to consumers.	Consumers and consumer communities can also initiate a dialogue among themselves.
The firm chooses which consumer segments to serve, and the distribution channels to use for its offerings.	Consumers choose the nodal firm and the experience environment to interact with and co-create value. The nodal firm, its products and services, employees, multiple channels, and consumer communities come together seamlessly to constitute the experience environment for individuals to co-construct their own experiences.
Firms extract consumer surplus. Consumers are "prey", whether as "groups" or "one-to-one". Firms want a 360-degree view of the customer, but remain opaque to customers. Firms want to "own" the customer relationship and lifetime value.	Consumers can extract the firm's surplus. Value is co-extracted. Consumers expect a 360-degree view of the experience that is transparent in the consumer's language. Trust and stickiness emerge from compelling experience outcomes. Consumers are competitors in extracting value.
Companies determine, define and sustain the brand.	The experience is the brand. The brand is co-created and evolves with experiences.

Source: Prahalad and Ramaswamy (2004)

A key factor spurring the shift outlined in Table 2.12 is the role of technology, and in particular, the web in transforming markets (Prahalad and Ramaswamy, 2004). Co-

creation is built on personalised interactions based on the extent to which individuals want to interact with the brand (Prahalad and Ramaswamy, 2004). The timelessness and immediacy of interaction through social media provide both brands and consumers with a platform on which interaction can occur relatively easily and cheaply. As the brand-consumer interaction is seen as the locus of value creation (see Figure 2.8 above), platforms that enable interaction are likely to be beneficial in the co-creation of value.

The emergence of a new market structure signifies a downstream shift in power towards the consumer. The boundaries between the brand and consumer are increasingly blurred due to a radical decentralisation of power and control. In this paradigm, the brand and consumer roles merge (Pitt et al., 2006). The market is now viewed as a locus of exchange, whereby both parties work in tandem to create value, most notably through co-creation activities (Prahalad and Ramaswamy, 2004).

The discussion of co-creation to this point has focused on defining co-creation, and the key differences between co-creation and traditional approaches to NPD. It is now important to explore *how* value is co-created, and consider the literature guiding brands on adoption of a co-creation approach.

2.4.2 Complete Co-creation

The review of co-creation to this point explores the core principles of the co-creation paradigm, defining how value is created, the shifting role of the brand-consumer relationship and markets as a forum for co-creation experiences. The application of these principles in an NPD scenario is termed a 'co-creation approach'. Following the understanding of what the co-creation paradigm 'is', it is now important to explore how value is created through a co-creation approach.

Value is perhaps the most ill-defined and elusive concept in service marketing and management (Carú and Cova, 2003; Sánchez-Fernández and Iniesta-Bonilla, 2007; Woodall, 2003). The discussion of the S-D logic and co-creation paradigm outlines value as interactional created through experience environments as opposed to the view of the traditional value chain.

The value created from consumer co-creation comes as a result of skill, information and knowledge. These are transformed through existing or new value generating processes into 'value-in context' experiences (Ballantyne and Varey, 2008; Chandler and Vargo, 2011). Implicit in this, is the assumption that value is interpreted by the beneficiary, both

the brand and consumer collaborate in the joint aim of yielding benefits for both parties (e.g. Denegri-Knott et al., 2006; Vargo and Lusch, 2008; Pongsakornrungslip and Schroeder, 2011). The market is characterised by interdependence between brand and consumer, production and consumption are viewed as parts of a continuous process and value is co-created throughout the NPD lifecycle (Lusch, et al., 2007).

To implement the core principles of the co-creation paradigm and maximise value creation, a 'complete co-creation' approach is required. A complete co-creation approach denotes a true collaboration approach to NPD (Prahalad, 2004) and is defined by the interaction and collaboration between a brand and consumer throughout the NPD lifecycle. A complete co-creation approach builds an experience environment around an NPD project. This results in the application of consumer knowledge (as an operant resource) from the outset and throughout an NPD project, and the co-creation of unique experiences throughout the NPD lifecycle. Complete co-creation is regarded as necessary in maximising value and delivering the greatest impact on brands' NPD competences.

To gauge the extent to which a brand is able to adopt a complete co-creation approach, Hoyer et al. (2010), emphasise the 'degree of co-creation'. The degree of co-creation is an overarching term, used to describe a brand's reliance on co-creation and how extensively they co-create in NPD. Complete co-creation is signified by a high-degree of co-creation, as intense collaboration is occurring throughout the NPD lifecycle. The degree of co-creation is a function of both the scope and intensity of co-creation activities (Hoyer et. al., 2010). The explanation of the intensity and scope of co-creation follows below.

Intensity: The intensity of co-creation refers to the extent to which brands rely on co-creation to develop products at a particular stage of NPD (Hoyer et. al., 2010). Prahalad (2004) notes that a true collaboration approach to NPD (complete co-creation) is required to maximise value. This implies that consumers should be regarded as a vital part of each stage of NPD in order to maximise value. Brands that exhibit high levels of co-creation intensity at a particular stage of NPD rely almost exclusively on the input of consumers in co-creating value (Hoyer et. al., 2010).

Scope: The scope of co-creation refers to the propensity of brands to collaborate with consumers across all the stages of the NPD lifecycle (Hoyer et. al., 2010). The co-creation literature expresses that consumers should be used across all stages of NPD;

hence, the scope of NPD is a key parameter in maximising value (Prahalad and Ramaswamy, 2013). Brands that are highest in scope co-create across all stages of the NPD lifecycle (Hoyer et. al., 2010).

High-degree co-creation is integral in adopting a complete co-creation approach. Complete co-creation embodies the core principles of the S-D logic and co-creation literature, and is considered the value maximising approach to NPD. In order to promote a complete co-creation approach, Prahalad (2004) introduces five stages of engagement. The aim of which are to progressively integrate consumers into NPD processes and realise a true collaborative approach to NPD. These are summarised in Table 2.13:

Table 2.13: Stages of co-creation engagement

Stages of co-creation engagement		
1st Stage	*Persuasion of customers through advertising and promotion*	Emotional and physical engagement in the act of co-production
2nd Stage	*Self-service*	Transfer of work from firm to customer. Customer is a co-brand.
3rd Stage	*Staging an experience*	Customer is involved and engaged, but the context is firm driven.
4th Stage	*Customers enabled to solve problems*	Service is available but customers must navigate their way around requiring customer time, effort and skill.
5th Stage	*Customers co-design and co-produce products and services*	Customers have work, service and risks transferred from the firm, and both the customer and the firm benefit.

Source: Adapted from Prahalad (2004)

The stages of engagement outline a progressive approach to complete co-creation. This is valuable in providing brands with guidelines to transform their value-creation process. As brands progress through the stages of engagement, risks are increasingly shared, and there is a shift from a 'firm-centred' approach to a true collaborative approach (Prahalad, 2004). One can argue that the brand has to augment the early stages of the process as they have the most to lose, i.e. the majority of risk is borne by them. As brands progress through the stages, both their approach to value creation and the market structure shifts. Prahalad (2004) presents four implications as brands transition towards complete co-creation:

1. Co-creation suggests networks rather than dyadic brand-consumer interactions. Consumer communities are integral, whether by developing product strategy or new distribution channels.

2. The outcome of engagements (dyadic or network) is the co-creation of value; what are co-created are the experiences. Physical products and services are artefacts around which experiences are co-created.

3. New building blocks are needed for the co-creation of value. These are dialogue (rather than one-way communication from the firm to the customer), access and transparency to information (to avoid and eliminate the asymmetry of information between the brand and the consumer), and risk assessment (an explicit dialogue among consumers, consumer communities, and the firm of risk).

4. No single brand can provide the total co-creation experience. Often, a network of brands must work together to provide unique co-creation experiences.

The stages of engagement and implications of these signify the importance of the design of the co-creation experience in respect to value creation in NPD. A co-creation approach is built from the co-creation experiences between a brand and consumers. Co-creation experiences are defined as the interaction and collaboration between a brand and consumer. Consequently, through the design of effective co-creation experiences, brands can promote the impact of their co-creation approach.

A complete co-creation approach challenges traditional market perspectives as the roles within the market have drastically changed. Consumers have transitioned from being isolated to connected, from unaware to informed, and from passive recipients to active co-creators of value (Prahalad and Ramaswamy, 2004). This represents a significant transformation of how value is traditionally both viewed and created. Without proper frameworks or structures in place to guide this transition, brands are likely to resist adopting a complete co-creation approach. A main obstacle to maximising the full potential of co-creation is striking a balance between empowering consumer co-creators, and the brand losing control over their processes and resources (Jenkins, 2006). This danger is challenging the foundations of value and ownership that reside in markets (Chesbrough and Appleyard, 2007).

To overcome the obstacles to a complete co-creation approach, brands must be able to design effective co-creation experiences. Effective co-creation experiences ensure that the brand is able to avoid the risks or pitfalls associated with co-creation whilst maximising the potential benefits of co-creation. In this regard, the design of effective co-creation experiences is a vital antecedent to the implementation of a complete co-creation approach.

2.4.3 Co-creation Experiences

As discussed above, co-creation experiences foster the interactions that underpin a co-creation approach. To deliver a high-level impact of co-creation on NPD competences, co-creation experiences must be designed to promote a complete co-creation approach, thus highlighting the significance of the design of co-creation experiences in terms of the research aim. As the co-creation paradigm is fundamentally shifting brands' approaches to NPD, this is likely to require a dramatic reorganisation of NPD processes in order to implement a co-creation approach. In this regard, it is not sufficient to simply understand the underlying principles of the co-creation paradigm; the literature review must explore the guidelines in respect to implementing a co-creation approach in NPD (through co-creation experiences).

In order to maximise the high-level impact of the co-creation approach on NPD competences, the design of co-creation experiences must promote interaction and collaboration throughout the NPD lifecycle (complete co-creation). Competences are built and enhanced through continuous, high-quality interactions and dialogue (co-creation experiences) (Gray, Matear, Deans and Garrett, 2007; Gummesson, 2004; Jaworski and Kohli, 2006; Kalaignanam and Varadarajan, 2006; Payne, et al., 2008; Prahalad, 2004; Rust and Thompson, 2006). Co-creation experiences should encourage active participation, allowing both parties to share and gather information and strengthen the relationship between the brand and consumer (Jaworski and Kohli, 2006; Prahalad and Ramaswamy, 2004; Wikström, 1996).

The co-creation experience must be designed to promote a partnership approach to NPD. This involves brands acting as facilitators and partners to pro-active consumers (Zwick, et al., 2008), as well as allowing consumers to design solutions or implement strategies to efficiently transfer solutions from the consumer to the brand (Seybold, 2006; Tapscott and Williams, 2006; Reichwald and Piller, 2009). If both parties are able to combine their respective knowledge and configure new solutions (products) that meet the needs of the market better, this co-creation process can yield successful and innovative products. From the outset, effective co-creation experiences may increase the likelihood of superior products, customer adoption through word-of-mouth referrals, increased brand image, and consumer buy-in (Henard and Szymanski, 2001; Im and Workman, 2004).

It is important to state that whilst brands and consumers are recognised as equal contributors of value in the co-creation paradigm, the brand must initiate, design and manage co-creation experiences. The decision to adopt a co-creation approach is governed exclusively by the brand. In this regard, the brand empowers consumers to co-create through the initial decision to adopt a co-creation approach, and the design of the co-creation experience. Hoyer et al. (2010) highlighted the role of the brand in stimulating consumer co-creation, stating that brands who manage this process effectively will ultimately achieve a competitive advantage (Prahalad and Ramaswamy, 2004).

The drastic change to NPD processes and the creation of value signifies that brands face a significant challenge in implementing co-creation. Whilst it is widely proposed that co-creation is competence building and a vital forerunner of strategic benefit, brands must be able to actually implement this approach in real-life NPD scenarios. This emphasises the importance of designing effective co-creation experiences to promote a complete co-creation approach. Complete co-creation is necessary in maximising the high-level impact of co-creation on NPD competences and value creation.

The following paragraphs review the literature guiding the design of co-creation experiences.

2.4.3.1 DART dimension

Prahalad and Ramaswamy (2004) outline the DART framework as the key building blocks of co-creation. The DART dimension provides a framework on which co-creation experiences are built, outlining the dimensions of dialogue, access, risk assessment and transparency, as discussed below.

Dialogue: Dialogue means interactivity, engagement and a propensity to act (by both brand and consumer). This dimension implies shared learning and communication and creates and maintains a loyal community (Prahalad and Ramaswamy, 2004). Prahalad and Ramaswamy (2013) propose the following features for dialogue in co-creation:

- It focuses on issues that interest both the brand and consumer (value creation)

- It requires a forum in which dialogue can occur

- It also requires rules of engagement (explicit or implicit) that make for an orderly, productive interaction.

Access: Access begins with information and tools. The notion of access challenges the idea that consumers can experience value only through ownership (Prahalad and Ramaswamy, 2004). The traditional role of the brand and its value chain was to create and transfer ownership of products to consumers, however it is now argued that consumers aim to access desirable experiences (Prahalad and Ramaswamy, 2013).

The idea that consumers can access experiences at multiple points of interaction, rather than simply ownership of products, opens the door for their input into the NPD process. This view uncouples the notions of access and ownership (Prahalad and Ramaswamy, 2013). Empowered consumers desire greater access to both information and the tools to co-create personalised experiences. Brands must transfer information and tools to consumers to empower them to co-create value, transforming the consumer's capacity for self-expression (Prahalad and Ramaswamy, 2013; Payne et. al., 2008; Storbacka and Lehtinen, 2001).

Prahalad and Ramaswamy (2013) also highlight the role of access in creating new opportunities in emerging markets. Access overcomes the problem of the 'digital divide' as now in emerging markets, ownership of computers is not a prerequisite for the co-creation of value as cyber cafes and internet kiosks are now making online access available on a pay-per-use access (Prahalad and Ramaswamy, 2013). This is allowing the level and span of engagement to cross into new markets through digital channels.

Risk-benefits assessment: If consumers become co-creators of value, they demand more information about potential risks of goods (access and transparency), but may also bear more responsibility for dealing with those risks (Prahalad and Ramaswamy, 2004). Access to greater information allows the consumer to make more informed product decisions, and greater knowledge regarding the risks of their product choices. Risk refers to the probability of harm to the consumer. As transparency, access and dialogue increase, the consumer becomes better informed about the risks involved, thus affecting their product choice.

Additionally, risk assessment offers new opportunities for brands to differentiate themselves. Active dialogue on the levels of risk and benefits involved in using a product can develop a level of trust between brand and consumer (Prahalad and Ramaswamy, 2013). This illustrates a strengthening of the tie between brand and consumer and can result in greater levels of knowledge sharing in the future.

Transparency: Transparency of information is key in creating trust between brands and consumers. The transformation of the brand-consumer relationship (Table 2.11) highlights the necessity to educate consumers with regards to shaping their expectations (Prahalad and Ramaswamy, 2004). This occurs through access and transparency of information, shaping consumer's expectations and contributions in the co-creation of value.

Traditionally, brands benefit from information asymmetries in the marketplace. However, these are rapidly disappearing as information regarding products, technologies and business systems are becoming increasingly accessible (Prahalad and Ramaswamy, 2013). Creating new levels of transparency is now desirable, as a strengthening of the tie between brand and consumer is likely to result in greater levels of knowledge and information transfer. Transparency provides the consumer with the information to make informed decisions regarding the co-creation process and in turn facilitates further co-creation of value. Both parties thus become increasingly empowered and educated, resulting in higher levels of value creation.

The DART framework focuses on structuring ongoing interactions that result in knowledge creation and transfer between the brand and consumer. The brand adopts the role of facilitator of these interactions, and a provider of tools and information in order to empower consumers to co-create value. Ultimately, co-creation is looking to match the competences and resources of both parties to maximise the value of the joint effort of product development. Through combining the building blocks of the DART framework, brands can create the capabilities listed in Table 2.14 below:

Table 2.14: Migrating to co-creation experiences

Migrating to co-creation experiences		
	Traditional exchange	**Co-creation experiences**
Goal of interaction	Extraction of economic value	Co-creation of value through compelling co-creation experiences, as well as extraction of economic value
Locus of interaction	Once at the end of the value chain	Repeatedly, anywhere, and any time in the system
Brand-consumer relationship	Transaction based	Set of interactions and transaction focused on a series of co-creation experiences
View of choice	Variety of product and services, features and functionalities, product performance, and operating procedures	Co-creation experience based on interactions across multiple channels, options, transactions, and the price-experience relationship
Pattern of interaction between brand and consumer	Passive, brand-initiated, one-on-one	Active, initiated by either brand or consumer, one-on-one or one-to-many
Focus of quality	Quality of internal processes and what brands have on offer	Quality of consumer-brand interactions and co-creation experiences

Source: Prahalad and Ramaswamy (2004)

Combining the building blocks of dialogue, access, risk-assessment and transparency provides a framework for brands to engage and collaborate with consumers (Prahalad and Ramaswamy, 2004; Schiavone, Metallo and Agrifoglio, 2014). These components of the DART dimension can be seen as a way of conditioning experiences surrounding the co-creation of value. Rather than the traditional value chain, this dimension seeks to provide solutions in the terms of service experience. This notion mirrors the core values of the S-D logic and they can be seen as one and the same. The DART framework looks to integrate the consumer through conditioning their experiences through these four dimensions. This framework provides a structured approach to managing the processes surrounding co-creation. In order to further refine the original DART framework, Prahalad and Ramaswamy (2004) outline four 'dimensions of choice' to include opportunities for personalised co-creation experiences. The dimensions of choice are summarised in Table 2.15 (overleaf).

Table 2.15: Dimensions of choice

Dimensions of Choice	
Co-creation across multiple channels	Consumers want the freedom of choice to interact with the brand through a range of experience gateways. Therefore, the firm must focus on the co-creation experience across *multiple channels.*
Co-creation through options	Consumers want to define choices in a manner that reflects their view of value. Therefore, the brand must provide experience-centric options that *reflect consumer desires.*
Co-creation through transactions	Consumers want to interact and transact in their preferred language and style. They want quick, easy, convenient and safe access to experiences. Therefore, in consummating individual choices, the brand must focus on the co-creation experience *through transactions.*
Co-creation through the ability to influence the relationship between price and experience	Consumers want to associate choice with the experiences they are willing to pay for. They want the price of these experiences to be fair. Therefore, the firm must focus on the totality of the *price-experience relationship in the co-creation.*

Source: Prahald and Ramaswamy (2004)

The 'dimensions of choice' denote a loosening of control by brands in order to allow consumers the freedom to contribute to NPD. As a partnership is established, the dimensions of choice represent a shift of power to some degree as consumers gain control over previous firm-centric processes. A particularly relevant aspect of the 'dimensions of choice' is the focus on engagement channels. In the context of this research, social media is regarded to enable co-creation by connecting the brand and consumer. The emergence of the web and social media technologies is widely recognised as fuelling the growth of the co-creation paradigm, resulting in empowered, informed and connected consumers (Hoyer et al., 2010). The market is now characterised by the growing influence of 'digital natives', a generation of tech-savvy young people immersed in digital technologies (Bennett and Maton, 2010). The ongoing growth of social media suggests that the influence of the digital native is likely to continue to grow and shape product categories in the future. In respect to the dimensions of choice, this places a greater significance on social media platforms as the 'preferred language and style' of consumers.

2.4.3.1.1 Extended DART framework for social media

The role of social media in spurring the growth of the co-creation paradigm has been discussed above in respect to empowering consumers. The discussion now builds a focus on the role of social media in enabling co-creation. Schiavone, Metallo and Agrifoglio (2014) outline a key limitation of the DART framework as being the lack of emphasis placed on the role of social media in the design of co-creation experiences.

This is supported by the view that transparency and access are of little value if brands do not create the infrastructure for dialogue, requiring brands to invest in technology (Prahalad and Ramaswamy, 2004). Consequently, the DART framework is extended by adding the dimension of technology management.

Technology management: Technology becomes a strategic asset in the design of co-creation experiences. Technology management is defined as 'the abilities to aggregate customers and engage them, to carry out actions through social media that encourage them to make contributions and support their active participation' (Schiavone, Metallo and Agrifoglio, 2014).

Technology management is considered a critical issue in exploiting media and the situated creativity of consumers (Schiavone, Metallo and Agrifoglio, 2014). Brands can 'mobilize and deploy IT-based resources in combination or co-present with other resources and capabilities enhance performance' (Bharadwaj, 2000). In effect, utilising social media efficiently in the co-creation experience boosts the competence enhancing effects of co-creation. The extended DART (DARTT) framework is displayed below:

Figure 2.9: DARTT framework
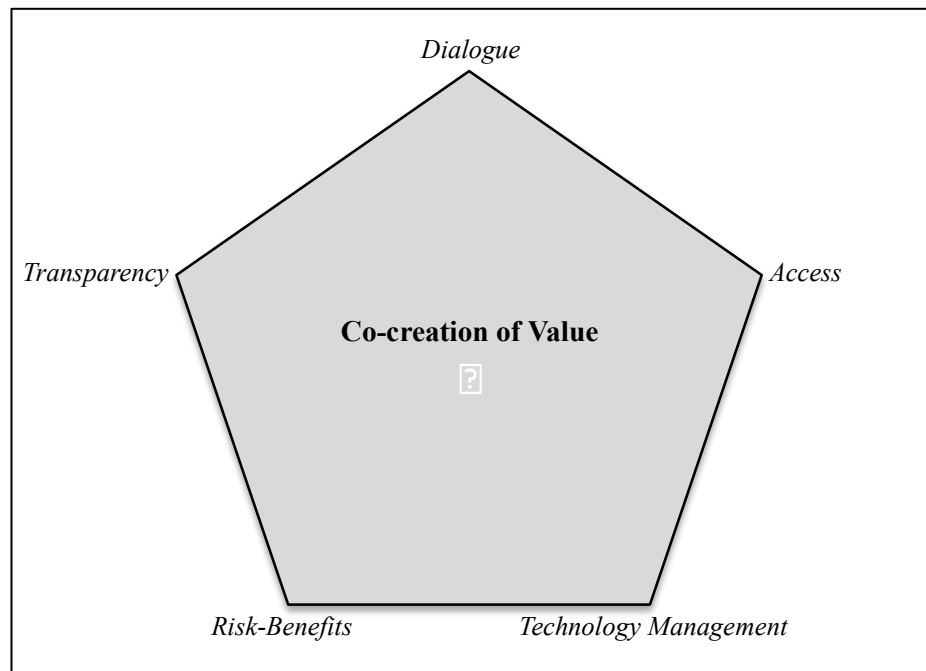
Source: Schiavone, Metallo and Agrifoglio (2014)

In respect to the research aim, the review of the DART dimension explores the literature guiding the design of co-creation experiences. The DART dimension provides the

building blocks of co-creation experiences, detailing 'what' co-creation experiences should consist of. The inclusion of 'technology management' as a dimension of the DARTT framework provides an early understanding of the role of technology in enabling co-creation, justifying the rationale for a focus on social media. Reviewing the literature in respect to guiding the design of co-creation experiences is vital in understanding how brands can implement a co-creation approach. In respect to the research aim, a high-level impact of co-creation on NPD competences is as a result of a complete co-creation approach. In turn, a complete co-creation approach is underpinned by the effective design of co-creation experiences. The guidelines outlined above provide brands with the fundamental building blocks for designing and managing effective co-creation experiences.

2.4.3.2 Additional considerations of co-creation experience design

In addition to the DART(T) framework and dimensions of choice, consideration must be given to a number of additional principles impacting the design of co-creation experiences. The co-creation experience must be designed to promote collaboration from both the brand and consumer perspective. This is the foundation of the co-creation paradigm. Whilst co-creation in itself is a learning process, learning to implement and control a co-creation approach (through co-creation experiences) is likely to be a learning challenge to brands. As of yet, there are no comprehensive methodologies guiding brands in the design of co-creation experiences, and the optimal level of consumer integration has not yet been identified.

The design of the co-creation experience should be guided by the core principles of the co-creation paradigm. Brands should seek to design co-creation experiences to not only extract economic value, but to provide compelling experiences (Prahalad and Ramaswamy, 2004). This maintains the view that effective product solutions must be developed alongside valuable experiences. Consequently, the co-creation experience should be seen as a source of value for both the brand and consumer. Additionally, co-creation experiences should be designed across the NPD lifecycle, coupling production and consumption as inseparable components of value and promoting a complete co-creation approach.

Effective co-creation experiences are highly motivating from both the brand and consumer perspective. The onus is on the brand in designing the co-creation experience. Brands can design co-creation experiences to extract the maximum economic value from their interactions with consumers. However, they must also give consideration to the

value consumer's extract from the co-creation experience. As the co-creation process is seen as a partnership, this requires 'the consumer to be co-brand to the point, in some cases, of being an investor' (Deighton and Narayandas, 2004). Consequently, the underlying purpose should be the shared realisation of value, and the co-creation experience should seek to drive consumer participation. To ensure both the brand and consumer are motivated to co-create throughout the NPD lifecycle, the design of the co-creation experience should seek to maximise the benefits and minimise the costs for both brand and consumer.

Co-creation postulates that value is derived from interaction and involvement (Ramaswamy and Ozcan, 2018). Highly motivating co-creation experiences built on interaction yield benefits both in respect to knowledge sharing (impacting the product solution) and in delivering valuable experiences. Motivated consumers are likely to invest more time and effort in co-creation experiences, and not merely 'show up' (Claycomb, et al., 2001). This is likely to boost knowledge sharing and value the consumer derives from the experience. Moreover, ongoing and intense interaction is considered key in building a strong relationship between the brand and consumer. The development of strong relationships with consumers may lead to consumers becoming proportionally committed as levels of participation increase (Dong, et al., 2008; Wilson, et al., 2008). As a result, a motivating co-creation experience is likely to strengthen relationships and boost information flow. A high level of involvement allows the consumer to gain more control over the experience. Increased control and responsibility drives proactivity and information sharing, as the level of participation will influence the final product outcome (Claycomb, et al., 2001). In this case knowledge can be seen as a commodity, with the true value being realised when both parties are highly motivated (Maglio and Spohrer, 2008; Prahalad, 2004; Vargo and Lusch, 2004). This signals the benefit of an effective co-creation experience design in respect to knowledge as an operant resource.

With regard to delivering valuable experiences, the strengthening of the brand-consumer relationship can also impact brand loyalty. Through prolonged engagement, consumers develop deep bonds and trust towards the brand (Jaworski and Kohli, 2006). These relationships can act as a switching barrier, as switching to another firm may not entail the same customer experience (Dowling and Uncles, 1997; Uncles, Dowling and Hammond, 2003). Additionally, increased involvement with a brand may result in consumers feeling a sense of accomplishment, feelings of self-efficacy and overall enjoyment of the process, increased sense of belonging to a community, or a better product fit with their own needs (Dong, et al., 2008; Meuter, et al., 2005; Schneider and

Bowen, 1995; Nambisan and Baron, 2009; Franke et al., 2010; Piller and Ihl, 2009). This reiterates the importance of the design of the co-creation experience on the unique value that each consumer is empowered to co-create.

The design of the co-creation experience is vital both in respect to accessing valuable knowledge (as an operant resource), but also in empowering consumers to co-create valuable experiences. Highly motivating co-creation experiences can deliver a myriad of benefits to both brand and consumer. Through high-levels of interaction and involvement, brands can extract maximum economic value (in respect to a product solution) and consumers are able to co-create their own unique valuable experiences. As a result, the design of effective co-creation experiences is considered vital in value creation and maximising the high-level impact of co-creation on NPD competences.

2.4.4 Co-creation Summary

The review of the co-creation literature began by outlining the core values of the co-creation paradigm. It explored the philosophical underpinnings of 'what' co-creation is, including how value is perceived and created through co-creation, the shifting nature of the brand-consumer relationship and the emergence of a new market structure.

Co-creation is implemented through a co-creation approach in NPD. Of particular significance is the notion of complete co-creation as the value maximising approach to NPD. This was noted to be signified by interdependence in value creation between brand and consumer, and intense collaboration throughout the NPD lifecycle. A complete co-creation approach is therefore considered an antecedent of a high-level impact of co-creation in NPD.

To promote a complete co-creation approach, the discussion focused on the significance of the design of co-creation experiences. Effectively designed co-creation experiences foster interaction and collaboration between brands and consumers. The discussion reviewed the existing literature guiding the design of co-creation experiences and outlined a number of additional considerations. Effectively designed co-creation experiences should promote intense collaboration across the whole NPD lifecycle. This is vital in promoting a complete co-creation approach, developing effective products and valuable experiences, and delivering a high-level impact of co-creation in NPD. As co-creation is built on interaction, the platforms on which brands and consumers engage are vital to the design of the co-creation experience. This opens the enquiry to explore

the role of social media in enabling co-creation, and brings together the three research elements.

2.5 Social media

Social media provides ubiquitous connectivity and the opportunity to easily interact on a global level. This is particularly significant following the review of the NPD, S-D logic and co-creation literature as value creation is considered the result of the interaction between brand and consumer. The need to offer diversified and unique experiences (S-D logic) and collaborate and interact throughout the NPD lifecycle (co-creation) implies that interaction between brand and consumer must occur on a mass scale. Accordingly, it is important to examine social media as a platform to enable this high-level interaction between brands and consumers.

The impact of social media on co-creation has been touched on in the previous discussion (e.g. DARTT framework). Up to this point, social media has only been discussed with regard to its role in empowering consumers (through access to information) and in connecting brands and consumers (value creation through interaction). The final narrative of this chapter explores the link between social media and co-creation, focusing on the platforms of interest (DESNs and VCCs). The final focus of the literature review explores the social media literature in greater depth, particularly in the lens of co-creation in NPD and the role of social media in enabling co-creation.

2.5.1 Social Media and Co-creation

The review of the literature this far briefly touches on the role of social media in driving co-creation, and also the use of social media in the design of co-creation experiences (DARTT framework). It is no coincidence that the growth of co-creation, the empowerment of consumers, and the emergence of social media are phenomena that have grown in parallel.

Prahalad and Ramswamay (2004) identified web-based characteristics responsible for shifting innovation management strategies towards co-creation: information access, global view, networking, experimentation and activism. These relate to the unprecedented amounts of information that empowered consumers have access to, the lack of geographical limits on information, thematic consumer communities, the use of the internet to experiment with and develop products and the unsolicited feedback consumers provide to both brands and each other (Prahalad and Ramaswamy, 2004).

These characteristics also apply to social media and provide a preliminary understanding of the role of social media in enabling co-creation.

Additionally, in Ramaswamy and Ozcan's (2018) 'envisioning' of co-creation, they stress the role of interactive platforms in affording involvement and interaction. Of relevance is the categorisation of 'APPI' components of interactive platforms (Artefacts, Persons, Processes, and Interfaces) that make up interactive platforms (DeLanda, 2016). These APPI components afford multiplicity of interactive system environments, in effect allowing unique and personalised interactions between social media users (brands and consumers). From the onset this specifies the necessity of interactive platforms in enabling interaction and involvement, and gives an early indication of specific social media characteristics that positively impact co-creation.

It is well documented that co-creation relies on ongoing and intense interaction between brands and consumers. The rise of social media platforms in recent years has fundamentally changed interactions between brands and consumers (Hoyer et al., 2010; Kaplan and Haenlein, 2010; Kim et al., 2010). Social media provides an unparalleled platform for users (both brand and consumers), intentionally or unintentionally, to establish different types of content and exchange ideas (Calder et al., 2009; Steyn et al., 2010). In respect to co-creation, brands and consumers are now able to interact and collaborate more easily and more frequently than in the past (Gallaugher and Ransbotham, 2010). Lusch et al (2007) describe technology as 'a pivotal force in enabling collaboration and innovation'. Brands must embrace the emerging dynamic of consumer empowerment, and cannot neglect the valuable opportunity to utilise social media to communicate and co-create with consumers (Kane and Fichman, 2009).

The co-creation approach recognises that whilst a resource, consumer knowledge cannot be treated in the same way as internal resources. It is not a tradable commodity and often requires distinctive mechanisms for knowledge transfer, protection and incentivising (O'Hern and Rindfleisch, 2010). These mechanisms reside in the consumer-brand interface that is increasingly apparent through a virtual presence (Ballantyne, 2004). There is consequently a greater focus on technology management in the design of co-creation experiences, with social media perhaps the most efficient consumer-brand interface (Schiavone, Metallo and Agrifoglio, 2014).

The value created from co-creation is as a result of 'the scale of the cumulative input of its members and their connectedness, interactivity, and tendency to share knowledge

and skill'. In essence, the greater the input from consumers, the greater the value realised by both parties (Sweet, 2001). The phrases 'connectedness' and 'tendency to share knowledge' are of significance when considering co-creation through social media. Consumers are now in possession of ubiquitous connectivity, constantly sharing information with other users online (Prahalad, 2004). The impact of social media on co-creation is often discussed in respect to its potential to nurture the requirements of interaction and information exchange specified by the co-creation paradigm. In addition to providing a platform to promote interactivity and collaboration, there are a number of characteristics exclusive to social media that are likely to extend the competence enhancing nature of co-creation in NPD.

Social media platforms are characterised by multiple directions of communication, more intense and richer interaction, and larger audience size and scope (Sawhney et al., 2005). Fundamentally, access to more information (through greater numbers of consumers) and easier interaction is likely to positively impact co-creation in NPD. Social media platforms can provide more dynamic connections and meaningful relationships between brands and consumers, enabling co-creation on a wider scale. This provides a significant opportunity for brands to engage in timely and direct consumer contact at relatively low cost, and achieve higher levels of efficiency than with more traditional communication tools (Jespersen, 2010; Piller et. al., 2012). This stresses the role of social media in enabling interaction and information exchange on a wider scale. As brands must seek to deliver unique experiences to their consumers, the ability to easily connect and interact with a volume of consumers is of significant worth to the co-creation of value.

Moreover, social media provide different social dynamics and phenomena that boost and support co-creation (Schiavone, Metallo and Agrifoglio, 2014), thus impacting on the behaviours of brands and consumers online. The ease of interaction and connection promotes social bonding and social bridging, thereby enhancing information exchange and increasing the power of collective wisdom (Eisenbeiss et al., 2012; Ellison et al., 2007; Smith, 2010). Additionally, through continuous interaction, co-creation can develop unconsciously and unintentionally (Kao et al., 2016). Finally, Potts et al. (2008) highlight the actuality of situated creativity on social media, referring to creativity situated in localised and contingent systems of social interaction, not the creativity exclusively held by an individual (Potts et al., 2008). This provides brands with easier access to knowledgeable consumers, leveraging the search tools of social media to reduce the costs of identifying and targeting consumer co-creators (Piller and Ihl, 2009).

It appears the impact of social media in enabling co-creation rests primarily on the structure of social media platforms, and, the behaviours of users (brands and consumers) on these platforms. In this regard, the review of social media seeks to explore Digitally Enabled Social Networks (DESNs) and Virtual Consumer Communities (VCCs), and their role in enabling co-creation. DESNs are amongst the most widely used social media platforms, with sites such as Facebook having upwards of 2 billion monthly active users (Facebook, 2017). VCCs share similar characteristics with DESNs, however they are usually centred on a specific topic, and users gather due to a shared common interest. VCCs are commonly concentrated on a specific brand or product category.

The discussion provides a background to the subject of DESNs and VCCs, defining them in the context of this research. Following this, the review of social media literature (DESNs and VCCs) focuses on identifying characteristics associated with the structure of the platforms, and the behaviours of users and their potential to enable co-creation. The identification and discussion of these characteristics is guided by the existing literature pertaining to the role of social media in enabling co-creation. The aim of this is to develop a fundamental understanding of the specific characteristics of social media that are likely to have a positive impact on the co-creation-NPD relationship.

2.5.2 Digitally Enabled Social Networks (DESNs)

DESNs and VCCs are considered amongst the most important tools for brand-consumer interactions of the modern age. This discussion aims to provide background knowledge of DESNs in the context of this research, and explore specific characteristics that are likely to impact the co-creation-NPD relationship. A Digitally Enabled Social Network (DESN or social network) is defined as:

> "A set of people or groups of people with some pattern of contacts or interactions between them." (Wasserman and Faust, 1994)

DESNs are the virtual representation of real-life networks, built up of people (users) who share some connection or relationship with another user. Rather than viewing DESNs as a communication tool, it is important to stress that they are viewed as collections of users who are connected by links (Easley and Kleinberg, 2010). Ellison (2007) outlines DESNs as web-based services that allow individuals to:

1. Construct a public or semi-public profile within a bounded system.

2. Articulate a list of other users with whom they share a connection.

3. View and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site.

DESNs not only allow individuals to connect with strangers, but users within a DESN are able to construct a profile, articulate their interests and make their social networks visible (Boyd and Ellison, 2007). This ability to articulate a public profile and openly display interests facilitates ties between users, who in ordinary circumstances may never have communicated. Moreover, DESNs promote the formation of 'latent ties' where users have previously made some sort of offline connection (Haythornthwaite, 2005). The ability to connect with users with similar interests allows for discussion and information transfer centred on a specific topic. Furthermore, DESNs overcome geographical and temporal barriers to ties, enabling geographically dispersed individuals with shared interests to gather online (Thomsen et al., 1998). A social network is likely to be built from users with diverse backgrounds and access to different information, supporting the increased access to information proposed by Prahalad and Ramaswamy (2004).

The foundations of a DESN are similar to those of real-life social networks; both are made up of users who form relationships. A key difference is the transparency in DESNs, particularly in being able to view other user's relationships and the ability to construct a public profile. Wasserman and Faust (1994) develop a number of assumptions about networks that categorise the resulting structure of networks:

*   Users and their actions are viewed as interdependent rather than independent, autonomous units.

*   Relational ties (linkages) between users are channels for transfer or 'flow' of resources (whether material, such as money, or nonmaterial, such as information).

*   Network models focusing on individuals view the network structural environment as providing opportunities for or constraints on individual action.

*   Network models conceptualise structure whether social, economic, political, and so forth as enduring patterns of relations among users.

Of particular relevance is the notion that linkages between users are channels for resource flow. DESNs build the capability for many-to-many, consumer-consumer (C2C) interactions, and brand-consumer interactions (Brodie et al., 2011). This echoes the discussion of social media and co-creation, whereby social media is regarded to promote information exchange and communication. In respect to co-creation, information is considered a key vital resource and knowledge the source of strategic benefit

(competitive advantage). The notion that social media fosters a high number of connections (many-to-many) implies social media enables information exchange to a higher degree and is considered a key benefit of using social media to enable co-creation.

Additionally, of particular relevance to co-creation and NPD is the formation of networks within a network. This is characterised by sub-groups created around a specific area of interest or topic. Frequently, this is evident through the creation of groups dedicated to a specific brand or product category in the context of the wider DESN. In respect to co-creation, this groups those consumers who have a shared interest, and is likely to reduce the search costs for brands seeking informed and knowledgeable consumers (Piller and Ihl, 2009).

Groups are characterised as clusters of highly interconnected users, they are densely knit, i.e. most information exchanged stays within the network (Wasserman and Faust, 1994; Wellman, 1997). Groups are usually characterised by a 'high network density', which is the measure of actual ties compared to the number of theoretically possible ties (Garton et al., 2007). Highly dense networks are more likely to be an abundant source of knowledge resources. High numbers of ties between individuals with shared interests is likely to promote information exchange as ties consist of resource flow. By targeting groups centred on relevant interests (in respect to a brands NPD project), brands can minimise search costs, view interactions between consumers, and actively reach out and interact with consumers.

2.5.3 Virtual Consumer Community (VCC)

A Virtual Consumer Community (VCC) shares many of the same characteristics as a DESN; the key difference separating the two is that a VCC is centred exclusively on a specific topic or subject. Of particular interest are VCCs that are centred on a specific product category or brand (Muniz and O'Guinn, 2001; Zaglia, 2013), as these are regarded as most influential in enabling co-creation in NPD. In the context of this research, a VCC is defined as:

> *"A specialised non-geographically bound, online community, based on social communications and relationships amongst users with a shared interest in a specific brand or product category."* (De Valck et al., 2009)

Members share a common interest, enthusiasm or even love for a brand; this is vital in providing brands easy access to both informed and passionate consumer co-creators (Albert, Merunka, and Valette-Florence, 2008). Greater emphasis is placed on the role of information exchange in VCCs in functioning as social interaction, as users gather primarily to discuss a specific subject, brand or product category (Andersen, 2005; Bagozzi and Dholakia, 2002; Woisetschläger, Hartleb, & Blut, 2008).

Communication and interaction are the focus of online collaboration in a VCC. Membership of a VCC and shared interests are likely to reduce the barter in exchange for information between users (Craig and Zimring, 2000). As members share an interest, involvement and interaction produces affinity, may create a bond, and generate consumer feelings of empowerment (Cova and Pace, 2006; De Valck et al., 2009). The strengthening of the bond between both consumers (C2C) and brands (B2C) promotes information exchange, interaction and involvement; these exemplify the cornerstones of co-creation.

VCCs group consumers with valuable knowledge together, reducing search costs for brands in respect to their NPD projects. Moreover, information exchange in respect to a product category or brand allows for both consumer and brands to exchange personal experiences, learn more information about products, and take advice from other consumers (Zaglia, 2013). Ongoing interaction in the community develops users' product knowledge through engaging in product-related conversations. VCCs typically exhibit a large focus on providing peer support in solving problems and generating new product ideas (Fuller et al., 2007). Focused communication leads to brand/product knowledge being accumulated over time, and the development of strong ties between community members. Consumer-consumer interactions are a source of value for brands as they are likely to be built on vital solution information. This socialisation leads to the creation and transfer of knowledge that presents a source of novelty for the firm.

VCCs are characterised as computer mediated spaces abundant with user generated content and communication (Hagel and Armstrong, 1997). Due to the lack of geographical restrictions on information, the information exchanged surpasses physical limitations; this leads to the exchange of highly diverse communication with versatile content (Zaglia, 2013). This is particularly relevant to driving the rise of the connected, informed, active consumer, and the co-creation approach (Prahalad and Ramaswamy, 2004). Patterson (2012) stresses the role of social media in empowering consumers:

"Along with other forms of computer mediated communication, they [social networking sites] have transformed consumers from silent, isolated and invisible individuals, into a noisy, public, and even more unmanageable than usual, collective." (Patterson, 2012)

The emergence of social media and in particular DESNs and VCCs is further fuelling the empowerment of consumers and their desire to be involved in NPD. VCCs are a powerful, interactive engagement platform for enabling both consumer-to-consumer (C2C) and brand-to-consumer interactions (B2C) (Sawhney et al., 2005).

The value of VCCs to co-creation is partially due to the reduction in search costs for consumers with valuable and relevant information, but also the impact of community activity in respect to co-creation. Community activity has been described as 'the biggest change in business in 100 years' (Ahonen and Moore, 2005). Wiertz and de Ruyter (2007) examine brand-hosted online communities, in which consumers interactively engage to help solve each other's service problems. The results suggest that the most active community members, in terms of quantity and quality, act primarily out of commitment to the community. This emphasises the power of the community in promoting information exchange, mutual collaboration and sense of duty amongst community members. In respect to co-creation, this is likely to drive consumer motivation due to a shared sense of responsibility. Additionally, VCCs provide an environment where users, through individual and collaborative effort, create and co-create valuable experiences for themselves, other members and brands (Porter and Donthu, 2008; Schau et al., 2009).

2.5.3.1 Consumer roles on social media

A key consideration of the design of co-creation experiences is identifying consumers with relevant and valuable information. Brands seek to minimise the cost of identifying and managing interactions with consumers (Pihler and Ihl, 2009). In this regard, DESNs and VCCs are considered to not only foster communication, but boost the ease with which brands are able to target co-creators through the existence of roles online.

VCCs group consumers with relevant knowledge; this is key in reducing search costs. Additionally, the existence of roles within VCCs distinguishes the most active and perhaps knowledgeable consumers within the network. VCC users can be categorised according to their actions within the community. These roles help distinguish the most active and potentially valuable contributors to NPD. Fuller et al. (2004) highlight specific

roles within VCCs that can help indicate the potential value of a consumer to a brand's NPD project (summarised in Table 2.16 overleaf).

Table 2.16 Characteristics of VCC users

Role	Characteristics
Tourist	• Lacks strong social ties to the group • Has a rather small or only contemporary interest in the topic
Mingler	• Maintains strong social ties • Not really into the topic
Devotee	• Highly involved with the topic • Not very related to the community
Insider	• Highly associated with the community • Highly involved in the topic

Source: Fuller et al. (2004)

The existence of roles and the ability of brands to identify users adopting these roles significantly impacts the ease with which they can target co-creators. Kozinets (2002) highlights that devoted, enthusiastic, actively involved and sophisticated user segments are represented in VCCs as insiders and devotees. VCCs provide brands with the platform to target active users (devotees and insiders) to gain access to both their knowledge and influence in the community. They possess similar characteristics to lead users (von Hippel, 1972) and through their ongoing participation in the community are highly respected (Kozinets, 2002). These users can have a strong influence on opinions towards the brand, and possess considerable amounts of valuable information in respect to the brand's NPD projects.

2.5.3.2 Motives of information exchange

In addition to identifying consumers with relevant knowledge, it is also important to understand what drives consumers to exchange information and potentially participate in co-creation. The locus of value in co-creation is involvement and interaction between the brand and consumer (Prahalad and Ramaswamy, 2004). To explore the role of social media in enabling co-creation experiences, it is important to understand the underlying motives that promote interaction online. Hennig-Thurau et al. (2004) identify eight specific motivating factors for consumer interactions on social media as:

1. Venting negative feelings

2. Concern for other consumers

3. Self-enhancement

4. Advice-seeking

5. Social benefits

6. Economic benefits (e.g. cost savings)

7. Platform assistance

8. Helping the brand

The nature of social networks facilitates greater information sharing due to these motivating factors. The barriers for knowledge exchange are lower due to a user's affinity towards the brand, the strong ties developed in VCCs and the perceived benefits of contributing. Oldenburg (1999) and Figallo (2004) propose that of these benefits, social benefits are of the most influence. Social benefits drive 'devotees' and 'insiders' to contribute a large quantity of high quality information out of commitment towards the community (Brodie et al., 2013). This signals the impact of social media on impacting the behaviours of consumers. Through the development of community rituals and a sense of duty towards other users, consumers are increasingly driven to co-create to deliver value not only for themselves, but also for the wider community.

In addition to the motives outlined above, social media are considered to enhance the benefits experienced by consumers through online co-creation. Consumer activity in co-creation is entirely voluntary, their motivation and the quality of contributions is likely to be dependent on the perceived benefits (Nambisan, 2002). Of particular significance is the impact of social media on the community and medium related benefits consumers experience through co-creation (Nambisan, 2002).

Community related benefits are derived from consumers' sense of responsibility to the wider community. Any benefit derived from contribution to NPD assumes more importance as this affects not only the consumer, but also their community members (Nambisan, 2002). Consumers construct strong social identities as well as strong ties with other community members; this allows consumers to discharge their 'generalised reciprocity' obligations through sharing knowledge and information with others in the community (Ekeh, 1974). Social media allows contributions to be viewed by both the brand and peer consumers. This satisfies consumer's desires for peer recognition along with their 'status seeking' within the network (Nambisan, 2002). Oliver (1999) notes that the product is no longer the consumable, it is now the camaraderie provided by the network. Community related benefits are related largely to behaviours of social media users, and the co-creation of experiences aside from the tangible product.

Medium related benefits refer to the positive consumer experience provided by the communication platform (network) (Nambisan, 2002). These platforms can provide optimal online interactions that are extremely gratifying to consumers. The platform allows consumers to connect, share and create knowledge and contribute to development (Nambsian, 2002). Medium related benefits come as a result of the design of the social network. This is something brands should consider, as effective social network design can lead to greater contributions. The structure of social media in enabling interaction is considered to enhance the medium related benefits of co-creation.

2.5.3.3 Community markers

The development of a community experience is key in facilitating interaction, and a potential source of experiential value through both consumer-to-consumer and brand-consumer interaction. This section explores the unique community markers that develop from online interaction, and their potential impact on co-creation. Casaló et al., (2008) identify three community markers that form through online interaction. These are displayed in Table 2.17 (below).

Table 2.17 Community markers on social media

Community Markers	Behaviour
Consciousness of Kind	• Perceived membership of participants • Intersects with social identity theory (Bagozzi and Dholakia, 2006) • Members feel connected with each other, developing a feeling of belonging from membership to the brand community
Shared Rituals and Traditions	• Social processes
Moral Responsibility	• Sense of duty or obligation to the community as a whole, and to its individual members

Source: Casaló et al. (2008)

The formation of community markers on social media result in a unique set of rituals that promote knowledge sharing and exchange. These community markers result in community members feeling morally committed to others in the community (Casaló et al., 2008). This moral commitment reduces or even removes barriers to exchange as helping another user is regarded as mutually beneficial. This responsibility can appear in the form of supporting members with usage information, integrating new members into the community or providing information or support to peers (Muniz and O'Guinn, 2001). This 'community effect' is beneficial for the brand as more knowledge is likely to be shared and created within an online community. This is particularly valuable in respect

to co-creation as Vargo and Lusch (2008) outline knowledge as the fundamental source of strategic benefit. The discussion of social media to this point focuses heavily on knowledge and information exchange. The nature of DESNs and VCCs promote a unique set of rituals and motivations in respect to knowledge sharing and information exchange. These behaviours of social media users provide considerable value to the co-creation of value through the sharing and creation of knowledge.

The discussion of DESNs and VCCs to this point introduced the social media platforms of interest and a number of characteristics that provide the rationale for focusing on their impact in enabling co-creation in NPD. The remainder of this chapter comprises of a thematic literature review to explore specific characteristics relating to the structure of social media (DESNs and VCCs) and the changing behaviours of users (brands and consumers) in respect to enabling co-creation. This is guided by the prior discussion of social media and co-creation – particularly how social media enables co-creation (structure) and how the brand-consumer relationship has changed (behaviour) necessitating the need to adopt a co-creation approach.

2.5.4 Structure of an Online Network

To explore the role of social media in enabling co-creation, it is vital to identify specific social media characteristics that drive brand-consumer interaction and in turn enable co-creation. The discussion begins by outlining how users are connected through social media. This provides relevant knowledge as a precursor to identifying specific characteristics that enable co-creation. Following this, there is a specific focus on structural characteristics of DESNs and VCCs in respect to enabling interaction, collaboration and ultimately co-creation.

Figure 2.10 (overleaf) illustrates a simple network made of four users (A, B, C and D). The lines between each node represent the relationships between users. These relationships consist of resources flowing between each user. In DESNs and VCCs, the relationship (resource flow) primarily consists of textual, graphical, animated, audio or video-based media. The majority of resources are intangible, hence the focus on knowledge and information (Haythornthwaite et al. 1995). This provides a simple view of how brands and consumers are connected in DESNs and VCCs.

Figure 2.10: Structure of a network
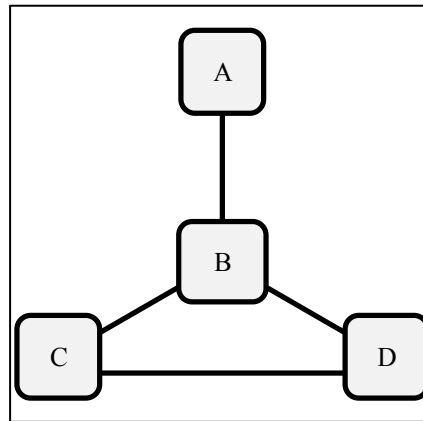
Source: Adapted from: Newman (2003)

If we take B to be the brand, Figure 2.10 outlines a connection with three consumers. Furthermore, a connection between C and D represents a consumer-to-consumer connection. This outlines the value of both B2C and C2C interaction on social media, in respect to knowledge sharing. Particular emphasis is placed on the connections between users as these enable interaction, information exchange and collaboration. Networks are centred on resource flow, the larger the network the larger the potential for knowledge sharing and resources transferred.

Relations represent an exchange between two users within a network. They are characterised by content, direction and strength (Garton et al., 1997). The content of a relation refers to the resource that is exchanged. These relations can be directed or undirected. With regard to social media, relations tend to be undirected due to the two-way communication facilitated by the platforms, and notable forms of exchange include complex or difficult information (Fish, Kraut, Root and Rice, 1992); uncertain or equivocal communication (Daft and Lengel, 1986 and Van de Ven, Delbecq and Koenig, 1979) and communication to generate ideas or create consensus (Kiesler and Sproull, 1992 and McGrath, 1984).

Nodes depict users within a network; these nodes are connected through ties that characterise relationships and resource flow (Figure 2.10). Figure 2.10 showed an undirected social network with identical users and relationships (Newman, 2003). Figure 2.11 (overleaf) displays three different social networks whereby the strength of ties and directions of relationships vary.

Figure 2.11: Typology of social network structures

Network A exhibits a weak tie between users C and D, this is shown as a dashed line. Weak ties are infrequently maintained and described as non-intimate (Marsden and Campbell, 1984). Weakly tied users are less likely to share resources, however they provide access to more diverse information as each person operates in different social networks (Garton et al., 1997).

Network B shows a strong tie between users A and B, this is depicted through the weight of the line connecting them. A strong tie consists of frequent two-way communication transferring large amounts of resources. Users connected through strong ties are more likely to undertake resource exchange (Wellman and Wortley, 1990; Lin and Westcott, 1991). This is likely to represent a richer source of information for brands. By creating and maintaining strong ties with consumers, they are likely to have access to more intimate and fuller information on which they can leverage their internal capabilities.

Network C shows directed relationships from B to C, and D to B, this symbolises the direction of resource flow and is depicted through directional arrows. This characterises a one-way relationship, such as the traditional view of the brand-consumer relationship.

These aspects of the network structure are vital in understanding how brands and consumers can connect and how resources are transferred between them. The characteristics of DESNs and VCCs promote both weak and strong ties, and two-way relationships (Newman, 2003). The composition of a relationship is derived from the social attributes of the users, i.e. their position within society such as a supervisor and underling (Garton et al., 1997). These social cues are widely ignored on social media, as it is the content of the relation that is of importance, rather than the status of the user.

This is significant in reducing the perceived roles of brands and consumers in the market, transcending status barriers allowing more free flowing communication.

Moreover, both weak and strong ties play a role in resource exchange. Weak ties are easily and frequently created on social media as users can connect by simply clicking a button. A weak tie nonetheless mediates conversations and the flow of resources between users, albeit to a lesser degree. Strong ties can be the virtual representation of an existing relationship that has been formed over time. However, the ease of communication and community aspects of social media mediate the strengthening of ties as users can easily and frequently communicate. Overtime, weak ties strengthen and, in turn, resource flow and information exchange increase.

The nature of DESNs and VCCs promote information exchange and the strengthening of relationships, which is considered vital to the co-creation of value. Ease of connection, transparency in terms of interests, and two-way communication are considered pivotal in enabling collaboration and interaction. Increasingly, these are providing brands with an opportunity to exploit such platforms in the design and management of co-creation experiences. The discussion of the structure of networks provides a necessary underlying knowledge in respect to the structural characteristics of social media in enabling co-creation.

The discussion now focuses on identifying and defining specific characteristics that underpin the role of social media in enabling co-creation. These are classed as structural characteristics and behavioural characteristics. The purpose of this is to review the literature in respect to social media and develop a greater understanding of the specific features of DESNs and VCCs that potentially enable co-creation.

2.5.5 Social Media Characteristics: Structure

The following discussion outlines a number of relevant characteristics pertaining to the structure of social media (DESNs and VCCs) with respect to enabling co-creation:

2.5.5.1 Range

Range measures the distribution of connections across different pools of expertise (Reagans and McEvily, 2003). Networks with high range contain relationships that span multiple knowledge pools; range is likely to have a complementary effect on knowledge transfer. The range of social networks is measured through size and heterogeneity. Large networks are characterised by greater numbers of users and heterogeneity in the

social characteristics of users and complex structures (Wellman and Potter, 1997). Small networks on the other hand are more homogenous in nature and focus more on traditional societal norms (Garton et al., 2007).

The range of a social media platform typically reaches much further that of an offline network. In respect to co-creation, this provides brands with both greater numbers of potential consumer co-creators and access to more diverse knowledge and skillsets. In addition to the benefit of large networks, the nature of social media platforms, particularly 'networks within networks' allow brands to benefit from both homogeneity and heterogeneity of users. This provides benefits from the masses/crowd (e.g. diversity of information, number of potential co-creators), but also through the situated creativity localised in VCCs or in subsets of smaller networks (Potts et al., 2008).

2.5.5.2 Ease of ties

Ties in DESNs and VCCs can be made relatively easily as users can openly view the preferences and interests of users, identifying users whom they share offline similarities (Boyd and Ellison, 2007). Ties consist of a relationship transferring resources, most notably knowledge. The number of ties people form is likely to increase as a result of using social media as they can be formed more cheaply and easily on these platforms (Donath and Boyd, 2004).

Higher numbers of ties signify a greater number of channels for resource flow. This is beneficial for brands in terms of being able to connect and communicate with higher numbers of consumers relatively easily and cheaply. Moreover, consumer-to-consumer interactions are vital in the development of product-related knowledge, a valuable source of solution information for a brand. The co-creation paradigm stresses the central role of knowledge as an operant resource in value creation. The ease with which both brands and consumers can make and maintain 'resource consisting ties' is of significant value in promoting knowledge sharing and creation. Moreover, the ease of making ties provides brands with easier access to knowledge, as they are able to connect and communicate with consumers on an unprecedented scale.

2.5.5.3 Centrality/connectivity

Centrality relates to the level of connectedness within the network. Users who are central play a large role in information exchange; the idea of centrality highlights the most important people within a network similar to lead users (Newman, 2010). The use of lead

users in NPD is a widely acknowledged approach in incorporating consumers into brands' value creating processes (Herstatt, Von Hippel, 1992).

Centrality signifies which individuals are best connected to others, and who has the most influence. Identifying and connecting with a central user will allow a brand to exert their influence over a large number of users. Social network analysis can be used to identify users with the most high degree connections to others, and whose exit from the network would lead to it falling apart (Wasserman and Faust, 1994). Realistically, in a DESN or VCC there is no one user whose departure would cause the network to fall apart. However, users with large numbers of high-level connections can exert significant influence over a large number of users. By identifying and targeting highly connected users, brands can utilise consumers' influence in the network. This may entail developing a strong relationship with certain users in the network through ongoing communications.

Similarly, the notion of centrality highlights the opportunity for brands to link with highly connected consumers with the aim to boost information exchange and extend their reach across the network. Highly connected users can be seen as hubs of resource flow (through relationships) and also have the potential to influence, advertise or promote co-creation experiences and products through their extensive network.

2.5.5.4 Roles

Similarly, roles within networks allow brands to target specific motivated consumers. This once again echoes the sentiments of the lead user approach (Kozinets, 2002). Consumers on social media command roles far different to that of their offline persona, they can exert influence and motivate other consumers to contribute and exchange knowledge (Fuller et al., 2004).

Hoyer et al. (2010) identify the roles of innovators, lead users, emergent consumers and market mavens, and their value in the co-creation of value. The visibility of consumers' activities, preferences and to a degree their influence over their network provides brands with tools to distil consumers adopting these roles. This reduces search costs and enables brands to target consumers with significance influence over the crowd or those that fit these roles (Piller and Ihl, 2009).

Structural equivalence or regularities in the patterns of relations within networks allows the identification of network roles (Garton et al., 2007). For instance, a Facebook user who has a large number of subscribers or a high number of likes on multiples posts

develops the role of leader. Similar to the lead user concept (von Hippel, 1986) these users possess a high level of influence and possible know-how when compared to other users within the network.

Brands can connect with these users to initiate co-creation activities and use their influence to communicate with large number of users. By connecting with a high profile individual, the brand has access to the rest of their network through secondary connections. These users can act as 'technological gatekeepers' (Allen, 1977) spreading information from the brand to other users and potentially initiating two-way conversations between consumers and the brand.

2.5.5.5 Density

Network density measures the presence of strong third-party ties around a connection. Highly dense networks contain a large number of ties when compared to the maximum theoretical number of ties. High levels of ties provide the avenue for large-scale interactions, knowledge creation and transfer (Garton et al., 2007). Typically, the density of social media platforms far exceeds that of offline networks, boosting the potential for information exchange, interaction and collaboration. This is further fuelled by the ease at which ties are made on social media, as users are able to easily connect and interact, boosting the density within the platform. High levels of density signify high numbers of relationships that are characterised by resource flow.

The highly dense nature of online networks (compared to offline) promotes far greater knowledge sharing and information (exchange). This is vital in the ongoing development of consumer's product related knowledge, but also aids in the diffusion of information. Brands can use highly dense networks to educate and inform consumers (enhancing their competences in respect to NPD) and also in promoting and launching product solutions.

2.5.5.6 Cohesion

Cohesion around a relationship can ease knowledge transfer; cohesion is likely to have a complementary effect on knowledge transfer (Reagans and McEvily, 2003). Social cohesion impacts the willingness and motivation of an individual in investing, time, energy and effort in sharing knowledge with others (Reagans and McEvily, 2003). The nature of DESNs and VCCs promote empowerment, interaction and bonds between users, lowering barriers to knowledge barter (Craig and Zimring, 2000; Cova and Pace, 2006; De Valck et al., 2009). The lack of restrictions on information and instantaneous

communication facilitated through social media are regarded to boost the cohesion around online relationships.

Cohesion is vital in reducing barriers to knowledge sharing. Essentially, users are more open to sharing online. This is indicated by the reduced significance of the roles of brand and consumer online, as both are regarded as social media users. By unlocking this relationship, consumers are likely to feel more open and comfortable in communicating with a brand, promoting the ongoing and intense interactions required in co-creation.

2.5.5.7   Low degrees of separation

The 'small world phenomenon' relates to the issue of centrality, with Frigyes Karinthy (1929), proposing (prior to the development of the internet and social media), that every person in the world was no more than six people away from every other person on earth, this was termed 'six degrees of separation' (Goth, 2012).

The ease of ties, density and centrality of social media platforms results in users being connected by fewer steps. Facebook currently has in excess of 2 billion active monthly users, separated by 3.57 degrees of separation (Facebook, 2017). The mainstream adoption of social media has drastically changed the physics of information diffusion (Stieglitz, Dang-Xuan, 2013). The widespread adoption of social media reduces barriers to the diffusion of information and low degrees of separation results in information spreading at an unprecedented rate.

This presents a huge potential resource in terms of knowledge and information. Brands must develop capabilities and implement processes to try to capitalise on these potential resources in order to enhance their NPD competences.

2.5.5.8   Strength of weak ties

Granovetter (1973) proposes the notion of 'the strength of weak ties' in terms of access to diverse information and differing user's perspectives and experiences. Social media are populated by users connected by both strong and weak ties. The benefits of strong ties are stressed in respect to likelihood for users to exchange resources, however weak ties are also characterised by resource flow.

According to Donath and Boyd (2004), 'the number of weak ties one can form and maintain may be able to increase substantially, because the type of communication that can be done more cheaply and easily with new technology is well suited for these ties'.

Due to the structure of DESNs and VCCs, users form ties with almost no effort, and this provides the avenue for users to share their diverse knowledge and information.

From the perspective of brands, the value of weak ties lies in the diversity of information. As weakly tied users come from different backgrounds and have different experiences, each user's needs are uniquely shaped through their experiences. Granovetter (1982) argues weak ties are likely to provide useful information and new perspectives to other users in a network. Additionally, Hansen (1999) argues that strong ties promote the transfer of complex knowledge whereas weak ties promote the transfer of simple knowledge. Any and all information flow is valuable to brands, particularly in respect to consumers' wants and needs. Weak ties provide brands with an abundance of information upon which they can apply their technical know-how and bundle of resources to reduce these needs.

Social media promote the formation of weak ties through the ease at which users can communicate and connect. Moreover, the ease of interaction aids the transition from a weak tie to a strong tie, boosting resource flow in the long run. By mitigating the face-to-face interactions traditionally required in developing a strong tie, users can form strong ties with people whom they have never met, but with whom they constantly communicate back and forth. This is particularly applicable to networks within networks and VCCs as an electronic tie coupled with shared interests and activities may be sufficient to stimulate strong ties between users.

2.5.5.9 *Overcoming geographical and temporal boundaries*

The discussion of co-creation outlines the role of digital technologies in providing consumers access to information from around the world (Prahalad and Ramaswamy, 2004). Likewise, social media platforms reduce the geographical and temporal restrictions on information. The information exchanged surpasses physical limitations; this leads to the exchange of highly diverse communication with versatile content (Zaglia, 2013).

The features of DESNs and VCCs allow users to interact in their own time as there are no time restrictions and any message is sent in a digital format. Moreover, the platforms enable geographically dispersed individuals with shared interests to gather online (Thomsen et al., 1998). This once again boosts the sharing and exchange of diverse knowledge and information, maintaining the focus of knowledge as the source of strategic benefit to a brand (Vargo and Lucxh, 2008).

2.5.5.10 Ease of search

A key issue regarding the design of co-creation experiences is the cost incurred by the brand in searching for consumer co-creators (Piller and Ihl, 2009). Through the discussion of previous characteristics, the role of social media in reducing search costs is outlined particularly with respect to the notion of networks-within-networks, and VCCs centred on a specific subject.

Social media platforms allow users to search for other users based on a wide range of criteria including, but not limited to, demographic information, interests and activities. The public nature of a user's profile and transparency in respect to their interests and activities allows brands to perform targeted searches for potential consumer co-creators, accessing information that is not openly available without social media.

This type of proactive engagement from the brand is likely to facilitate the transfer of knowledge. Engaging in such activities is likely to boost consumer motivation, resulting in reciprocal participation, and interactive communication and activities as both parties are rewarded (Brodie et al., 2013).

2.5.5.11 Visibility of preferences/interactions

Visibility of preferences reiterates the ease of search as consumers can overtly display interests and activities in their everyday life through social media platforms. Additionally, brands are able to indirectly view interactions between social media users, as a potential source of solution information. Brands can monitor consumer feedback and inform consumers of others' opinions (Gallaugher and Ransbotham, 2010).

Social media platforms are regarded as powerful tools for consumer-to-consumer (C2C) recommendations, with specific consumer evaluations assuming a level of credibility representative of the wider population (Sawhney et al., 2005; Brodie et al., 2013). Brands can listen in on consumer-to-consumer interactions, and indirectly solicit information about their NPD projects, identifying trends in the network (Wasserman and Faust, 1994).

2.5.5.12 Diversity of information

The diversity of information on social media is a constant discussion point in the review of other social media characteristics. DESNs and VCCs are characterised by both large and small networks, providing the benefit of having access to homogenous and

heterogeneous networks. Consumers and brands alike have access to a mass of diverse information and knowledge (Garton et al., 2007; Wellman and Potter, 1997). Prahalad and Ramaswamy (2004) stress the importance of the diverse elements of consumer knowledge in impacting co-creation, and the need for brands to capture this.

2.5.5.13 Intensity of interactions

Co-creation outlines the impact of consumer knowledge to a brand's value-creating processes; this is built on ongoing and intense interactions. A key criticism of consumer contributions in value-creation is their inability to fully articulate their needs, and is a large reason behind the uncertainty of market needs (Trott, 2001). Social media platforms provide a low-cost platform, mediating iterative interactions to take place over long periods of time. This provides consumers with greater freedom and time to articulate both their explicit and implicit needs. Moreover, the two-way communication flows allow brands to prompt and probe to ensure they capture all relevant information.

Additionally, social media platforms provide multiple forms of expression through textual, graphical, animated, audio or video-based media. The various methods of expression provide a path for the easy transfer of knowledge, decreasing the time and increasing the likelihood of transfer (Levinthaal and March, 1993; Hanses, 1999). The intensity of interaction enabled through social media provide far richer insight than that of traditional, one-way interaction (through market research), reducing the damaging effects of a consumer's inability to articulate needs and problems (Hamel and Prahalad, 2004).

2.5.5.14 Ease of knowledge conversion

Knowledge is considered a vital operant resource in the co-creation approach. The collaboration of brands and consumers is built on interaction and knowledge sharing; accordingly, the ease with which knowledge is integrated in value-creating processes assumes significance.

Knowledge integration is defined as creating, transferring, sharing and maintaining information and knowledge (Wijnhoven, 1999). Brands seek to integrate relevant and valuable knowledge into their resource bundles and leverage their existing capabilities with new knowledge (Pisano and Wheelwright, 1995). Co-creation experiences are only as effective as the management of knowledge, with knowledge considered the source of strategic benefit (Vargo and Lusch, 2008).

Information regarding consumer needs (a key component of solution information) can be exchanged through the intense interactions enabled by social media. The rich, two-way interactions allow consumers to disclose their explicit needs in regards to product functions and features, or experience expectations.

Moreover, tacit knowledge is transmitted through the socialisation process (Merali and Davies, 2001). Traditionally, tacit knowledge is difficult for brands to assimilate (Cohen and Levinthal, 1990). Spender (2003) suggests that tacit knowledge is profoundly attached to people. It is a driving force behind NPD performance and its transfer is crucial in leveraging existing resources (Cross and Baird, 2000). Social media provides both the platform for interaction and groups of consumers with shared interests together, promoting the conversion of implicit knowledge to explicit knowledge. Through ongoing and focused discussions around a brand or product category, consumers are able to increasingly articulate the foundations of their tacit knowledge, converting it to explicit knowledge.

The structural characteristics of social media relate primarily to the role of social media in promoting knowledge sharing and information exchange, both between the brand and consumer, and consumer-to-consumer on a global scale. This reiterates a number of beneficial characteristics discussed through the co-creation literature (e.g. access to information, global view, networking etc.) and focuses primarily on the value of knowledge as an operant resource.

2.5.6 Social Media Characteristics: Behaviours

A key factor in the growth of the co-creation paradigm is the shifting nature of the brand-consumer relationship, signified by a coalescing of roles and downstream shift in power. The growth of social media, coupled with informed, empowered and active consumers has been pivotal in driving this shift (Prahalad and Ramaswamy, 2004). This denotes an impact from social media on brand and consumer behaviours, building the foundations of a co-creation approach.

In addition, there are a number of characteristics of social media platforms that promote a unique set of behaviours by users. These centre primarily around the effects of the community on knowledge sharing, empowerment and motivating consumer co-creators. This narrative explores the relevant characteristics of DESNs and VCCs in impacting brand and consumer behaviours.

2.5.6.1 E-WOM

Electronic word-of-mouth (E-WOM) is defined as 'any positive or negative statement made by consumers about a product or brand, which is shared via the Internet' (Hennig-Thurau, Gwinner, Walsh & Gremler, 2004). E-WOM is a manifesto form of consumers' engagement with a brand, accordingly E-WOM is considered to directly impact co-creation and vice versa (See-To and Ho, 2014).

Co-creation occurs through the strengthening of the bond between brands and consumers. Similarly, E-WOM influences purchase intentions through its impact on consumers' trust (Chan & Ngai, 2011). The co-creation of value is likely to boost positive E-WOM as the consumer and brand are intimately involved in jointly creating value (Prahalad & Ramaswamy, 2004).

E-WOM can be considered an outcome of co-creation; the range and diffusion of information on social media provide the consumer with a powerful voice to spread either positive E-WOM or negative E-WOM. This is significant for two reasons. Firstly, positive E-WOM enhances purchase intention and negative E-WOM reduces it, and is meaningful from the perspective of the brand (Bailey, 2004; Xia & Bechwati, 2008). Secondly, positive E-WOM impacts consumer trust, and is likely to motivate other consumers to co-create value with a brand (Abela & Murphy, 2008).

2.5.6.2 Community effects (consumer motivation)

Claycomb et al. (2001) outline the importance of consumer motivation in the success of co-creation. Social media platforms develop distinct community rituals and norms that motivate interaction and information exchange. The discussion of community-related benefits of social media (Nambisan, 2002) outlined the distinctive community aspect of social media in motivating activity within a network. Moreover, the development of roles and community markers on social media provide distinctive motivation for consumer co-creators.

Kozinets (2002) highlights that devoted, enthusiastic, actively involved and sophisticated user segments are represented in VCCs as insiders and devotees. Consumers adopting these roles are driven by their status within the network, and possess considerable influence. Brands can seek to collaborate with these users or 'insiders' as intermediaries, and leverage their authority across the network.

The discussion of community markers outlines the moral commitment of users on social media and the resultant effect on reducing barriers to exchange. This responsibility can manifest in the form of supporting users with usage information, integrating new members into the community or providing information or support to peers (Muniz and O'Guinn, 2001). The community effects of social media enhance the benefits derived from contributing to NPD, as this impacts not only the consumer co-creator but also other community members (Nambisan, 2002). This shows the importance of 'general reciprocity' as consumers adopt altruistic motives and seek to deliver value to their personal network.

2.5.6.3   Unlocking social relations

Social media allows users to overcome social status and norms, opening up communications between diverse users (Rheingold, 1993; Barlow, Birkets, Kelly & Slouka, 1995, Hoyer et al., 2010). Social media users construct a public profile; this is how they want to be viewed in the network. There is less distinction between brand and consumer and both are considered social media users with an equal voice. Social media platforms lower barriers to interaction and encourage more self-disclosure enabling interactions and connections that otherwise would not occur (Bargh, McKenna and Fitzsimons, 2002; Tidwell and Walther, 2002). This is vital in promoting knowledge sharing and in the transition towards markets as a forum for exchange.

2.5.6.4   Empowerment of consumers

The rise of the empowered consumer is directly linked to the growth of the web and digital technologies, and is widely discussed in respect to driving co-creation (Hoyer et al., 2010). Social media provides consumers with access to unlimited amounts of information, and platforms through which to interact with brands and other consumers on a global scale (Hoyer et al., 2010). The co-creation paradigm emerges as a result of the transition from consumers as passive recipients of value to an empowered group; this is fuelled by the role of social media (Law et al., 2003; Seybold, 2006).

Social media not only empowers consumers, but provides brands with a platform to transfer information and tools to enable consumers to co-create value and build personalised experiences (Prahalad and Ramaswamy, 2013; Payne et al., 2008; Storbacka and Lehtinen, 2001). The role of social media in empowering consumers and as a platform for brands to transfer information is supported by the extension of the DART (DARTT) framework to include technology management (Schiavone, Metallo & Agrifoglio, 2014).

2.5.6.5 Knowledge sharing and creation

Knowledge sharing and creation is a constant theme discussed through the structural characteristics of social media. Increased knowledge sharing and creation is enabled through a combination of the previously discussed characteristics of social media. For instance, the discussion of the community effects of social media outlines the development of rituals that promote knowledge sharing, the unlocking of social relations lowers barriers to exchange, and positive E-WOM promotes trust and co-creation (interaction). In addition, a particularly relevant notion is that of social capital.

Bourdieu and Wacquant (1992) define social capital as 'the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition'. Social capital broadly refers to the resources accumulated through the ties within a network; various forms of social capital are related to indices of psychological well-being, such as self-esteem and satisfaction with life (Bargh and McKenna, 2004; Helliwell and Putnam, 2004).

Social capital is built through interaction and recognition within a network. Social media provides the platform for individuals to connect with others who share interests and goals, the visibility of interactions can lead to further ties being made thus increasing the social capital of users (Ellison, Heino, and Gibbs, 2006; Horrigan, 2002). Users are gratified through the number of ties likes, shares, comments on public posts, boosting their social capital.

This promotes interaction and exchange not only due to the community aspects of social media, but also to build social capital. In respect to co-creation, ongoing discussion in a targeted network or VCC builds information exchange based on a specific subject. This promotes knowledge sharing, conversion of tacit to explicit knowledge, and the potential for brands to access valuable solution information. In addition, the unlocking of social relations further reduces the distinction between a brand and consumers, as both are considered 'users' of social media, and enables low-pressure, two-way communication.

2.5.6.6 Pervasiveness of social media

The pervasiveness of social media refers to the ever-growing presence and use of social media in consumer's daily lives. Throughout this chapter, the discussion touches on the ubiquitous connectivity consumers have access to, the rise of 'digital natives' and the vast number of active users (e.g. Facebook 2017- 2 billion monthly active users) on

social media. Consumers now feel at home communicating through social media, and this is evident as brands increasingly adopt and build a virtual presence.

This characteristic embodies a number of elements discussed in respect to the previously discussed factor. Simply, social media has fundamentally changed how brands and consumers communicate. The sheer volume of consumers and ease of interaction presents a huge opportunity. As the co-creation literature emphasises the appropriate selection of engagement channels (Prahalad and Ramaswamy, 2004), the growth and pervasiveness of social media is likely to impact approaches to co-creation on an ongoing basis.

2.5.7 Social Media Summary

The review of social media commenced by exploring the current literature relating to the role of social media in enabling co-creation. This was then used to guide the thematic review of the literature to identify social media characteristics considered to positively impact the design and management of co-creation experiences. Exploration of the social media characteristics was done so in line with the aim of developing a greater fundamental understanding of the role of social media in enabling co-creation.

The social media characteristics centre on the structure of social media (DESNs and VCCs) and the behaviour of users on these platforms. Structural characteristics are typified by access to information on a global scale, the ease of interaction and information exchange, and the role of social media in facilitating ties which are characterised by resource flow.

Behavioural characteristics centre on the changing nature of both brands and consumers on social media; including the impact of social media on consumer co-creation motivation, reducing barriers to knowledge sharing and information exchange, unlocking social relations and the distinction between brands and consumers. Exploration of social media characteristics provided a vital underlying knowledge of the ways in which social media enables co-creation, and provided significant direction in respect to the research approach, and the subsequent stages of research.

2.6 Key literatures

The aim of the discussion in this chapter is to analyse the relevant literature to develop a deep understanding of the relevant aspects of the research and distil what has been done in previous research. The literature review loosely focuses the discussion on four

key areas: NPD, S-D Logic, co-creation and social media. These areas embody the three research elements (NPD, co-creation and social media); additionally, the S-D Logic is explored as a vital precursor of co-creation, and the underlying mind-set of the co-creation paradigm.

NPD is the process under investigation. Traditionally NPD is characterised by high failure rates, partially due to information asymmetries as technical knowledge resides primarily with brands, whilst consumer needs reside with consumers. The NPD lifecycle is defined as having six stages, and this delivers the parameters on which to explore the role of co-creation in enhancing competences. Additionally, the NPD CSFs are explored to understand the factors that underline NPD success, as a first step in exploring the competitive impact of co-creation on NPD.

Co-creation is the approach under investigation. The literature review explored the philosophical underpinnings (S-D logic), the changing nature of markets, the brand-consumer relationship, and the fundamental shift in how value is created through NPD (brand and consumer collaboration). Emphasis was placed on a 'complete' co-creation approach in the pursuit of value maximisation, and of particular relevance was the design of effective co-creation experiences to promote a complete co-creation approach.

Stressing the design of co-creation experiences opened the avenue of enquiry to examine the role of social media in enabling co-creation. The literature stresses the impact and use of social media in co-creation to a degree. Building on this, the review sought to build a greater understanding of how and why social media can be used in the design of effective co-creation experiences through collecting social media characteristics.

Mastering the relevant literature is vital in driving the next stages of the research to explore the research topic in line with the research aim. To provide early guidance to the next stages of research, Table 2.18 (overleaf) outlines the key literatures in respect to specific areas relating to NPD, S-D Logic, co-creation and social media. This provides an overview of the key literature relevant to this research project, and the specific concepts and areas that assume particular significance in the context of this research.

Table 2.18 Key Literature

Literature Review section	Specific area of focus	Key literatures
NPD	*NPD Lifecycle*	Booz Allen and Hamilton, 1982; Cooper and Edgett, 2006; Cooper and Kleinschmidt, 1986; Edgett, 2011 & 2015
	NPD CSFs	Cooper 2013
	Closed innovation	Chesbrough, 2003; von Hippel, 1978
	Open innovation	Von Hippel, 1986; 1998 & 2005; West and Gallaugher, 2006; Nambisan, 2002; Chesbrough, 2006
S-D Logic	*G-D logic Vs. S-D Logic*	Vargo and Lusch, 2004
	Foundational principles	Vargo and Lusch, 2004, 2008, & 2016
	Brand-consumer relational processes	Vargo and Lusch, 2006
Co-creation	*Co-creation paradigm*	Prahalad and Ramaswamy, 2004
	Brand consumer relationship	Prahalad and Ramaswamy, 2004
	New frame of reference for value creation	Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2008
	Complete co-creation	Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2008; Prahalad, 2004; Hoyer et. Al., 2010
	Co-creation Experiences	Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2008, & 2016; Prahalad, 2004; Schiavonne, Metallo and Agrifoglio, 2014; Hoyer et. Al., 2010
Social Media	*Social media and co-creation*	Prahalad and Ramaswamy, 2004; Hoyer et. al., 2010; Lusch et. al., 2007; Schiavonne, Metallo and Agrifoglio, 2014; Piller et. al., 2012; Piller and Ihl, 2009
	DESNs	Ellison, 2007; Haythornwaite, 2005; Brodie et. AL., 2011; Newman, 2003
	VCCs	Zaglia, 2013; De Valck et al., 2009; Cova and Pace, 2006; Fuller et al. 2004; Nambisan, 2002; Figallo, 2004; Casaló et al., 2008
	Social media characteristics (structure)	Reagans and McEvily, 2003; Boyd and Ellison, 2007; Newman, 2010; Hoyer et. al., 2010; Garton et al., 2007; Facebook, 2017; Donath and Boyd, 2004; Zaglia, 2013; Brodie et al., 2013; Gallaugher and Ransbotham, 2010
	Social media characteristics (behaviour)	Chan & Ngai, 2011; Kozinets, 2002; Nambisan, 2002; Hoyer et al., 2010; Ellison, Heino, and Gibbs, 2006, Facebook, 2017

2.7 Research Gaps

The previous section summarises the key literatures supporting the literature review. As previously stated, the research adopts an interpretivist philosophy, seeking to explore

the combination of three distinct schools of thought. In respect to the literature review, the researcher has attempted to link existing bodies of literature in respect to the research aim. This approach is effective in both providing a foundation of knowledge to shape the research approach, but also highlights the research gaps and provides guidance for the next stages of research. The research gaps shaping the subsequent stages of researched are considered as follows:

Co-creation-NPD relationship: Whilst co-creation and NPD have been extensively researched as standalone concepts, there remains a lack of understanding regarding specific aspects of the relationship between co-creation and NPD. The review of the literature provides the parameters on which to investigate NPD (the NPD lifecycle) and the critical success factors of NPD. In relation to the overall research aim this provides an understanding of what NPD is and how success is achieved. However, there is a lack of literature pertaining to the relationship between co-creation and the stages of the NPD lifecycle, and similarly, the relationship between co-creation and NPD success. Co-creation is championed as an efficient and value-maximising approach to NPD however the underlying reasons of how and why co-creation delivers this impact on NPD are widely under researched (Hoyer et Al., 2010). The empirical investigation must explore this research gap to resolve the relationship between co-creation in enhancing NPD competences.

In addition, there remains a lack of research or frameworks that provide enough guidance in implementing the co-creation approach in NPD. This echoes the sentiments of Vargo and Lusch (2016) who call for more mid-range research into co-creation to provide practical guidance. At a high level, the meta-theoretical co-creation literature provides a deep knowledge of what co-creation is, what is now required is research that guides the implementation of these 'meta' principles in real life NPD scenarios. Accordingly, the research gaps pertain to both a deeper understanding of the high-level relationship between co-creation and NPD, and frameworks and tools to guide the implementation of co-creation in an NPD scenario.

Social media impact on the co-creation-NPD relationship: The extant literature supports the role of interactive platforms in enabling co-creation and highlights the impact of social media in shifting innovation management strategies towards a co-creation approach (Ramaswamy and Ozcan, 2018). Once again, whilst social media is recognised as an enabler of co-creation at a high-level, the underlying reasons as to how and why social media delivers this impact are relatively unknown.

The literature review seeks to explore this impact in greater depth by using the existing literature to guide a thematic review into the structure of social media and the behaviours of social media users. This is the first step in understanding the specific characteristics of social media that deliver a positive impact on co-creation in NPD. Going forward, the role of social media in enabling co-creation must be explored deeper, to contribute an understanding of the specific characteristics of social media that can be leveraged to deliver an impact. This is vital in providing practical contributions, a deeper understanding of this impact provides the foundations on which effective social media enabled co-creation experiences can be designed.

The outcome of this chapter is a strong theoretical base on which to guide the current study. Additionally, the review of the relevant literature is key in shaping the researcher's philosophy towards the research project and the subsequent stages of research. Chapter 3 uses the findings of this chapter to build a conceptual framework as a blueprint to guide the data collection and analysis. This includes a review of the examples of co-creation to build a contextual view of the research context, and a deeper review of focal literature.

Chapter 3: Conceptual Framework

3.1 Introduction

The purpose of this chapter is to explore the research topic in greater detail to further develop the researcher's philosophy and synthesise a conceptual framework to guide the data collection. Chapter 2 comprehensively reviewed the literature regarding NPD, co-creation and social media. A deep understanding of the relevant literature and a strong philosophical orientation are vital in ensuring the actions taken through the research are in line with the overall research aim. Accordingly, this chapter explores the relevant literature in greater detail to refine the researcher's philosophy and develop a conceptual framework to guide the research. The conceptual framework provides a blueprint, guiding the subsequent stages of research.

The first stage in developing the conceptual framework is to revisit the research aim to guide the discussion in this chapter:

'To explore the role of co-creation in enhancing NPD competences and the impact of social media in enabling co-creation.'

The research aim is embodied by three research elements: NPD, co-creation and social media. The interaction of these research elements is characterised by an incomplete state of knowledge. There is a significant dearth of literature regarding the interconnected relationships between these research elements. The discussion in Chapter 2 provided a vital knowledge foundation in guiding the research approach. The literature review explored each of the research elements through the relevant literature, and provided parameters on which the research topic could be explored. In respect to NPD, of particular significance is the understanding and definition of the NPD lifecycle and NPD CSFs. In regards to co-creation, the discussion of the core principles of co-creation, the complete co-creation approach and the design of effective co-creation experiences is most significant. Finally, concerning social media, the structure of social media and behaviours of users (collectively social media characteristics) on DESNs and VCCs provide insight into the specific features of social media that enable co-creation.

In line with the understanding gained in Chapter 2, a high-level impact of co-creation on NPD competences begins with the design of effective co-creation experiences. Co-creation experiences foster interaction and collaboration between a brand and consumer. This is considered the locus of value creation. Co-creation experiences must

motivate both brands and consumers to co-create through the NPD lifecycle. In this regard, the design of effective co-creation experiences is a vital forerunner to a complete co-creation approach.

Social media as an enabler of co-creation is of value in promoting interaction and information exchange. Accordingly, social media can be used in the design of co-creation experiences as an efficient platform in connecting the brand and consumer. Additionally, the literature review in respect to social media outlines the impact on consumer's brand loyalty, willingness to pay and WOM advertising. In this respect, social media provides a platform to host interaction, but can also deliver a high-level impact on the success of a new product.

A complete co-creation approach is considered the value maximising approach to NPD. This signifies a shift from a value-chain approach to the co-creation of value through experience networks. Co-creation is regarded to enhance a brand's competences in respect to delivering effective product solutions and valuable experiences. This results in greater economic value realised by the brand (through the commercial success of a product) and greater levels of value delivered to consumers (through effective products and valuable experiences). The results of the literature review (Chapter 2) provide a strong philosophical orientation on which to base the research approach. This chapter explores the relevant aspects of the research in further detail in respect to the research aim.

A key requirement of the co-creation approach is to fundamentally shift how value is perceived and created through experience networks. The discussion in Chapter 2 outlines the potential difficulties brands may face in firstly adopting a collaborative mind-set, and then adapting their value-creating process to implement a co-creation approach. To explore the extent to which brands are adopting a co-creation approach in NPD, the early discussion of this chapter explores the current co-creation landscape through examples of consumer goods brands. Following this, the discussion explores the relevant literature in greater detail, focusing on the co-creation-NPD relationship (co-creation experience design, high-level impact of co-creation on NPD competences) and the impact of social media in enabling co-creation. The discussion of these aspects of the research explores the perspectives of both the brand and consumer at the appropriate points.

3.1.1 Co-creation Landscape

Chapter 1 (Introduction) specified a research focus on the consumer goods sector. In the context of this research, the term 'consumer goods' refers to nondurables (FMCG) and semi-durables. This sector is characterised by high rates of incremental innovation and is a sector displaying an increasing trend of brands co-creating with consumers. The boundaries between these sectors are beginning to merge due to the shortening product lifecycles and rapid rate of incremental innovation. Semi-durables are becomingly increasingly commoditised and are transitioning towards the characteristics of the FMCG sector. Nondurables and semi-durables brands are showing an increasing reliance on and use of co-creation. To provide a contextual understanding of this industry sector, it is vital to explore the current state of co-creation to refine the researcher's philosophy and further drive the research.

The review of the literature in the previous chapter provides a strong theoretical basis to explore this topic. It presents a view of how co-creation should be implemented and how value is created through co-creation. Of particular relevance is the necessity to adopt a complete co-creation approach. This specifies that value is created through experience networks, production and consumption are inseparable and the consumer and brand should collaborate intensely throughout the whole NPD lifecycle. It is now important to develop a contextual understanding of co-creation in real-life NPD scenarios. The aim of this is to explore whether brands are both willing and able to implement the approach specified by the theory.

Exploring the co-creation landscape allows the researcher to contrast what is currently happening in context (real-life NPD scenarios) against what is proposed by the theory. This provides a greater understanding of the research topic, and the perspectives of both brands and consumers. In order to provide this contextual view, this section outlines a number of examples of co-creation in the consumer goods sector.

Table 3.1 (overleaf) provides examples of consumer goods brands co-creating in NPD. The stages of the NPD lifecycle (upfront homework, ideation, feasibility, development, testing and launch) provide the parameters on which to examine a complete co-creation approach. A complete co-creation approach would be signified by evidence of a brand co-creating with consumers throughout the NPD lifecycle. Additionally, emphasis is placed on the platforms used to interact with consumers to explore evidence of social media in enabling these interactions.

Table 3.1: Co-creation landscape

NPD Stage	Brand	Engagement Platform	Activity (Actions taken to co-create value)	Source
Upfront homework	**Nivea**	Online Platform	• Use of netnography to listen and observe consumer-to-consumer conversations in online communities as the first stage in developing a problem definition	Bartl and Biel, 2011
Ideation	**Lego**	Online Platform	• Consumers submit ideas for new Lego sets	Bry, 2014
	Burberry	Online Platform	• Consumers can submit ideas for the new trench coat design	Hughes and Hughes, 2016
	Dell	Online Platform	• Users submit new ideas and issues openly, discuss them with one other and their employees	Lam, 2016
	Starbucks	Online Platform	• 93,000 ideas submitted for new products • Consumers provide feedback on existing products	Hinks, 2014
	Nissan	Online Platform	• Consumers able to conceptualise solutions, NPD team base future offerings on consumer input	PwC, 2013
Feasibility	**BMW**	Online Platform	• Consumers able to evaluate ideas and vote for new product ideas	Hinks, 2014
	Lego	Online Platform	• Ideas are rated by other consumers and those with the highest number of votes are produced	Bry, 2014
Development	**Volvo**	Face-to-Face	• The XC90 project involved 24 participants, the majority (16) of which were involved at all stages of NPD	Roser et. Al, 2009
	Procter & Gamble	Online Platform	• Encourages and enables partners and other stakeholders to contribute and assess new ideas	Bry, 2014
	Audi	Online Platform	• Consumers able to conceptualise solutions for product characteristics, NPD team base future offerings on consumer input	Füller, 2010
Testing	**Dell**	Online Platform	• Customer feedback environments	Lam, 2016
	Unilever	Online Platform	• Creation of Axe concepts, fragrance concepts and variant name • Design team develops product based on consumer suggestions	Needham and Zohhadi, 2009
Launch	**Chevrolet**	Face-to-Face	• Consumers enabled to build the engine of their car	PwC, 2013
	Pringles	Online Platform	• Consumers submit designs for packaging of new flavour variants	Bry, 2014
	Samsung	Online Platform	• Virtual Product Launch Centre' to enlist customers help in diffusion of new product information	Roser et. Al, 2009

Table 3.1 provides a snapshot of the use of a co-creation approach in the consumer goods sector. In collecting the examples, the aim was to explore the existence of a complete co-creation approach in a real-life NPD scenario. Through the search for examples of co-creation in consumer goods, the researcher noted that whilst these brands utilise the co-creation of value in their NPD lifecycle, there are relatively few examples of brands adopting a complete co-creation approach. There is a clear trend of brands co-creating with consumers primarily in the early stages of NPD. Additionally, there are number of cases of co-creation in the post-development stages of NPD. Co-creation at the development stage appeared least common. This illustrates a limited scope of co-creation in NPD through the examples reviewed. The role of consumers appears primarily as an information provider regarding product ideas, functions/features or testing product concepts. This implies a focus on the tangible product as the source of value and little evidence of value co-creation through experiences. It appears from the examples that brands maintain a product focus and value chain approach. According to the theoretical perspective (Chapter 2), this limited scope of co-creation is not sufficient in maximising value creation.

Whilst it is evident that co-creation is occurring to some degree, the examples suggest that the levels of co-creation do not meet those set out in the literature. Whilst generalisations cannot be drawn from a small set of examples, this provides an important insight, shaping the researcher's approach to this phenomenon. The research must therefore seek to explore the ability and motivation of brands in implementing a complete co-creation approach. This is vital in maximising the high-level impact of co-creation on NPD. The existing literature is effective in outlining what is required to maximise value through co-creation (a complete co-creation approach). However, the limited degree of co-creation exhibited in these examples suggests that brands are unwilling, unable or unaware of how to adopt a co-creation approach.

This contextual view illustrates a gap between theory and practice. This shapes the research approach to explore the costs and benefits associated with co-creation in NPD. To shift to a complete co-creation approach and co-create value through experience networks, brands must be motivated (by the benefits) and be able (sufficiently guided/informed) to adapt or evolve their value-creating processes. This is an important consideration in this research, as the co-creation landscape suggests that whilst co-creation is regarded as a useful tool in NPD, there are costs or challenges associated with co-creation that prevent or dissuade brands from implementing a complete co-creation approach.

The examples in Table 3.1 display an encouraging trend of brands using social media to enable co-creation. Prahalad and Ramaswamy (2004) identify the growth of the World Wide Web as a defining development allowing the co-creation of value to take place on a wider scale. The majority of examples in Table 3.1 show the use of social media or web-based technologies. This is important as it signifies the suitability of social media to enable co-creation experiences. In the case of this research, this validates the focus on social media as an enabler, impacting co-creation in NPD.

3.1.2 Research Philosophy

Exploring the co-creation landscape coupled with a deep understanding of the literature significantly shapes the research philosophy towards the research topic. It is important to outline this philosophy to provide the rationale for the choices taken in respect to the research direction and approach.

The discussion in this chapter focuses on the interaction between three research elements: co-creation, NPD and social media. Co-creation is the core focus of the research, in respect to implementing a co-creation approach in NPD and the resultant impact of this. The emergence of the co-creation paradigm symbolises an approach to enhance the competences of a brand in NPD by adapting to changing business and market circumstances, and creating greater value. The need for improvements to the NPD process is validated by the review of NPD literature (Chapter 2), specifically the challenges and uncertainties that arise from NPD (Thomke von Hippel, 2002). In order to realise these levels of value creation, the literature stresses a complete co-creation approach, whereby brands and consumers collaborate intensely across the whole NPD lifecycle.

Brands that are able to manage the co-creation-NPD relationship effectively will ultimately achieve a competitive advantage over the competition (Prahalad and Ramaswamy, 2004). Effective co-creation can improve product quality, reduce risk, and increase market acceptance (Business Wire, 2001). Moreover, the co-creation paradigm specifies that value is not only embedded in tangible products, but in unique experiences. Accordingly, value is co-created through experience networks (Prahalad and Ramaswamy, 2004). This represents a fundamental shift in approaches to value creation, promoting interaction and collaboration throughout the NPD lifecycle (complete co-creation).

A co-creation approach is implemented through co-creation experiences. To promote a complete co-creation approach, co-creation experiences must be designed to motivate both the brand and consumer and deliver value throughout the NPD lifecycle. Consequently, effective co-creation experiences should promote the benefits of co-creation whilst minimising the costs to both the brand and consumer. Brands assume responsibility for the design and management of co-creation experiences. As co-creation is a partnership approach to value creation, the design of the co-creation experience must be informed by a deep knowledge of the key factors that motivate and impede brands and consumers from co-creating in NPD. In this regard, it is vital to understand how to develop effective co-creation experiences in order to promote a complete co-creation approach and maximise the value created in NPD.

Effective co-creation in NPD requires ongoing and intense interaction between brands and consumers (Prahalad and Ramaswamy, 2000). In regards to this research, social media is considered to be an enabler of co-creation, positively impacting the co-creation-NPD relationship. The review of the relevant literature regarding social media identifies social media as a platform to efficiently foster and manage interaction and collaboration between brands and consumers. As a greater knowledge of the co-creation-NPD relationship is developed, the impact of social media in managing this relationship must also be explored.

The review of literature (Chapter 2) and co-creation landscape (Table 3.1) provides significant direction in the approach to this research. The challenge of this chapter is to discuss and explore the research aim in order to develop a conceptual framework to guide the research actions. Currently, the literature is effective in understanding the research elements as standalone concepts. However, the interconnected relationships between NPD, co-creation and social media are characterised by an incomplete state of knowledge. The discussion of the existing literature and examples of co-creation necessitates the need for a deeper understanding of the co-creation-NPD relationship, the impact of social media on this relationship, and an overall understanding of the interaction between the research elements (social media, co-creation and NPD).

3.1.3 Interaction of Research Elements
In order to guide the discussion in this chapter, it is important to outline the key aspects of the research that require further exploration. This chapter discusses the interaction of the research elements in relation to the overall research aim. A high-level impact of co-creation on NPD competences is the result of a complete co-creation approach

implemented through effective co-creation experiences. An impact on NPD competences implies that brands are better equipped to deliver value through NPD, and co-creation has the potential to deliver a competitive impact on the results of an NPD project. Additionally, social media is identified as an enabler of co-creation, promoting interaction and collaboration. This suggests that the use of social media in the design of co-creation experiences positively impacts the co-creation-NPD relationship. Consequently, the discussion in this chapter is aimed at guiding the research to explore these notions.

The research to this point has shaped the philosophy of the researcher, resulting in the need to understand and explore the interaction of the research elements. The way in which the research elements are viewed are displayed in Figure 3.1 (below).

The interaction between co-creation and NPD is termed the co-creation-NPD relationship (*1. co-creation-NPD relationship*). Social media is regarded as an enabler of co-creation, with the potential to positively impact the management of the co-creation-NPD relationship (*2. Social media impact*). The literature suggests that co-creation in NPD, and the use of social media can lead to a high-level impact on a brand's NPD competences (*3. High-level impact*).

Figure 3.1: Interaction between the research elements
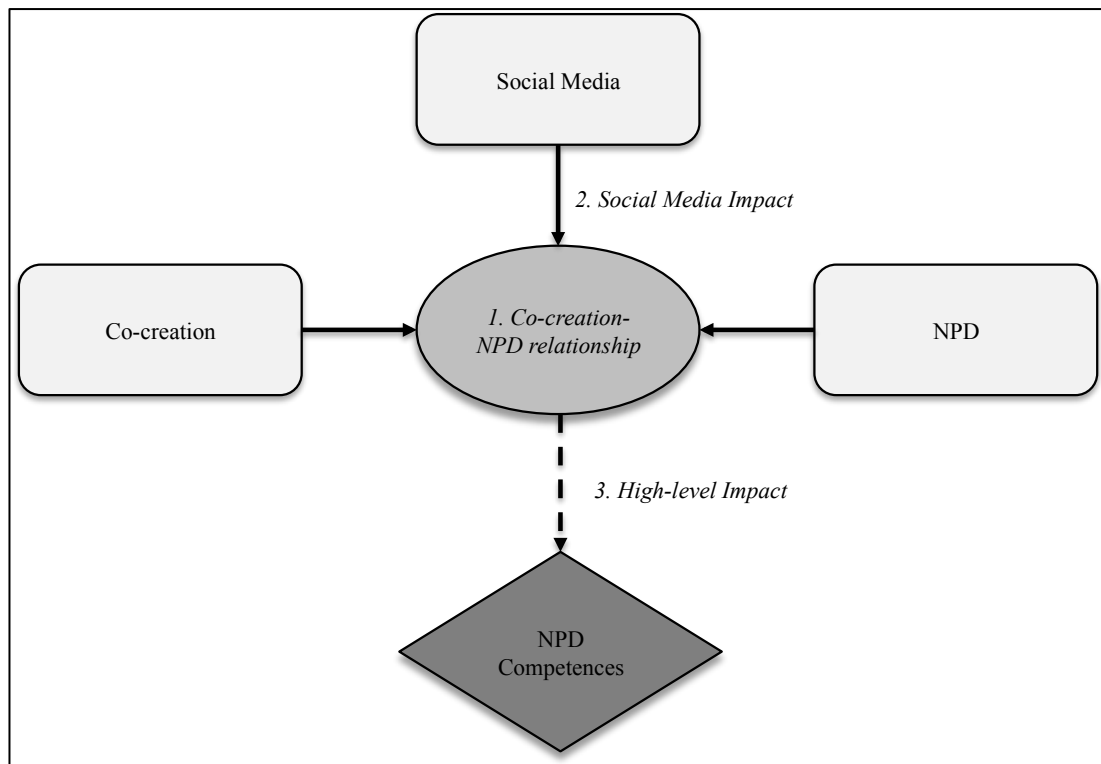
In line with the researcher's philosophy and the understanding of the research topic to this point, the research seeks to explore the following areas:

1. The co-creation-NPD relationship: The previous discussion highlighted the lack of existing literature regarding certain aspects of the co-creation-NPD relationship. It is vital to gain a deep knowledge of the co-creation-NPD relationship in order to provide a foundation upon which the impact of social media can be explored. In this respect, the aspects of this relationship that are of interest are as follows:

* The design of effective co-creation experiences

* The high-level impact of co-creation on NPD competences.

The examples in Table 3.1 display a limited degree of co-creation, i.e. co-creation is not apparent across the whole NPD lifecycle for each brand. This suggests that whilst the benefits of co-creation in NPD are recognised to a degree (otherwise brands would not co-create), there are underlying reasons why brands choose to co-create only at select stages of the NPD lifecycle. The existing co-creation literature is effective in 'what' co-creation experiences should be built on. However, there is a less focus on the challenges brands face in the design and implementation of co-creation experiences in a real-life NPD scenario. As a result, it is important to gain a greater understanding of 'how' to design and implement effective co-creation experiences.

The design of effective co-creation experiences is vital in promoting a complete co-creation approach. A complete co-creation approach, as the value maximising approach to NPD, is an antecedent of a high-level impact of co-creation in NPD. The existing literature widely proposes co-creation as the most effective approach to NPD and the role of co-creation in creating/maintaining a competitive advantage. However, knowledge of the specific ways in which co-creation can deliver an impact on NPD competences is lacking. In line with the research aim, it is vital to explore the high-level impact of co-creation on NPD.

2. Social Media impact: Social media in the context of this research is regarded as an enabler of co-creation, positively impacting the co-creation NPD relationship. The discussion regarding this impact characterises the interaction of the three research elements. As a greater understanding of the co-creation-NPD relationship is formed, the ways in which social media can impact this relationship become increasingly apparent. At this point, the following areas are of interest:

- The specific characteristics that underline the role of social media in enabling co-creation (using social media in the design of co-creation experiences).

- The potential impact/outcomes of the use of social media in co-creation.

The thematic literature review relating to social media (Chapter 2) outlined specific characteristics of social media with the potential to positively impact the co-creation-NPD relationship. This is in line with the aim to develop a greater understanding of the role of social media in enabling co-creation. In respect to guiding the next stages of research, the social media characteristics provide the parameters to explore the role of social media in enabling co-creation. Accordingly, the discussion in this chapter outlines the focus on developing a greater understanding of social media in enabling co-creation (through the social media characteristics). The aim of this is to understand the specific features of social media that can be leveraged in the design of co-creation experiences.

In addition, the discussion in respect to social media and co-creation in the previous chapter outlined a potential impact on the outcomes of NPD (i.e. a product). This is evident through the discussion relating to social media promoting brand loyalty, E-WOM and consumer's willingness to pay. Accordingly, the research seeks to explore the high-level impact of social media on the co-creation-NPD relationship. This aims to contribute knowledge supporting the role of social media in enabling co-creation; particularly through the impact that social media enabled co-creation experiences can deliver.

3. High-level Impact: The literature discussed in Chapter 2 strongly promotes co-creation as an approach to increase the success of the NPD process (Hoyer et al., 2010). Whilst this is widely accepted, research creating a formal link between co-creation and NPD success (through enhanced competences) is lacking. It is vital to understand how and why co-creation can drive NPD success when considering the research aim.

Through this, the research seeks to contribute a holistic knowledge of the interconnected relationships between co-creation, NPD and social media. This includes a greater fundamental understanding of how co-creation can impact a brand's NPD competences (high-level impact), how brands can implement an approach to maximise this impact (complete co-creation and the design of effective co-creation experiences) with a specific focus on the role of social media in enabling co-creation.

The discussion regarding the interaction of the research elements will emphasise both the brand and consumer perspectives, as both are necessary co-creators of value. To

achieve a complete co-creation approach, both the brand and the consumer must be motivated and have the means to co-create throughout the NPD lifecycle. This necessitates the need to explore the research topic from both the brand and consumer perspective. The outcome of the discussion and exploration of the research elements is a conceptual framework. The conceptual framework is synthesised from the literature surveyed and the understanding of the interconnected relationships between NPD, co-creation and social media. The conceptual framework is developed to display the interaction of these elements, and guide the subsequent stages of the research.

3.2 Research Focus: Complete Co-creation

The research must maintain a focus on complete co-creation as the value maximising approach to value creation (Hoyer et al., 2010), which is typified by intense collaboration between brands and consumers throughout the NPD lifecycle. In order to guide the research to maintain a focus on complete co-creation, it is vital to identify the parameters used to assess a complete co-creation approach.

Hoyer et al. (2010) term the extent of a brand's use of co-creation and their reliance on co-creation in NPD as the 'degree of co-creation'. This term serves as a measure of complete co-creation. A 'high-degree' of co-creation signifies the extensive use and reliance (by a brand) on a co-creation approach throughout the NPD lifecycle. In essence, a complete co-creation approach is co-creation to the highest degree.

The degree of co-creation is a function of both the _scope_ and _intensity_ of co-creation activities (Hoyer et al., 2010). Prahalad (2004) notes that a true collaboration approach to NPD (complete co-creation) is required to maximise value. This implies that consumers should be regarded as a vital co-creator through the NPD lifecycle. Brands that exhibit high levels of co-creation _intensity_ at a particular stage of NPD rely almost exclusively on the input of consumers in co-creating value (Hoyer et al., 2010).

The _scope_ of co-creation refers to the propensity of brands to collaborate with consumers across all the stages of the NPD lifecycle (Hoyer et al., 2010). The co-creation literature expresses that value should be co-created throughout the NPD lifecycle (production and consumption are inseparable) (Prahalad and Ramaswamy, 2013). The NPD lifecycle in the context of this research is defined by six stages: upfront homework, ideation, feasibility, development, testing and feedback. This provides the parameters on which the _scope_ of co-creation can be measured. Brands that are highest in _scope_ co-create across all stages of the NPD lifecycle (Hoyer et al., 2010).

Complete co-creation requires both high scope and high intensity interactions (Hoyer et al., 2010). In order to achieve the levels of value creation set forth by the literature, high-degree co-creation must be achieved. This specifies that consumers are regarded as vital collaborators in value creation, brands strongly rely on their input, and consumers are involved across all stages of the NPD lifecycle (Prahalad and Ramaswamy, 2004; Hoyer et. al., 2010). The constructs of scope and intensity provide clear direction to specifically focus on how heavily brands rely on co-creation (intensity) and how extensively they co-create across the NPD lifecycle (scope).

The focus on complete co-creation is guided by the overall research aim, particularly the role of co-creation in enhancing NPD competences. Understanding 'what' complete co-creation is, and 'how' it is measured, is vital in ensuring the research maintains a focus on complete co-creation as the value maximising approach to NPD. Consequently, this forms a key consideration in the design of the conceptual framework.

3.3 Co-creation-NPD Relationship (Co-creation Experiences)

The design of effective co-creation experiences is considered a vital forerunner to a complete co-creation approach. The existing literature outlines 'what' co-creation experiences should consist of. This is evident through the DART framework and 'dimensions of choice' in providing the building blocks of co-creation experiences (Prahalad and Ramaswamy, 2004). However, there is lack of guidance of 'how' to implement these building blocks in an NPD scenario. Accordingly, the research seeks to deliver valuable knowledge guiding the design of effective co-creation experiences.

In order to maximise the impact of co-creation, brands and consumers should collaborate intensely across all stages of NPD, this is termed a complete co-creation approach (Hoyer et al., 2010). In order to promote a complete co-creation approach, co-creation experiences must motivate both the brand and consumer to interact and collaborate throughout the NPD lifecycle. However, the examples reviewed in Table 3.1 display a limited degree of co-creation. This is signified by co-creation at select stages of NPD, and little or no evidence of a complete co-creation approach. This indicates that the co-creation approaches implemented by the brands are delivering sub-optimal value. There is a clear gap existing between theory and practice, with brands either unable or unwilling to adopt a complete co-creation approach in NPD. This drives the research to explore the factors that impact the motivation/ability of brands and consumer to co-create in NPD.

A significant underlying theme shaping this discussion is the notion that the brand maintains control over the design and management of the co-creation experience. Whilst both the brand and consumer are vital collaborators, the brand must initiate the co-creation experience and also control the degree of co-creation. In essence, the brand engages with the consumer and co-creates to the degree they see fit. It is important to explore the benefits and challenges of implementing a co-creation approach. In order to realise a complete co-creation approach, firstly the brand must be willing and able to do so. High-degree co-creation must be desirable from the brand perspective. Secondly, the brand must design co-creation experiences to maximise the benefits and minimise the costs to stimulate consumer collaboration (Hoyer et. al., 2010). In this regard, it is vital to explore this aspect of the research from both the brand and consumer perspective.

To explore this aspect of the co-creation-NPD relationship, the discussion focuses on the factors that drive (benefits) and inhibit (costs/risks) both brands and consumers from co-creating in NPD. A greater knowledge of these factors is likely to guide the design of co-creation experiences to maximise the benefits and reduce the costs to both the brand and consumer. This is vital in ensuring that both brands and consumers are motivated and able to co-create in NPD, promoting a complete co-creation approach.

This seeks to contribute to the existing literature guiding the design of co-creation experiences. This aspect of the co-creation-NPD relationship focuses on the challenges faced by both brands and consumers when co-creating in NPD. This provides greater insight into 'how' to implement the core principles of the design of co-creation experiences (e.g. DART framework) through a deeper knowledge of the fundamental factors that drive or inhibit co-creation. Exploring what drives and impedes co-creation allows for a greater understanding of how to design and manage effective co-creation experiences, this is vital in promoting a complete co-creation approach.

3.3.1 Co-creation Factors

In order to understand the challenges of designing and managing co-creation experiences, the benefits and costs of co-creation must be explored. These are termed co-creation factors, and are categorised as the factors that drive or inhibit brands and consumers from co-creating in NPD. This discussion explores the potential co-creation factors both brands and consumers are likely to face when co-creating in NPD. Driving factors occur as a result of potential benefits that may be realised through co-creation, whereas inhibiting factors result from the potential costs/risks.

Both brands and consumers experience distinct sets of co-creation factors. In the co-creation paradigm, both the brand and consumer are competitors for the extraction of economic value (Prahalad and Ramaswamy, 2004). Consequently, in the context of this research, the brand and the consumer are considered value-maximising individuals, seeking to maximise the value they derive from the co-creation experience. They will only co-create when the perceived benefits outweigh the potential costs. In this regard, the co-creation experience must promote the potential benefits (or driving factors) and reduce the potential costs/risks (inhibiting factors). This provides the rationale for a focus on the co-creation factors, in respect to a complete co-creation approach. In order to achieve a high-degree of co-creation and a high-level impact in NPD, the perceived benefits must outweigh the perceived costs across the whole NPD lifecycle. Brands must be able to design effective co-creation experiences to maximise the benefits whilst minimising the costs for both themselves and consumers.

3.3.1.1 Trade-offs of co-creation factors

Prior to identifying specific co-creation factors, this section explains how these factors interact, and how this affects the degree of co-creation. Increasing the scope and intensity of co-creation in NPD is desirable assuming the driving factors exceed the inhibiting factors. Brands and consumers as value-maximising individuals experience a trade-off between these co-creation factors. This trade-off determines whether or not they co-create. Effective co-creation experiences will result in a positive trade-off for both the brand and consumer, i.e. the driving factors outweigh the inhibiting factors. This will drive the degree of co-creation as both stakeholders realise a net value gain from co-creation.

Viewing interactions between brands and consumers as a series of transactions, the co-creation experience must promote the driving factors and reduce the inhibiting factors for both parties. The examples of co-creation reviewed (Table 3.1) illustrate a focus on co-creation at certain stages of the NPD process. This suggests that the co-creation factors differ at each stage and, as a result, so do the trade-offs (this is evidenced by the research findings in Chapter 5). It is important to develop an understanding of the significance of the co-creation factors at each stage of NPD and the resulting trade-offs. Complete co-creation is signified by collaboration throughout the NPD lifecycle. In respect to this discussion, a positive trade-off at each stage of the NPD lifecycle is likely to promote a complete co-creation approach. A greater knowledge of the trade-offs of

co-creation factors at each stage of NPD is vital in designing effective co-creation experiences throughout the NPD lifecycle.

As the brand is responsible for initiating, driving and designing the co-creation experience, the trade-offs faced by the brand assume greater significance in this discussion. This notion is vital to the research aim and frames the discussion to focus deeper on the brand perspective. In order to achieve a high-degree of co-creation, the brand must achieve a favourable trade-off of co-creation factors at each stage of NPD. Following this, a greater understanding of the co-creation factors that consumers face will equip the brand with the knowledge to design effective co-creation experiences. The following narrative explores the co-creation factors for both the brand and consumer through a focus on the relevant literature. A greater knowledge of the factors that drive and inhibit co-creation builds an understanding of the challenges in designing and implementing effective co-creation experiences.

3.3.1.2 Brand driving (+) factors

This discussion outlines the factors that drive brands to co-create, providing a more in-depth review of the relevant literature. The brand controls the degree of co-creation; accordingly, the trade-off between brand driving and inhibiting factors is of significance. Moreover, as the brand designs the co-creation experience, they are responsible in ensuring consumers also achieve a favourable trade-off (Hoyer et al., 2010).

Brand driving factors result from a number of factors contributing to the perceived benefits of co-creation. These factors contribute to enhancing the brand's performance, specifically in creating and sustaining a competitive advantage (Prahalad and Ramaswamy, 2000, 2004). This narrative identifies a comprehensive set of brand driving factors segmenting them into three types: efficiency, relationship and product performance factors.

Efficiency: Efficiency factors relate primarily to the impact of co-creation on a brand's productivity. Productivity gains result from increased efficiency by reducing operating costs. Efficiency factors are regarded as antecedents in creating and sustaining a competitive advantage (Hull, 2004; Payne, Storbacka, and Frow, 2008; Prahalad and Ramaswamy, 2000). Co-creation can reduce costs by substituting employees' input with consumer input in the development of new products (Bowers, Martin, and Luker 1990; Lovelock and Young, 1979).

Consumer knowledge can be virtually costless to acquire, assuming effective engagement platforms are used, i.e. social media. This consumer input allows the brand greater access to solution information and decreases the need for input from traditional market research methods. Consumers as co-creators reduce the need for employee input as the brand can outsource tasks to consumers, reducing the costs of the NPD process (Evans and Wolf, 2005; Hull, 2004; Mills, Chase, and Marguilies, 1983).

Further cost reductions can be realised in the form of the reduced risk of product failure. Greater access to solution information ensures effective products are developed. This limits the cost of resources wasted from products that fail. Cost savings also arise from being lean and agile (leagile) in production, reduced inventory holding costs, faster speed-to-market of new products, post-launch gains through continuous product improvements and consideration of additional usages (Grewal, Lilien and Mallapragada, 2006; Muniz and Schau, 2005; Xie, Bagozzi and Troye, 2008; Cook, 2008; Ogawa and Piller, 2006; Fang, 2008; Joshi and Sharma, 2004; Sawhney, Verona and Prandelli, 2005).

From the discussion of the relevant literature, six efficiency-based brand-driving factors are identified:

- Virtually costless acquisition of consumer ideas

- Outsourcing of NPD efforts

- Greater solution information

- Reduced risk of product failure

- Leagile manufacturing

- Faster speed-to-market.

Relationship: Relationship factors relate to the impact of co-creation on the brand-consumer relationship. Co-creation educates the consumer in respect to the challenges, costs and constraints brands face, introducing the element of consumer empathy. This can result in adjustments in preferences and higher levels of appreciation for new products (Dabholkar, 1990; Joshi and Sharma, 2004). This emphasises the experience element of co-creation, the overall service surrounding the process is considered the locus of value creation and appreciation (Vargo and Lusch, 2004).

Through the delivery of increased value and amplified number of connection points between the brand and consumer, co-creation may strengthen their relationship, enhancing consumer equity, brand loyalty and buy-in (Kumar et al., 2010; van Doorn et al., 2010; Hoyer et al., 2010). The resulting positive attitudes toward the product, can in turn positively affect consumers' purchase intentions, willingness-to-pay, and word of mouth referrals (Franke, Keinz and Steger, 2009; Mathwick, Wiertz and DeRuyter, 2007). Accordingly, four relationship-based brand-driving factors emerge:

- Greater consumer understanding of NPD processes (costs, challenges and constraints

- Adjustments of consumer preferences

- Better appreciation of the product

- Strengthening of brand-consumer relationship (consumer equity)

- Positive attitudes toward the product (willingness to pay, purchase intentions, referrals/WOM.

Product performance: Product performance factors convey the results of co-creation once the product is launched. Co-creation can provide significant gains in the effectiveness of new products as the increased solution information allows for a closer preference fit with the needs of consumers and higher commercial potential (Fang, Palmatier and Evans, 2008; Lilien et al., 2002). The developed products are shown to possess high-expected benefits and novelty in the eyes of the consumer, which in turn increases commercial attractiveness (Franke, von Hippel and Schreier, 2006; Magnusson, Matthing and Kristensson, 2003). Higher expected benefits and novelty provides a route for better product differentiation, once again impacting the success of the launched product (Song and Adams, 1993). The following performance-based driving factors are considered significant:

- Post launch gains

- Closer market fit

- Higher commercial potential

- High expectations and novelty (commercial attractiveness)

The discussion of the brand driving factors outline the most significant factors in driving a brand to co-create. Promoting these factors through the design of co-creation experiences is likely to boost the economic value the brand is able to extract from co-

creation, and also impact the commercial success of a new product. Table 3.2 provides a taxonomy summarising the brand driving factors in the context of this research.

Table 3.2: Brand driving factors

Brand Driving Factors	
Efficiency	• Virtually costless acquisition of consumer ideas • Outsourcing of NPD efforts • Greater solution information • Reduced risk of product failure • Leagile manufacturing • Faster speed-to-market
Relationship	• Greater consumer understanding of NPD process (costs, challenges and constraints • Adjustments of consumer preferences • Better appreciation of the product • Strengthening of brand-consumer relationship (consumer equity) • Positive attitudes toward the product (willingness to pay, purchase intentions, referrals/WOM
Product Performance	• Post launch gains • Closer market fit • Higher commercial potential • High expectations and novelty (commercial attractiveness)

3.3.1.3 Brand inhibiting (-) factors

The potential brand inhibiting factors are relatively widespread as co-creation represents a drastic change to traditional innovating management approaches. Brand inhibiting factors are segmented into process, information and security factors:

Process: Process factors refer to the potential of co-creation to negatively impact the NPD process, particularly in regards to cost, complexity and inefficiency. A significant inhibitor is the diminished control over the brand's strategic management. Sharing control of the NPD process and its outcomes with consumers is effectively sharing control of a vital function of management, aggravating a brand's strategic planning objectives (Ernst, Hoyer, Krafft and Krieger, 2010; Han, Kim and Srivastava, 1998; Moorman and Miner, 1998). Hoyer et al. (2010) identify the risk of a focus on incremental innovation as consumers assume greater control over the NPD process. Empowering consumers increases the complexity of managing brand-objectives, potentially incurring costs through coordination requirements, constraints and other non-monetary costs (Hoyer et al., 2010).

The conflicting objectives of the brand and consumer may result in a power struggle, as consumers are likely to opt for customisation, whereas brands are more likely to prefer efficiency and cost reduction (Hoyer et al., 2010). Effects of co-creation are asymmetrical

and apply only to consumers when the outcome is positive. Consumers are likely to take credit in regards to high-perceived quality and satisfaction, but shirk responsibility in the light of poor outcomes (Bendapudi and Leone, 2003). As consumers are not within direct control of the brand, brands are likely to struggle with the management of co-creator mis-performance (Etgar, 2008). Six process-based brand-inhibiting factors emerge:

- Diminished control over a brand's strategic management and planning

- Complexity of managing a brand's objectives and interests of diverse stakeholders (employees, shareholders, co-creators and other types of consumers)

- Coordination requirements, constraints and other non-monetary costs

- Infeasibility of product ideas

- Asymmetrical effects (consumers quick to acknowledge success, shirk failure)

- Conflicting preferred outcomes (cost minimisation versus customisation).

Information: Information factors represent the potential costs or risks of having to assimilate and make sense of the information coming from consumers. The co-creation of value requires the internalisation of consumer information and knowledge. Hoyer et al. (2010) identify the possibility of information overload as a risk, with the majority of contributions coming at the ideation stage of NPD. The 'wide end' of the NPD funnel becomes much wider in NPD contexts where co-creation is involved (Hoyer et al., 2010). Information overload carries a greater threat at the downstream stages of NPD as they are deadline sensitive, requiring the brand to act on the results of ideation quickly in order to meet market needs.

Additionally, the heterogeneity of consumers is likely to lead to a wide range of opinions, ideas or preferences in response to an NPD project. Brands must develop the capability to assimilate, filter and select the most valuable information from potentially a huge body of data. This can impact both the complexity and cost (in terms of time and monetary resources) of co-creation.

Any benefit derived from a better product fit is dependent on the consumer's ability to articulate their preferences and future needs (Franke, Keinz and Steger, 2009; Mullins and Sutherland, 1998). The consumer's inability to articulate their needs may render the process useless or require the brand to invest time in identifying these needs. Similarly, although consumers may be a source of novel ideas, their inability to assess the feasibility of ideas or their implications may result in the brand's production function being

unable to act upon these ideas (Magnusson, Matthing and Kristensson, 2003). Three information-based inhibiting factors are of significance:

- Information overload

- Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs

- Consumer heterogeneity.

Security: Security factors focus on the issue of intellectual property and secrecy. The DART dimension highlights the need for transparency by the brand, as they need to reveal information regarding their NPD process and ideas. This information or proprietary knowledge may have otherwise remained secret (Prahalad and Ramaswamy, 2004). Brands that rely on secrecy to protect their proprietary knowledge are less likely to undertake co-creation activities in NPD (Liebeskind, 1997).

Another challenge is the ownership of intellectual property as a result of the co-creation process. The discussion of consumer driving factors (Section 3.3.1.4) identifies financial rewards as a driving factor. One such way in which consumers are financially rewarded is through the ownership of intellectual property regarding product design. This lack of consistency in intellectual property expectations may create perceptions of unfairness amongst consumers (Hoyer et al., 2010). There is also the risk of legal repercussions for the brand that will incur monetary costs. It is in the nature of the brand to retain ownership of IP, but this can hinder high-level co-creation.

Empowering consumers with the tools and knowledge to become active contributors to NPD processes can be favourable, however it can also result in them becoming a formidable source of competition, as they may be unwilling to purchase a brand's offerings or develop products which damage the brand's sales (Cook, 2008; Fodness, Pitegoff and Sautter, 1993). Brands may also face a backlash from consumers if their ideas are not selected, with the risk of retaliation and defection to rivals brands (Hoyer et al., 2010). Four security-based brand-inhibiting factors emerge:

- Concerns about secrecy

- Ownership of intellectual property

- Risk of retaliation and defection

- Consumers as competitors.

The discussion of the brand inhibiting factors outlined the most significant factors in inhibiting a brand from co-creating in NPD. Co-creation experiences should seek to reduce or mitigate these factors to ensure the brand receives a net value gain from co-creating. Table 3.3 (below) provides a taxonomy summarising the brand inhibiting factors in the context of this research.

Table 3.3: Brand inhibiting factors

Brand Inhibiting Factors	
Process	• Diminished control over brand's strategic management and planning • Complexity of managing brand's objectives and interests of diverse stakeholders (employees, shareholders, co-creators, and other types of consumers) • Coordination requirements, constraints and other non-monetary costs • Infeasibility of product ideas • Asymmetrical effects (consumers quick to acknowledge success, shirk failure) • Conflicting preferred outcomes (cost minimisation versus customisation)
Information	• Information overload • Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs • Consumer heterogeneity
Security	• Concerns about secrecy • Ownership of intellectual property • Risk of retaliation and defection • Consumers as competitors

Identification of the brand co-creation factors (driving and inhibiting factors) provides a deeper insight into the fundamental factors that impact a brand's motivation to co-create in NPD. The brand co-creation factors are relatively widespread and complex. These factors provide a detailed view of the potential benefits and challenges faced by brands through co-creation. In regards to the research aim, the ways in which driving factors can be increased or inhibiting factors reduced are of interest as this promotes a greater degree of co-creation. It is important to further explore the brand co-creation factors through empirical research to contribute a greater understanding of the brand driving factors and their significance in the design of co-creation experiences.

3.3.1.4 *Consumer driving (+) factors*
This section focuses on the co-creation factors from the consumer perspective. A greater knowledge of the consumer co-creation factors provides brands with the knowledge to ensure co-creation experiences stimulate consumer involvement. Consumer driving factors are segmented into financial, social, technological and psychological factors (Hoyer et al., 2010; Nambisan and Baron, 2009; Csikszentmihalyi, 1996; Etgar, 2008; Burroughs and Mick, 2004; Evans and Wolf, 2005; Ernst, Hoyer, Krafft and Soll, 2010).

Financial: Consumers can be rewarded financially through monetary prizes, profit sharing and the sharing of intellectual property by the brand. However, this research maintains the focus of the empowerment of consumers in co-creating personalised and valuable experiences. In this regard, the co-creation experience itself should provide sufficient value to consumers with no need for a financial incentive. Accordingly, financial factors assume little significance in this research as it is the consumer's desire to 'free reveal' information that drives the co-creation of value (von Hippel and von Krogh, 2006).

Social: Social factors occur as a result of the titles or recognition consumers gain from co-creating with a brand (Hoyer et al., 2010). One example of a title co-creating consumers can gain is Amazon.com's 'Top 100 Reviewer', this visible accolade is a clear symbol of a consumer's exceptionality relative to others. These factors encompass increased status, social esteem, good citizenship and strengthening ties with other consumers as a result of co-creation (Nambisan and Baron, 2000).

The social driving factors outline the intangible value attributed to the co-creation experience by the consumer. Aside from the product outcome, consumers are driven through the social processes and interactivity enabled by the co-creation experience. This is vital in supporting the view that consumers are driven to co-create valuable experiences and less of a focus is placed on their impact on a product solution.

Technological: Technological factors relate to the gain of technological knowledge by participating in product development. The discussion in Chapter 2 stressed the role of brands in sharing information to empower and enhance consumer capabilities in respect to NPD. Co-creators can experience important cognitive enhancements through information acquisition and learning (Nambisan and Baron, 2009). These driving factors stem from the consumer's desire to gain an in-depth knowledge of the technologies within and involved in the design of new products. Enabling consumers to co-create is a key function of empowerment; this is done by equipping them with the technical knowledge to contribute to the NPD process (Pires et al., 2006). This empowerment drives the consumer motivation to co-create.

Psychological: Psychological factors result from intrinsic motivation, the sense of self-expression and feelings of pride from participating in creative pursuits of co-creation (Csikszentmihalyi, 1996; Etgar, 2008). Creative actions can enhance positive effects and the enjoyment of contributing (Burroughs and Mick, 2004; Evans and Wolf, 2005; Nambisan and Baron, 2009). A number of consumers choose to participate purely for

the sense of altruism, as they genuinely believe in the objectives of the new product. In the case of social media, there is a heightened sense of altruism as consumers feel a moral obligation to help others in the network (Kwon and Wen, 2010).

Similarly, the psychic utility that consumers gain from participating in the co-creation process is of significance as a psychological driving factor (Hoyer et al., 2010). Finally, Ernst et al. (2010) highlight consumers being driven due to high involvement with a brand or product due to dissatisfaction of current product offerings. Unmet needs create an internal state of tension that can drive consumers to try to satisfy this (Williams, 2015). The consumer driving factors are summarised in Table 3.4:

Table 3.4: Consumer driving factors

Consumer Driving Factors	
Financial	• Monetary prizes
	• Profit sharing
	• Intellectual property
	• Increased visibility from participating in co-creation competitions
Social	• Social esteem
	• Good citizenship
	• Strengthening ties with relevant others
	• Formal recognition
Technological	• Gain of knowledge (technology specific)
	• Cognitive benefits of information acquisition and learning
Psychological	• Creative pursuits enhance intrinsic motivation, self-expression and pride
	• Enjoyment of contributing
	• Sense of altruism
	• Psychic utility from participation
	• High involvement or dissatisfaction with existing products

The consumer driving factors are primarily concerned with the value consumers are able to co-create through unique experiences. There is less of a focus on their impact on a product solution. The consumer driving factors clearly convey the importance of interaction and involvement as a source of value. This supports the view that co-creation experiences must maintain a focus on empowering consumers to co-create their own personalised experiences in order to maximise value creation.

3.3.1.5 Consumer inhibiting (-) factors

There are relatively few inhibiting factors for consumer participation in co-creation. As empowered consumers seek greater input and control over the NPD process, there are few significant impediments. Moreover, consumers derive value from the interaction and

involvement with brand. Accordingly, the opportunity to connect and collaborate with a brand is regarded as highly valuable, and few factors arise as significant in inhibiting this.

Hoyer et al. (2010) highlight the risk of failure despite invested effort as a significant consumer inhibitor. Consumers are not able to control the success of a co-created product – despite the amount of time or effort they invest the product may fail. There is a perceived shift in responsibility from the brand to the consumer as roles coalesce to a greater degree (Bolton and Saxena-Lyer, 2009; Etgar, 2008). This shift in responsibility may inhibit consumers from co-creating, as they must share the responsibility for the success or failure of the product. Consumers may be wary of 'lock-in' and loss of freedom of choice as a result of high-level co-creation (Hoyer et al., 2010).

Consumer co-creation in the latter stages of NPD, particularly in the development stage requires greater psychological efforts to learn, as technological knowledge is increasingly required. Consumers are likely to experience an opportunity cost in terms of the resources, time, effort and forgone opportunities as a result of participation in co-creation (Hoyer et al., 2010). This opportunity cost may inhibit consumers from co-creating as they seek to take advantage of other opportunities and invest their resources elsewhere. The consumer inhibiting factors are summarised in Table 3.5:

Table 3.5: Consumer inhibiting factors

Consumer Inhibiting Factors
• Risk of failure despite invested effort
• Lock in
• Loss of freedom of choice
• Psychological efforts to learn
• Resources
• Time
• Effort
• Forgone opportunities

The discussion of consumer co-creation factors provides an understanding of the drivers and inhibitors that consumers face when co-creating. The taxonomies provide vital information that can be utilised by brands in the design of co-creation experiences. Brands must design co-creation experiences in such a way that consumers experience a favourable trade-off of co-creation factors. In order to do this, they should seek to promote driving factors and reduce inhibiting factors.

Consumers are driven by a combination of factors. Consequently, a multi-pronged approach that targets several motivators is likely to be most effective (financial, social,

technological and psychological) (Hoyer et al., 2010). The brand can focus on targeting several of these driving factors in order to promote consumer collaboration. Further exploration of these consumer co-creation factors will uncover additional knowledge, providing the brand perspective with vital information on how to design co-creation experiences effectively.

The co-creation factors form a key construct of the conceptual framework, and drive the research to explore and expand this knowledge. This is vital in providing guidance on the design of co-creation experiences. Exploring this aspect of the co-creation-NPD relationship is vital. Effective co-creation experience design is considered to promote a complete co-creation approach. In turn, complete co-creation is a necessary antecedent in maximising the high-level impact of co-creation in NPD.

In respect to a complete co-creation approach, the research must seek to explore the significance of the co-creation factors across the NPD lifecycle. To promote a complete co-creation approach, a favourable trade-off of co-creation factors must be apparent at each stage of NPD. This signifies that both the brand and consumer will realise a net value gain through co-creation. As each stage of NPD is characterised by a unique set of activities and objectives, the potential benefits or costs/risks borne at each stage is likely to differ. This notion presents an early explanation into the reasons why a complete co-creation approach was not evident through the review of examples in Table 3.1. This is a key consideration in the design of the conceptual framework and is explored through the data collection and research findings.

3.4 Social Media

A focus on the design of co-creation experiences provides the basis on which to explore the role of social media in enabling co-creation. From the outset, the examples of co-creation (Table 3.1) display a heavy reliance on social media in enabling co-creation experiences. Moreover, social media is widely supported by the literature as an efficient and effective platform to foster the interaction and collaboration of brands and consumers.

In the context of this research, social media is regarded as an enabler of co-creation, positively impacting the co-creation-NPD relationship. Co-creation is built on the interaction and collaboration between brands and consumers. Lusch et al. (2007) describe technology as 'a pivotal force in enabling collaboration and innovation'. Brands are now able to use social media to design and manage valuable co-creation

experiences, delivering greater value to both themselves and consumers. Brands must embrace the emerging dynamic of consumer empowerment and not neglect the valuable opportunity to utilise social media to communicate and co-create with consumers (Kane and Fichman, 2009).

Whilst the literature promotes the impact and use of social media on co-creation, there remains a lack of understanding of the specific features of social media that can be leveraged in the design of co-creation experiences. The upcoming discussion focuses on the specific features of digitally enabled social networks (DESNs) and virtual consumer communities (VCCs) that positively impact the co-creation-NPD relationship. The aim of this is to develop a deeper understanding of how social media delivers a positive impact on co-creation in NPD, by categorising the specific characteristics that are regarded to support the role of social media in enabling co-creation, and guiding the design of social media enabled co-creation experiences.

Successful co-creation is dependent on ongoing and intense interactions between the brand and consumer (Hoyer et al., 2010). Prahalad and Ramaswamy (2002) highlight the growth of the Internet as a key factor in shifting innovation management strategies towards the co-creation of value. In particular, the increased access to information, global view and network benefits of web technologies are identified as key characteristics affecting the co-creation of value (Prahalad and Ramaswamy, 2002). This suggests that digital technologies are effective in managing the co-creation-NPD relationship and are responsible for the growth of the co-creation paradigm. DESNs and VCCs are amongst the most widely used social media platforms, and the use of examples in Table 3.1 displays a reliance on these platforms to enable co-creation experiences.

3.4.1 Social Media Characteristics

Social media platforms are considered to be fundamentally changing interactions between brands and consumers (Hoyer et al., 2010; Kaplan and Haenlein, 2010; Kim et al., 2010). The first step in exploring this aspect of the research is to examine the relevant literature regarding the role of social media in enabling co-creation. Prahalad and Ramaswamy (2004) identify 'information access, global view and networking' as key web-based factors that are shifting innovation management strategies towards co-creation. These factors encompass both the structure of web technologies and their impact on the behaviours of web users, and the resultant impact on co-creation. In addition, through the understanding gained in the literature review, the researcher identified connectivity as an additional factor that is likely to positively impact co-creation.

The following discussion provides an explanation of these factors in the context of DESNs and VCCs.

Information access*:* This factor is typified by the access to unprecedented levels of information that consumers have through social media (Prahalad and Ramaswamy, 2004). Increased access to information allows consumers to become more knowledgeable and make more-informed decisions (Prahalad and Ramaswamy, 2004). Füller et al. (2009) highlight increased consumer knowledge as a key contributor to consumer empowerment. The emergence of consumer empowerment and the changing dynamic of the brand-consumer relationship are stressed as key factors in promoting co-creation (Hoyer et al., 2010).

Moreover, as brands are able to easily connect and interact with consumers, this enlarges the brand's competences through knowledge as an operant resource (Vargo and Lusch, 2006). The structure of social media platforms provides multiple directions of communication, more intense and richer interaction, and larger audience size and scope (Sawhney et al., 2005). These features facilitate information sharing on a wider scale, empowering consumers and potentially enlarging the operant resource of knowledge available to brands. The ability to connect with empowered consumers, view and capture knowledge, and search/target specific groups and individuals are particularly valuable in the co-creation paradigm. The necessity of solution information to a brand has been heavily stressed, a more knowledgeable consumer provides the brand with a greater resource base and this links to the driving factor of greater solution information.

In addition, social media platforms provide brands with facilities to enhance consumer knowledge, empowering them to a greater extent and enhancing their potential to co-create value (Verganti, 2009). By leveraging the features of social media, brands can immediately connect and share information, knowledge and ideas with consumers (Kaplan and Haenlein, 2010). This is likely to fuel empowerment, and the speed and quality of consumer contributions (Kao et al., 2016).

Networking*:* Networking highlights the network effects of social media in inverting the traditional top-down pattern of brand marketing communications (Prahalad and Ramaswamy, 2004). This factor focuses on the impact of the behaviours of both brands and consumers in an online setting. The discussion in the previous chapter highlighted the emergence of online community behaviours, such as the consciousness of kind, shared rituals and moral responsibility (Casaló et al., 2008). Users can establish online

interpersonal relationships through shared interests; the linkage provided by social media promotes social bonding and social bridging (Eisenbeiss et al., 2012; Ellison et al., 2007; Smith, 2010). This is likely to enhance information exchange and increases the collective power of the wisdom of consumers (Kao et al., 2016). In respect to co-creation, these are vital behaviours in reducing barriers to knowledge sharing, creating a moral commitment between brands and consumers, and promoting the social benefits arising from interaction (Hennig-Thurau et al., 2004).

The community aspects of social media are particularly valuable in a brand context whereby users are connected through their shared interest in a brand. These communities have positive effects on an organisation's value creation practices because of their commercial character and user's interest in the brand (Laroche et al., 2012; Albert et al., 2008; Zaglia, 2013). These communities provide a social structure for consumer-consumer and brand-consumer relationships (Muniz and O'Guinn, 2001). They represent a form of association embedded in the context of the consumption of the brand's products (Laroche et al., 2012). This effectively groups users with a common interest in a brand, providing easier access to knowledge and feedback from consumers who have an understanding of the brand and their products. In addition, membership of a community dedicated to a specific brand and interaction with the brand can create a feeling of belonging (Algesheimer et al., 2005; Zaglia, 2013). This can strengthen the consumer's loyalty to the brand and increase their attention to participate in co-creation activities (Kao et al., 2016).

Global view: This factor is represented by the eroding geographical limits on information (Prahalad and Ramaswamy, 2004). The process of online interaction carries benefits due to the ease of undertaking intense, ongoing interactions between brands and consumers. These conversations can occur regardless of social status, geographical or time restrictions. Furthermore, the openness of consumers to interact, transfer knowledge and lower barriers to knowledge barter are benefits that arise from online interaction.

The pervasiveness of social media was identified in Chapter 1 as an underlying motive to carry out this research. This is echoed by the factor of global view. The number of users, ease of interactions and reduction in barriers to communication are considered to positively impact co-creation. Brands can now easily connect to individuals who are relevant for the organisation and the requirements of their NPD projects (Kim et al., 2010). Brands are able to leverage the timeliness and immediacy of the Internet, and the

lack of geographical barriers to connect to social media users and exchange information, share messages and build relationships (Kaplan and Haenlein, 2010).

Connectivity: Connectivity focuses on the structure of the social media platforms in connecting brands and consumers. Social media platforms provide an unparalleled platform for users, intentionally or unintentionally, to establish different types of content and exchange information and ideas (Calder et al., 2009; Steyn et al., 2010). This is vital in enabling interactions between brands and consumers, this is now occurring more easily and more frequently than in the past (Gallaugher and Ransbotham, 2010).

Connectivity allows the brand to create meaningful relationships with consumers, driving consumer engagement, building trust and accumulating relationship assets (Kao et al., 2016). Importantly, this includes product-knowledge relationships, community-identification relationships and interpersonal relationships through interaction and connection (Nambisan and Baron, 2009). This level of connectivity now allows brands to use social media to strengthen dialogue and connections with consumers or among consumers, and deliver valuable experiences and feelings that may deepen engagement with the brand (Kao et al., 2016). The high levels of connectivity, interactivity and social linkages, amongst other features, provide more dynamic connections and meaningful relationships between brands and consumers. These are valuable opportunities that brands are able to leverage to co-create using social media (Kao et al., 2016).

The discussion on the impact of social media outlines four factors that are responsible for shifting innovation management approaches towards co-creation. Whilst these factors provide a detailed view of the suitability for using social media to enable co-creation experiences and the potential outcomes, little prior research has created a formal link between specific social media characteristics and their impact on the co-creation process (Kao et al., 2016). In order to provide recommendations on the use of social media to enable co-creation, it is vital to understand how and why the characteristics of social media enable co-creation and can deliver an impact on the results of co-creation. The aim is to establish the role of social media in enabling co-creation, and guide the design of social media enabled co-creation experiences.

In order to explore this relationship, it is important to break down the social media platforms (DESNs and VCCs) into specific characteristics to assess their impact on co-creation. The first stage of this was the thematic literature review (Chapter 2). This identified characteristics relating to the structure and behaviours of users on DESNs and VCCs. The characteristics were outlined in respect to their potential to enable co-creation

and positively impact the co-creation-NPD relationship. These characteristics provide the parameters on which to base an exploration into the role of social media in enabling co-creation. The aim of which is to consider the relevance and impact of each specific characteristic in an NPD context, and deliver a greater understanding of the subject. The social media characteristics are summarised in Table 3.6 (overleaf).

Conceptual Framework

Table 3.6: Social media characteristics

Social Media Characteristics	Description
Range	Networks with high range span multiple knowledge pools; range has a complementary effect on knowledge transfer (Reagans and McEvily, 2003).
Diversity of information	Social media are characterised by both large and small networks, providing the benefit of having access to homogenous and heterogeneous networks (Garton et al., 2007, Wellman and Potter, 1997).
Density	Highly dense networks contain a large number of ties when compared to the maximum theoretical number of ties. High levels of ties provide avenues for large-scale interactions, knowledge creation and transfer (Garton et al., 2007).
Roles	Roles within networks allow brands to target specific motivated consumers, similar to the idea of using lead users (Kozinets, 2002). Consumers can use their roles to exert influence and motivate other consumers to contribute and exchange knowledge (Fuller et al., 2004).
Ease of ties	Ties on social media are made relatively easily as users can openly view the preferences and interests and identify users whom they share offline similarities (Boyd & Ellison, 2007). Ties consist of a relationship transferring resources, most notably knowledge (Donath and Boyd, 2004).
Strength of weak ties	Weak ties provide access to diverse information and differing user's perspectives and experiences. Barriers to exchange are relatively lower so vast amounts of knowledge can be shared even through weak ties (Bargh, McKenna, and Fitzsimons, 2002; Tidwell and Walther, 2002).
Overcoming geographical and temporal boundaries	DESNs and VCCs enable geographically dispersed individuals with shared interests to gather online (Thomsen et al., 1998). Users can interact in their own time as there are no time restrictions and any message is sent in a digital format.
Knowledge sharing and creation	C2C and B2C interactions can result in knowledge sharing and creation through socialisation, dissemination, internalisation and capture (Nonaka and Takeuchi, 1995).
Ease of Knowledge Conversion (Capture)	Interactions take place in digital format, aiding conversion of tacit knowledge to explicit knowledge (Nonaka, 1991).
Community effects (consumer motivation)	Development of community markers (consciousness of kind, shared rituals and traditions and moral responsibility) reduces barriers to exchange and drives consumers to interact (Casaló et al., 2008).
Unlocking social relations	Online profiles allow users to overcome social status and norms, opening up communications between diverse users (Rheingold, 1993; Barlow, Birkets, Kelly and Slouka, 1995).
Table 3.6 continued on next page	

Conceptual Framework

Pervasiveness of social media	The number of online users is in excess of 2 billion people. This provides brands with access to a large pool of potential co-creators.
Low degrees of separation	Facebook (2017) degrees of separation of 3.56. Brands and consumers can access almost anyone through the network relatively easily, mediating the creation and transfer of diverse knowledge.
Ease of search	DESNs and VCCs often allow users to search for others with similar interests, demographics and preferences.
Empowerment of consumers	Consumers are increasingly empowered through social media as they have greater access to information (educated) and access to the brand as social media allows a new type of relationship between consumer and brand (Fuller et. al., 2009).
Intensity of Interactions	The low cost associated with interacting online allows iterative interactions to take place over long periods of time.
E-WOM	DESNs and VCCs allow followers to 'retweet'/'repost' or share or comments made by others about a product being promoted. By repeating the message, the user's connections are able to see the message, therefore reaching more people. Because the information about the product is being put out there and is getting repeated, more traffic is brought to the brand (Waard and Gomez, 2013).
Visibility of preferences/interactions	Consumers can overtly display interests and activities in their everyday life through social media platforms.
Centrality/connectivity	Centrality relates to level of connectedness within the network. Users who are central play a large role in information exchange; the idea of centrality highlights the most important people within a network similar to lead-users (Newman, 2010).
Cohesion	Cohesion around a relationship can ease knowledge transfer, cohesion is likely to have a complementary effect on knowledge transfer (Reagans and McEvily, 2003).

Table 3.6 displays the taxonomy of social media characteristics collected through the thematic literature review (Chapter 2). This taxonomy of characteristics provides the parameters on which to explore the impact of social media as an enabler of co-creation. This allows the research to explore this area in depth, providing structure, and is particularly valuable considering the lack of research in this area.

The research aim frames social media as an enabler of co-creation in NPD. This perspective is achieved by discussing features of social media that are responsible for driving co-creation. In the context of this research, this is explored in further depth through examining the specific impacts of social media characteristics on the co-creation-NPD relationship. The examples of co-creation in Table 3.1 show evidence of brands using social media to enable co-creation. Understanding the impact of specific characteristics will explore how and why social media enables co-creation and once again will deliver knowledge to guide the design of effective co-creation experiences.

Social media (underpinned by the taxonomy of characterises) represents a key construct of the conceptual framework. The positive impact of social media on the co-creation-NPD implies that social media promotes the ease with which brands and consumers can interact and collaborate, or heightens the impact of co-creation in NPD. In addition to exploring the social media characteristics in respect to the design of co-creation experiences, the research should also seek to explore the high-level relationship between social media and co-creation. In essence, this includes how and why brands are using social media to co-create, and the high-level impact social media can deliver on co-creation in NPD.

3.5 Co-creation-NPD Relationship (High-level Impact)

The final focus of this discussion is the high-level impact of co-creation on a brand's NPD competences. This signals the interaction of the three research elements. The high-level impact of co-creation is maximised by implementing a complete co-creation approach in NPD. A complete co-creation approach is promoted through the effective design of co-creation experiences. Effective co-creation experiences are designed to promote interaction and collaboration throughout the NPD lifecycle; social media is considered an efficient and effective platform in fostering this interaction.

In this regard, a high-level impact is a result of the design of effective co-creation experiences and leveraging social media to positively impact the co-creation-NPD relationship. Focusing on the high-level impact of co-creation in NPD brings the research

full circle to address the research aim. The discussion in Chapter 2 reviewed the relevant literature regarding the ways in which co-creation are perceived to impact NPD. Co-creation is endorsed as the most effective approach to NPD, increasing the effectiveness of product solutions and delivering valuable experiences. Marketing practice and theory increasingly recognise the potential that co-creation has on a brand's performance (Prahalad and Ramaswamy, 2000, 2004).

The early discussion of the driving factors highlighted the potential of co-creation to create two significant sources of competitive advantage (Hull, 2004; Payne, Storbacka, and Frow, 2008; Prahalad and Ramaswamy, 2000): (1) productivity gains through increased efficiency (e.g., by reducing costs) and (2) improved effectiveness (e.g., through greater product value, innovativeness and learning capabilities, and a better fit with consumer needs). Driving factors such as greater speed to market, higher commercial potential and closer market-fit directly deliver benefits to brands through cost reductions/efficiency gains. As a result, it was important to explore and expand the knowledge of the driving factors, as this provides a greater understanding of the competitive impact of co-creation.

Moreover, the emergence of consumer co-creation highlights knowledge as a source of competitive advantage (O'Hern & Rindfleisch, 2015). This builds on the discussion of the S-D logic (Chapter 2) in which knowledge is regarded as an operant resource and the basis for a competitive advantage. By adopting a co-creation approach, consumers become a new source of competence for the brand (Prahalad & Ramaswamy, 2000). Collaborating with consumers provides brands with vital information on consumer wants and needs, their expectations in regards to experiences and also knowledge about consumer's value-creating processes (Payne, Storbacka and Frow, 2008).

Whilst the literature stresses the value of experience heavily, prior research discussing the deliverable impacts on co-creation on NPD places less significance upon this. A large focus of prior research in respect to the impact of co-creation in NPD denotes a product-based impact. Similarly, the examples of co-creation (Table 3.1) appear to be focused on products as the locus of value, there is little evidence of a focus on experience as the source of value. In this regard, the research must explore the significance of experiential value from both the perspective of the brand and consumer. Value is considered experiential; accordingly brands should shift their focus to co-creating valuable experiences with consumers (Vargo and Lusxh, 2006; Prahalad and Ramaswamy, 2004).

The true potential and impact of co-creation in NPD is largely unexplored, and this area is represented by a significant dearth in the literature. The majority of available co-creation studies are conducted in a B2B context, hence there is a need to explore the co-creation of value between brands and consumers (Bolton & Saxena-Iyer, 2009). A deeper understanding of the ways in which co-creation can enhance NPD competences is vital in resolving the co-creation-NPD relationship. Moreover, resolving this impact enhances the view that co-creation is the value-maximising paradigm in NPD. Consequently, the conceptual framework must guide the research to explore the high-level impact of co-creation in NPD.

The existing literature emphasises that co-creation is the value maximising approach to NPD. In support of this, this research seeks to contribute a fundamental understanding of 'how' and 'why' co-creation can deliver a high-level impact in NPD. This approach guides the research to contribute to a holistic understanding of the interconnected relationships between co-creation, NPD and social media. This includes the steps leading to a high-level co-creation impact in NPD (through effective co-creation experience design in promoting a complete co-creation approach) and the categorisation of specific ways in which co-creation can deliver a high-level impact in NPD. This provides the final construct of the conceptual framework.

3.6 Conceptual Framework

The narrative in this chapter identified three research elements that underpin the aim of this research (co-creation, NPD and social media). The discussion of these elements arose as a result of the researcher's understanding of the relevant literature and a contextual view built from a review of examples of co-creation. These elements and their interactions form the key constructs of the conceptual framework. The discussion creates linkages between these elements, highlighting potential synergies and emphasising the research gap at the point where these concepts overlap.

In order to further explore this area, an effective framework must be designed in order to act as a blueprint to guide further stages of research (Yin, 2003). An effective framework must capture and resolve the interaction of the research elements and guide the data collection to explore the concepts discussed in this chapter, particularly in the collection and analysis of data. Effective framework design requires revisiting the research questions, aims and objectives to guide the research and meet the research aim:

> *'To explore the role of co-creation in enhancing NPD competences and the impact of social media in enabling co-creation.'*

The narrative in this chapter aimed to refine the direction of the research by developing a deeper understanding of the topic in hand. The research aim is likely to be achieved when meeting each of the research objectives. At this particular stage, the following objective is of particular significance:

> *'To develop a framework based on focal theory to explore the design of effective co-creation experiences and the high-level impact of co-creation on NPD.'*

The first step in meeting this objective was the review and discussion of the relevant literature and the key elements of the research (Chapter 2). From this, a clear direction in the design of the research became evident. The focus of the research is co-creation in NPD. The driving forces behind the research are current challenges in NPD and co-creation, and the pervasiveness of social media. Finally, the proposed avenue of research is exploring the design of effective co-creation experiences, the role of social media in enabling co-creation, and the high-level impact of co-creation on NPD competences. The review of the literature, along with the use of examples, provided the basis for meeting this objective. The emerging framework must consider the interaction of the research elements, the perspectives of both the brand and consumer and the aims and objectives of the research.

3.6.1 Research Approach

A key consideration in the conceptual framework is the philosophical orientation of the researcher and the previously discussed literature. Having discussed these in detail, these shape the approach of the researcher in the subsequent stages of research. From the understanding gained from the literature, previous research and examples, it appears the co-creation approach is evident in NPD and social media is enabling co-creation to an extent (Table 3.1). However, there is little or no evidence of complete co-creation in real-life NPD scenarios, and a gulf exists between what is proposed by the literature and what is occurring in practice.

The real core of the research is to understand the role of co-creation in enhancing NPD competences, the challenges in implementing a complete co-creation approach and the role of social media in enabling, managing and designing co-creation experiences. The

discussion in this chapter emphasises a gap between theory and what is currently occurring in practice. The most desirable situation would be for co-creation to occur intensely across the whole NPD lifecycle. However, as discussed in this chapter, there are a number of challenges in reaching this degree of co-creation. In regards to how this impacts the research, it is important to explore and expand the discussion in this chapter to further understand the interconnected relationships between co-creation, NPD and social media.

3.6.2 Framework Design

The discussion in this chapter is geared towards refining the research direction and actions to meet the research aim. A number of key constructs are identified in respect to the conceptual framework. The key areas of discussion are recapitulated below:

The co-creation-NPD relationship (co-creation experience design): in line with the focus on complete co-creation, the discussion in this chapter explored the design of co-creation experiences in respect to the research aim. Co-creation experiences foster interaction and collaboration between a brand and consumer. This is the locus of value creation; co-creation experiences should be designed to promote the co-creation of value throughout the NPD lifecycle.

To explore the co-creation-NPD relationship, the conceptual framework must guide the research to explore the design of co-creation experiences to promote complete co-creation. Of particular significance, is the identification and discussion of co-creation factors. This chapter outlined separate taxonomies of driving and inhibiting factors from the brand and consumer perspective. These 'co-creation factors' represent the fundamental factors that underline the motivation and ability of brands and consumers to co-create. The discussion proposed that in order to drive co-creation, the driving factors (perceived benefits) must outweigh the inhibiting factors (potential costs/risks). Accordingly, the conceptual framework must seek to explore and expand the knowledge of these factors with respect to the design of co-creation experiences.

Effective co-creation experience design is considered the first step in promoting a complete co-creation approach. The existing literature is effective in providing the building blocks of a co-creation experience (e.g. Prahalad and Ramaswamy, 2004: DART framework). However, there remains a lack of focus on how to implement a co-creation experience in a real-life NPD scenario, and how to tailor the design of the co-creation experience to the various stages of the NPD lifecycle. The conceptual

framework must seek to explore this in further detail. This avenue of enquiry is likely to contribute greater practical knowledge of how to implement effective co-creation experiences, and extend the guidance provided by the existing literature. In this regard, the co-creation factors from both the brand and consumer perspective must be included as key constructs of the conceptual framework.

Complete co-creation is considered the value maximising approach in NPD. Accordingly, co-creation experiences should be designed throughout the NPD lifecycle to promote a complete co-creation approach. An additional consideration in the discussion is the likelihood of co-creation factors varying in significance across the lifecycle. As each stage of NPD is underpinned by differing tasks, processes and inputs, each stage of NPD represents a unique challenge. Consequently, the research must explore the significance of the co-creation factors at each stage of NPD to provide greater guidance in the implementation of a complete co-creation approach. This guides the framework design to explore and expand the underlying knowledge of this aspect of the co-creation-NPD relationship. The framework design must include the perspectives of both the brand and consumer as vital collaborators in value creation and drive the research to explore co-creation factors across the NPD lifecycle.

The discussion of the NPD literature (Chapter 2) and outlining of the NPD Lifecycle (6 stages: Ideation, feasibility, development, testing and launch) provides the parameters on which to measure a complete co-creation approach. This presents a key construct of the conceptual framework, as a complete co-creation approach is most likely achieved through collaboration at each stage of NPD. In the context of the overall research aim, a focus on complete co-creation is done so with the understanding that complete co-creation is likely to maximise the high-level impact of co-creation on NPD. By adopting this stance, the conceptual framework is likely to guide the research to explore the ways in which a complete co-creation approach can be implemented in a real-life NPD scenario. Once again, this seeks to extend the existing knowledge of co-creation in NPD beyond the theoretical perspective, and provide practical knowledge and guidance of how to maximise the high-level impact of co-creation on NPD.

The impact of social media in enabling co-creation: Building on the review of the literature in Chapter 2, this chapter explored the role of social media in enabling co-creation. The co-creation paradigm and S-D Logic are founded on the premise that locus of value creation is interaction and involvement between brand and consumer (Varo and Lusch 2006; Prahalad and Ramswamy, 2004). The relevant literature outlines the suitability

and impact of social media to foster interaction and collaboration between brand and consumer, and the impact social media has had in promoting the co-creation approach Accordingly, a focus on platforms that foster relatively easy engagement and interaction is beneficial to both designing effective co-creation experiences and in promoting a complete co-creation approach. This provides the underlying rationale for this research to focus on social media, particularly the specific ways in which social media enables co-creation.

Of particular significance is the taxonomy of social media characteristics. The social media characteristics underline the structure and behaviours of users in DESNs and VCCs that are considered to have the potential to positively impact the co-creation-NPD relationship. The taxonomy of social media characteristics provides the parameters to guide the inquiry into the role of social media in enabling co-creation. Consequently the conceptual framework must include the social media characteristics as a key construct, particularly in respect to their impact on the co-creation-NPD relationship.

This focus on social media is likely to contribute a greater knowledge of the impact of social media on the co-creation-NPD relationship and also the specific ways of how and why social media enables co-creation. This is particularly valuable in utilising social media in the design of co-creation experiences; a greater understanding of its impact provides the specific characteristics that brands should seek to leverage to impact co-creation in NPD. Exploring the impact of social media on the co-creation-NPD relationship ensures that the inquiry into social media is done so with the focus on a high-level impact of co-creation on NPD (through social media enabled co-creation experiences and complete co-creation).

The co-creation-NPD relationship (high-level impact): A complete co-creation approach is considered a vital antecedent of a high-level impact on a brand's NPD competences. It is vital to explore this high-level impact directly in line with the research aim. This chapter highlighted the significance of the design of effective co-creation experiences and the impact of social media in respect to a high-level impact of NPD. This aspect of the co-creation-NPD relationship embodies the interaction between the three research elements; a high-level impact is likely to result from this interaction.

Through the Literature Review (Chapter 2), it is clear that there is a lack of understanding of how and why co-creation can deliver a high-level impact in NPD. The current literature outlines co-creation as efficiency boosting and the value-maximising approach to NPD.

However, there remains a lack of understanding of the specific ways in which co-creation can deliver a high-level impact on NPD. A greater knowledge of the high-level relationship between co-creation and NPD is likely to promote the implementation of a co-creation in NPD, and explore the formal link between co-creation and NPD success. The conceptual framework therefore must guide the research to explore the interaction of the research elements, but also the results of this interaction (i.e. a high-level impact). This is done so directly in line with the research aim to contribute a greater fundamental understanding of the co-creation-NPD relationship. Particularly in understanding the specific ways in which co-creation can enhance a brand's NPD competences.

The conceptual framework is grounded on the three research elements, the perspectives of the two key stakeholders (brand and consumer), and a number of relationships the research seeks to explore. The framework is supported by the discussion in this chapter and is underpinned by the NPD lifecycle, and the taxonomies of co-creation factors and social media characteristics. The research should seek to explore and expand these taxonomies, and explore the high-level relationships between the research elements. Figure 3.2 (overleaf) displays the conceptual framework. The discussion that follows outlines the design of the conceptual framework and how this guides the next stages of research.

Figure 3.2: Conceptual framework
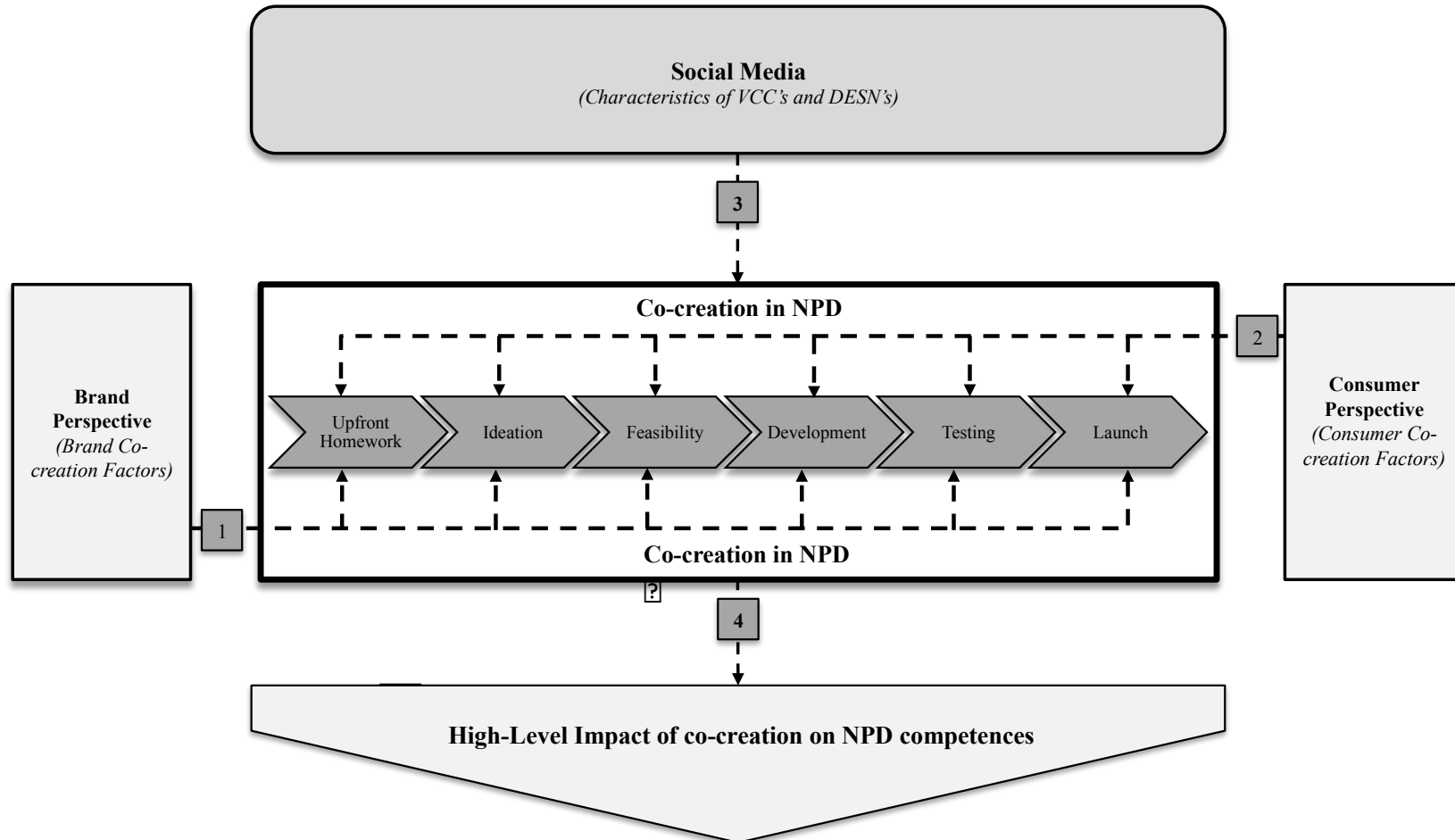
Conceptual Framework

Figure 3.2 displays the conceptual framework. The framework is built of the three research elements and the perspectives of the brand and consumer. The relationships between the research elements are numbered 1 to 4; these represent the relationships the research seeks to explore.

The co-creation-NPD relationship is at the centre of the framework. This is denoted by the inclusion of the NPD value chain (six stages) exclusively in the context of co-creation. The perspectives of the brand and the consumer are underpinned by the taxonomies of co-creation factors. Directional arrows show the input of the brand and consumer at each NPD stage, outlining the potential for co-creation to occur across each stage of the NPD lifecycle. **Relationships 1** and **2** refer to the perspective of the brand and the consumer. These drive the research to firstly explore and expand the taxonomies of co-creation factors, and following this, explore the significance of the co-creation factors across the NPD lifecycle.

Social media is a separate entity seen to impact the co-creation-NPD relationship, underpinned by the taxonomy of social media characteristics. The framework postulates that social media hosts the interaction between the brand and consumers. Consequently, **Relationship 3** drives the research to explore the impact of the social media characteristics on the co-creation-NPD relationship. This provides guidance for the research to explore and expand the taxonomy of social media characteristics, and explore the impact of social media in enabling co-creation.

The final construct of the framework is the high-level impact of co-creation in NPD. The discussion in this chapter highlights the need to understand the specific ways in which co-creation impacts NPD, and also the impact of social media in enabling co-creation. **Relationship 4** drives the research to explore this, linking the co-creation-NPD relationship and the high-level impact. As social media is seen to impact the co-creation-NPD relationship, this brings together the interaction of all three research elements.

3.6.3 Exploring the Framework
In order to meet the aim of the research, the framework provides a blueprint for the collection and analysis of data. Exploring the framework is vital (i.e. through the underlying taxonomies of co-creation factors and social media characteristics), but to contribute significantly to the body of knowledge it is also important to expand the underlying knowledge on which the framework is based. The research elements as separate concepts are widely researched and well understood. The discussion in this

chapter explores the relationships between these elements i.e. the research gap. The directional arrows are as a result of this discussion and these are the particular constructs of the framework that require validation and further exploration.

The framework displays the interaction of the research elements. However, the subtext derived from the discussion of these elements frames how the researcher intends to validate and explore the framework. As previously mentioned, the design of the framework relies on the discussion and interconnected conceptualisations emerging throughout this chapter. As a result, it is important to ensure that the framework is effective in guiding the research to address these areas. In order to do this, a number of research questions assume significance in guiding the research approach and design. The discussion in this chapter, in respect to the research aim, presents the basis for the research questions to guide the data collection to define and explore the phenomena.

3.6.3.1 Research questions

The use of research questions ensures the research approach aligns with the discussion in this chapter as well as the research aim. The research questions provide a clear path of enquiry for the research and allow freedom to explore the relevant aspects of the conceptual framework. The research questions focus on the relationships, factors and characteristics raised through the discussion in this chapter. The research questions are outlined below:

- What are the key driving factors of co-creation in NPD (brand and consumer perspective)?

- What are the key inhibiting factors of co-creation in NPD (brand and consumer perspective)?

- How do the co-creation factors differ across the NPD lifecycle?

- What are the key characteristics of social media in enabling co-creation?

- How does social media positively impact the co-creation-NPD relationship?

- How does co-creation enhance NPD competences?

The research questions outlined above aim to direct the next stages of research to collect data in line with the research aim. They have been developed to guide the research to explore and expand the conceptual framework in line with the researcher's philosophy and research aim. The framework provides the flexibility to design an effective research

methodology to capture and resolve the relationships between the three research elements, and meet the aims and objectives of the research.

3.7 Chapter Summary

This chapter took the background and understanding of the literature established in the previous chapter (Chapter 2) and identified key aspects of theory that underpin this research. The research elements (NPD, co-creation and social media) were explored in greater depth to build a strong direction to guide the data collection and analysis.

The initial discussion outlined the co-creation landscape through a review of examples of co-creation in real-life NPD scenarios. This was vital in building a contextual view of the consumer goods sector and refining the researcher's philosophical orientation towards the research project. Following this, the discussion centred on the relationship between co-creation and NPD, and the impact of social media on the co-creation-NPD relationship. A focus on a complete co-creation approach prompted the narrative to explore the factors that both drive and inhibit co-creation (co-creation factors) in respect to the design of co-creation experiences. The discussion of the impact of social media in enabling co-creation outlined a taxonomy of social media characteristics relating to the structure of social media and the behaviours of social media users. This provided the parameters upon which the data collection and analysis of the impact of social media in enabling co-creation can be based. The final focus was on the high-level impact of co-creation in NPD. This denoted the interaction of all three research elements and provided an early indication of the high-level impact of co-creation in NPD through the relevant literature.

The discussion throughout the chapter outlined the key constructs of the conceptual framework, and the underlying philosophy shaping the framework design. The conceptual framework provides a clear blueprint on which to base the research design and analysis. Research questions were developed to ensure a clear direction is maintained during the collection of data in order to meet the research aim.

Chapter 4 examines the research design, paradigms and methodologies and outlines their relevance in respect to the design of this research project.

Chapter 4: Research Methodology

4.1 Introduction

This chapter outlines the research design and methodology in respect to achieving the research aim. An effective research methodology should ensure that the actions taken in the collection of data are in line with the researcher's initial intentions. Remenvi et al. (1998) highlight the importance of the topic and specific research questions as key factors affecting the researcher's choice of data collection methods. In addition, the researcher's philosophy and conceptual framework outlined in the previous chapter are of vital importance. The narrative in this chapter centres on the relevant literature regarding research design and methodology and its significance in the context of this research.

The discussion in the previous chapters provided significant grounding on which to base the selection and design of the research methods. Chapter 1 introduced the research and in turn the research gap. The literature review (Chapter 2) reinforced this research gap and provided a detailed knowledge of the research topic and the relevant literature to date. Finally, Chapter 3 (Conceptual Framework) discussed the key research elements in line with the research aim and the researcher's philosophy. The results of Chapter 3 took the form of a conceptual framework and research questions that will be used to guide the subsequent stages of research.

The discussion in Chapter 3 utilised reflective reasoning to create linkages between existing bodies of literature, addressing the research elements that underpin the research. The conceptual framework outlined at the end of Chapter 3 conceptualised the interaction of the research elements and was explained through the related discussion. In regards to the primary research, the framework provides a blueprint to guide the research to explore and develop a greater understanding of the research topic in context. The research questions are aimed at guiding the research to explore the various aspects of the conceptual framework in line with the research aim. This chapter relies heavily on the conceptual framework and research questions as tools to guide the design and selection of appropriate research methods.

Robson (2002) states that if research methods are not providing answers to research questions, this indicates that something needs to be changed, i.e. the research question. This notion has driven a review of potential research methods in order to

ensure the most appropriate are selected. This chapter will outline the chosen research methods, justifying their use in this research and also how these relate to the narrative in the previous chapters.

4.1.1 Defining Research

The initial discussion in this chapter outlines the various definitions applied to different features of research. It is important to understand the significance of these features of research to ensure a structured research methodology is developed.

It is firstly important to understand the meaning and purpose of research. Mason (1984) terms the design of research as identifying:

> *"The centrality of the research question to the research process, and of linking research questions to one's own philosophical and methodical position on the one hand, and to appropriate data generation methods on the other."* (Mason, 1984)

This definition sums up the research journey perfectly. Chapter 3 presented the philosophical stance of the research, whilst this chapter represents the methodological position and the appropriation of data methods. The specific aims of any research usually depend on the subject of interest. However, in general, research is undertaken for the following reasons: (Aaker et al., 1995)

- To find out things

- To find a solution to a given dilemma or problem

- To predict events, for example in the case of market survey or opinion polls

- To understand social problems or phenomena

- To change the world by influencing people's way of thinking by providing alternative solutions to investigated problems

- To expand knowledge of a particular topic by disseminating widely the knowledge gained.

4.1.2 Research Design Vs. Research Methodology

Before discussing the relevant research approaches, strategies and data collection methods, two commonly used terms in respect to research must be defined and

clarified; 'research design' and 'research methodology'. From the outset, one must be able to distinguish the fundamental differences between 'research design' and 'research methodology'.

Research Design: According to Yin (2003), research design acts as a blueprint that enables the researcher to create solutions and tackle potential problems at various stages of the research. Research design provides guidance in collecting, analysing and interpreting research observations (Nachmias and Nachmias, 1996). Consequently, it deals with at least four problems of carrying out successful research (Yin, 2003):

- What questions to study

- What data are relevant

- What data to collect

- How to analyse the results

Therefore, research design comprises of strategic decisions regarding the choice of data collection methods, and more tactical decisions regarding measurement and scaling procedures, questionnaire, samples and data analysis (Zikmund, 2003). Effective research design provides a blueprint that guides data collection and analysis. Research design is considered more holistic as it is related to strategic issues.

Research methodology*:* Conversely, research methodology consists of a set of procedures and rules to guide research and against which its claims can be assessed (Robson, 2002). An effective research methodology must consider the specific requirements of the research and select the best methodology respectively. Research methodology provides a set of clear rules on which research is centred and against which assertions for knowledge are assessed, thereby ensuring results are consistent and effective (Contruser and Lorange, 2002). Cooper and Schindler (1998) suggest that research methodology presentation should include sampling design, data collection, data analysis, and limitations or constraints faced by the researcher. Research methodology is concerned with the tools used to achieve each specific objective, providing a blueprint that guides data collection and data analysis, and is a component of research design.

Following the understanding of the definitions ascribed to the various aspects of research, it is now important to outline the nature of this research. The proceeding discussion outlines the methodological choices made towards this research, discussing the relevant literature and how this shapes the research approach.

4.2 Research Methodology

In order to guide methodological choices, the discussion of the research methodology must outline the relevant literature and examine it in regards to this research project. This section discusses the theoretical underpinnings for the methods applied. The discussion is geared towards selecting the most appropriate methods to deliver results in line with the research aim. It is important to understand how the research is viewed, what the research is fundamentally about and what is to be achieved.

The choice of methodology employed by the researcher depends on numerous factors, such as, the purpose of the research, the objectives of the research, the process of the investigation and the desired outcomes. The suitability of methodologies cannot be determined until they have been applied to a specific research problem (Downey and Ireland, 1979). This research requires knowledge about the 'what', 'how' and 'why' of the interconnected relationships between co-creation, NPD and social media. The 'what' was discovered by the literature review, the 'how' and 'why' will be explored through empirical research.

4.2.1 Object of Study

In order to guide the methodological choices in this chapter, it is vital to understand what is to be studied. The research to this point shapes the researcher's view on the research topic and in turn what is to be explored.

The object of study is the co-creation interactions occurring between brands and consumers within a given context. Of particular focus will be the impact of social media in enabling co-creation, and the high-level impact of co-creation in NPD. In effect, this embodies each aspect of the conceptual framework, addressing the research from both the brand and consumer perspectives, focusing on co-creation in NPD and the potential impact of social media on this relationship. The interconnected relationships between co-creation, NPD and social media were conceptualised in Chapter 3. The study seeks to validate and expand this conceptualisation. The research questions guide the research to explore the various aspects of the

framework. Understanding what is to be studied provides a platform upon which to make the appropriate methodological choices.

4.2.2 Research Purpose

It is widely accepted that research is carried out for at least one of three main purposes: exploratory, descriptive or explanatory (Robson, 2002; Saunders et al., 2003; Yin, 2003; Neuman, 2004; Yates, 2004). Exploratory studies attempt to build descriptions of complex circumstances or unexplored phenomena in the literature (Marshall and Rossman, 1999). Descriptive research aims 'to portray an accurate profile of persons, events or situations' (Robson, 2002). Explanatory or analytical research is considered useful when the aim of the research is to establish causal relationships between variables (Marshall and Rossman, 1999; Robson, 2002; Saunders et al., 2003; Yin, 2003).

This research is exploratory in nature, being undertaken to clarify the nature of a vague problem. Robson (2002) argues that exploratory studies are a respected means of discovering 'what is happening; to seek new insights; to ask questions and to assess phenomena in a new light'. Exploratory research is characterised by framing problems more precisely, clarifying concepts, gaining insight, eliminating impractical ideas, and forming hypotheses (Neuman, 2004). A valuable characteristic of exploratory research is the apparent flexibility, as it can be performed using a literature search, surveying certain people about their experiences, and case studies (Yin, 2003). The results of this research will be largely empirical as exploratory research relies on observation and experience in developing new knowledge.

There is very little prior research formalising a link between co-creation, NPD and social media. This embodies a series of interconnected relationships, as of yet, there are few hands-on constructs or theories that can help to clarify or develop a profound knowledge and applicable framework in this area. The aim of this research is to deliver a greater fundamental understanding of the research topic through exploratory, empirical research.

The exploratory approach is justified by the research so far. The research topic is signified by an incomplete state of knowledge and the research to this point focuses on developing a greater understanding of the phenomena in hand. Chapter 3 presented a number of interconnected conceptualisations, creating links between existing bodies of literature. In order to explore and expand the discussion in Chapter

3, the aim of the research is to gain a fundamental understanding of the research topic through collecting and analysing rich, meaningful data. In particular, the discussion in Chapter 3 guides the primary research to explore the co-creation-NPD relationship, and the impact of social media on this relationship. This will be achieved through exploring each aspect of the conceptual framework guided by the research questions to gain a deeper understanding of the phenomena. In order to capture and create knowledge relative to the research topic, careful consideration must be given to the research design and methodology.

4.2.3 Research Philosophy

A key factor affecting the decisions regarding the methodology and design is the researcher's philosophy towards the topic. Chapter 3 provided a detailed outline of this philosophy. Of particular significance is the way in which the researcher views knowledge and the research topic, and how this shapes methodological choices.

Understanding of the research philosophy identifies important assumptions on which the researcher views the world (Saunders et al., 2009). These assumptions underpin the research strategy and the choice of methods. Johnson and Clark (2006) note the importance of the philosophical commitments that researchers make through their choice of research strategy. This has a significant impact not only on what is being understood, but on what is under investigation.

Research philosophy is an over-arching term relating to the nature of knowledge and the development of that knowledge (Saunders et al., 2009). The researcher's philosophy is influenced by their particular view of the relationship between knowledge, the process by which it is developed, as well as practical considerations (Saunders et al., 2009). It is important to identify and analyse the research philosophy as this allows for an understanding of the researcher's assumptions, and in turn the appropriateness of the research design. Reflecting on the choice of philosophy allows the researcher to consider philosophical choices and in turn defend them in relation to the alternatives that could have been adopted (Johnson and Clark, 2006).

The research seeks to ask 'how' and 'why' questions in line with the exploratory approach in order to understand the research topic more fundamentally. Chapter 3 highlighted the importance of context in co-creation (through the use of examples). The importance of context signifies that there is no single reality in terms of the relationships between co-creation, NPD and social media, and context plays a key

role in defining and understanding reality (Crotty, 1998). Consequently, it is clear this research adopts an interpretivist philosophy; the discussion of the disparity between theory and practice in the previous chapter supports this. The research is characterised by a number of social phenomena (e.g. co-creation factors). The subjective interpretation of these phenomena and varied behaviours of these phenomena in context is vital in developing knowledge regarding the research topic.

Interpretivists believe that there is no single reality or truth, and therefore reality needs to be interpreted, and are more likely to use qualitative methods to get those multiple realities (Crotty, 1998). This research philosophy is in line with the aim to expand and explore the conceptual framework. Rather than looking to test hypotheses or constructs, the aim of the research is to capture data relevant to the research aim in order to contribute a greater fundamental understanding of the research topic.

4.2.4 Research Approach

The next methodological consideration to be discussed is the research approach. A clear understanding of the research purpose and philosophy guides the selection of the research approach and subsequent data collection methods. Furthermore, a fundamental understanding of the research topic and goals is necessary to guide the approach to the research. This was achieved through the research objectives (Chapter 1) and the discussion in Chapters 2 and 3. The current section will consider the most appropriate approach in regards to this research.

Nachmias and Nachmias (1996) propose that two types of research approach exist: research-then-theory and theory-then-research. Respectively, these are called inductive and deductive research. The deductive approach involves the researcher developing a theory, hypothesis (or hypotheses), and designing a research strategy to test the hypothesis. On the other hand, the inductive approach involves the researcher collecting data and developing a theory as a result of the data analysis (Saunders et al., 2003).

This research is driven by a state of not knowing, i.e. lack of theory. Any contribution to knowledge will come as a result of the data collected, hence an inductive approach. In line with exploratory, empirical research, no set theory has been outlined by the researcher prior to data collection. In order to develop a greater understanding of the research topic, the researcher must explore the relevant concepts with relative freedom in order to gain access to rich, meaningful data. This further endorses the

inductive approach by using the discussion in Chapter 3 to guide the inquiry, with the aim of distilling and refining the information gleaned from the data collection. The basic premise of the inductive approach is outlined in Figure 4.1, below:

Figure 4.1: Inductive research approach
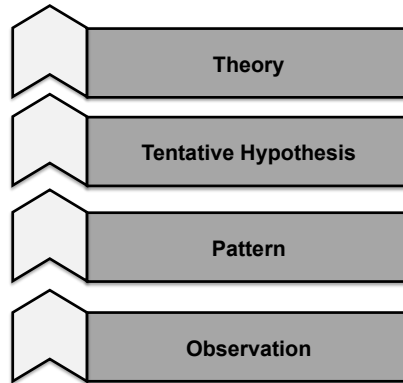
Source: Adapted from: Trochim (2001)

The inductive approach is displayed as moving from specific observations to broader generalisations and theories (Trochim, 2001). Inductive research relies on the use of research questions to narrow the scope of the study. In addition to the use of research questions to guide the inquiry, the conceptual framework is used to guide the exploration of the research topic. This approach uses inductive reasoning as the first step in knowledge development. The uncertainty surrounding the research topic and relative newness of the phenomena promotes an inductive approach, due to a lack of existing research upon which to build.

The literature review adopts an interpretivist philosophy, exploring three distinct areas of literature (NPD, co-creation and social media) and attempts to create meaningful linkages between them. This is significant in outlining the research gap and the need for an inductive or 'theory building' approach. The research seeks to explore the interconnected relationships between NPD, co-creation and social media, an area that is yet widely under researched. Moreover, the research seeks to deliver contributions that enable the meta-theoretical principles of co-creation to be operationalised and implemented in real NPD scenarios. Once again this is driven by a lack of mid-range frameworks to guide this. This is vital in stressing the need for an inductive approach by contributing to this area based on the empirical investigation.

This approach is in line with the research journey to this point, as the previous chapters sought to build explanations in an area that is characterised by a lack of

existing research. The previous chapters helped frame the research problem, where inductive research is required to increase the understanding of this topic. Understanding the approach helps guide research strategy and methods, as a clear plan of action is evident.

4.2.5 Qualitative Vs. Quantitative Methods

It is important to give early consideration to the data collection and, in particular, what type of data the researcher is seeking to collect, i.e. what type of data is most suited to answering the research questions. While it has already been outlined that qualitative data is most often associated with interpretivism, it is important to consider how the different classifications of data relate to this research project. The selection of data collection methods depends on the nature of the research and what the researcher is trying to find out. Data is classified into two types: qualitative and quantitative.

Quantitative research is commonly used to collect data from larger samples whereas qualitative research is usually more refined and aimed at smaller samples. According to Collis and Hussey (2003), qualitative data is usually descriptive and provides data that illustrates frequencies. Conversely, quantitative research is focused on the numerical measurement of specific aspects of phenomena. It provides a very structured approach with the aim to generalise across a broad population.

This type of research requires the collection of complex confirmation regarding the 'what', 'how', and 'why' questions in respect to the research topic. The aim of the research is to explore the phenomena in order to develop a greater fundamental understanding of co-creation, NPD and social media. The data collection method should be able to deliver deep, rich, meaningful data, capable of providing an understanding of the events occurring in the research setting. This prompts a focus on qualitative data as the most suitable in achieving the research aim.

Qualitative research centres on the intensive study of as many features as possible of a small number of phenomena. The discussion in Chapter 3 highlighted a number of factors and relationships that require exploration. This necessitates the need for rich, meaningful data capable of explaining the 'how' and 'why' questions associated with the research topic. Qualitative research builds understanding through depth and intensity, and provides the most appropriate approach in line with the research aim (Collis and Hussey, 2003).

The complexity and unique nature of each case of co-creation, and the potential of social media to positively impact the co-creation-NPD relationship requires data that provide a deep understanding of the research topic in context. Qualitative data is best suited to adequately describe and explore implications of events, signalling its value in the context of this research (Neuman, 2004). Additionally, flexibility is required in this research project, with qualitative research providing both the freedom and intensity to extract the relevant data through observation and involvement (Bryman and Bell, 2003).

Qualitative methods provide the most appropriate solutions in regards to this research. In order to achieve the research aim and deliver a significant contribution to knowledge, the outcomes of the research must build a profound understanding of the research topic. This is most likely to be achieved through qualitative methods that are capable of describing and exploring the conceptual framework and research questions.

4.3 Research Method

Careful consideration must be given to the methods employed in data collection to ensure the outcomes of the research are in line with the researcher's initial intentions. The choice of method is governed by choosing the most appropriate tool to answer the research questions (Saunders et al., 2003).

Robson (2002) highlights three main strategies in governing the choice of collection methods: experiments, surveys and case studies. Strategy in this context refers to the strategic choice of method to answer and resolve the research questions. Experimental strategy gauges the effects of manipulating one variable against another, this approach features strongly in social science research. Survey strategy consists of the collection of information in standardised format from groups of participants, it is usually associated with a deductive approach (Robson, 2002). Finally, case study strategy is the development of intensive, detailed knowledge about a single case, or a small number of correlated cases, and is usually suitable for exploratory research (Yin, 2003).

It is key to understand research strategies for three reasons. Firstly, it enables the researcher to make informed decisions about a research design. Secondly, it helps the researcher to think about those approaches that will work and, critically, those

that will not. Thirdly, understanding different research methods enables the researcher to adapt their research design to cater for constraints (Creswell, 2003).

In order to adopt a suitable research method, it is important to consider the requirements of this research. The aim is to contribute a fundamental understanding of the role of co-creation in enhancing brands' NPD competences and the impact of social media in enabling co-creation. In addition, the research method must address two key stakeholder perspectives: the brand and the consumer.

With regard to the requirements and nature of this research, the case study method is the most appropriate approach. Yin (1990) states that the case study is a typical research tactic widely used for qualitative data collection in social science, and describes it as:

> "*An empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and the context are not clearly evident, and in which multiple sources of evidence are used. It is particularly valuable in answering who, why and how questions in management research.*" (Yin, 1990)

This method is preferred as the research involves answering 'who', 'why', and 'how' questions, focusing on contemporary phenomena within their real-life context (Remenyi et al., 1998). The case study method allows the researcher to focus on specific instances in an attempt to identify detailed interactive processes that are crucial to understanding the research topic. The case study method provides flexibility and real-time information that can be as up-to-date as the researcher requires, making this method ideal for the contemporary issues in question (Yin, 1993; Remenyi et al., 1998).

The data for case studies can be collected from various sources including, document analysis, interviews, direct observations, participant-observation situations, physical artefacts, and/or archived records (Merriam, 1988; Cohen and Manion, 1994; Remenyi et al., 1998). However, in the context of management research, interviews usually constitute a major part of the case study research protocol (Kasanen and Suomi, 1987; Bell, 1993; Yin, 1993).

In building an in-depth knowledge of the research topic, a key strength of the case study method is that it offers a more holistic, context-based approach. Knowledge is derived from the exploration of phenomena in context, through the intense study of a small number of cases. Case studies seek to derive analytic generalisations, building an in-depth knowledge of the phenomena within the research context (Yin, 1989; Bryman, 1995). This is considered a key strength of the case study method as this research recognises the unique nature of each NPD project, and the need for a brand to tailor their co-creation approach accordingly. The focus is on developing a deep understanding of the research topic in context, rather than seeking to generalise across a population. This further corroborates the focus on qualitative data, as the case study method should not attempt to claim the statistical generalisation associated with quantitative techniques, such as questionnaires or survey strategies (Yin, 1989; Cohen and Manion, 1994).

Flexibility is a key requirement of this research in allowing the researcher to adapt and tailor the research method to explore concepts in line with the research questions and conceptual framework. The case study method is recognised as an approach that allows flexibility in data collection by using multiple data sources. In addition, it enables the researcher to use 'controlled opportunism' to permit flexible responses to new discoveries made while collecting new data (Einsenhardt, 1989).

This approach is ideal for conducting qualitative research with both brands and consumers, and for deriving analytic generalisations from this (Bryman and Bell, 2003). Case study research is an all-encompassing method, with the inquiry based on the following features:

- Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result

- Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion

- Benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 2003).

The features outlined above are indicative of the aspects of this research and further reinforce the choice of a case study approach. In this sense, the case study is neither a data collection tool nor a design feature; it is a comprehensive research strategy (Stoecker, 1991). It is necessary to employ an in-depth research method in order to

produce the deep, rich information that this research requires. The features outlined above signify the fit of the case study method with this research. The discussion in Chapter 3 highlighted the complex nature of the research topic and outlined a number of factors and characteristics (considered variables) that contribute to the research aim. In addition, Chapter 3 concluded by outlining the conceptual framework and research questions to guide the research. These are vital in guiding the data collection to explore the research topic in context.

4.3.1 Case Study Method

The dialogue in the chapter thus far has outlined the aims of the research, the philosophy of the researcher and the selection of research method. Moving forward, it is now important to outline the design of the case study, particularly how and from whom data is collected and analysed.

A case study is an empirical inquiry that investigates a contemporary phenomenon in its real-life context (Yin, 2013). According to Yin (2003), a case study design should be considered when:

- The focus of the study is to answer 'how' and 'why' questions

- You cannot manipulate the behaviour of those involved in the study

- You want to cover contextual conditions because you believe they are relevant to the phenomenon under study

- The boundaries are not clear between the phenomenon and context.

This section will discuss the design of the case study, outlining the relevant literature and how this shapes the design of the case study approach. Yin (1991; 2003 & 2013) develops robust procedures, guiding the design of this research. Yin (1994) specifies the need to use a case study protocol (CSP) as a set of guidelines to structure and govern a case study research project. The following discussion outlines the design and key considerations of the case study protocol specific to this research. Focusing firstly on the context and selection of case study type. Following this, the discussion relies heavily on the literature to ensure a quality case study design and analysis approach.

4.3.1.1 Unit of analysis

An important component of case study research is the unit of analysis (Yin, 2003). Case study research is not sampling research; cases must be selected carefully in

order to maximise what is learned in the period of the study. As a result, the unit of analysis is considered a critical factor in the case study design. Units of analysis are represented typically by a system of action, rather than an individual or group of individuals (Tellis, 1997).

The unit of analysis refers to the fundamental problem of defining 'what the case is' (Yin 2003). Miles and Huberman (1994) define cases as, 'a phenomenon of some sort occurring in a bounded context. The case is, in effect, 'the unit of analysis'. In the context of this research, the case is defined as:

'The co-creation-NPD scenarios occurring between brands and consumers.'

The discussion to this point highlights co-creation as the focal point of the study, with social media regarded as an enabler or catalyst impacting co-creation. In addition, it is important to 'bind' the case to define what the case will 'not be'. This ensures the study remains reasonable in scope. The literature regarding case study research suggests that cases can be bound by any of the following:

- By time and place (Cresswell, 1998)

- Time and activity (Stake, 1995)

- By definition and context (Miles and Huberman, 1994).

In the context of this research, the case is bound to the consumer goods sector. Through the use of secondary examples in Chapter 3, it is clear that consumer goods (nondurables and semi-durables) is an industry sector with clear evidence of co-creation between brands and consumers. Binding the case by industry sector ensures the research is reasonable in scope and focuses on an industry sector where there is evidence of the use of co-creation in NPD.

4.3.2 Case Study Design
The unit of analysis and case context (how the case is bound) provide the parameters of the case study design. The selection of an appropriate case study design is important in guiding the overall study purpose (Baxter and Jack, 2008). There are a number of potential case study designs to consider, Yin (2003) categorises case studies as explanatory, exploratory, or descriptive. It has already been established that this research is exploratory in nature as it seeks to acquire a more fundamental understanding of the research topic. Yin (2003) describes an exploratory case study as a method to explore situations in which the intervention being evaluated has no

clear, single set of outcomes.

Additionally, Yin (2003) differentiates between single and multiple case study designs. Single case designs are suitable as exploratory devices and are analogous to one specific case. Multiple-case designs allow for explanation building and seek replication across cases (Yin, 1994). In order to select an appropriate case study design, it is important to consider the research in hand. In particular, which case design would be most advantageous in delivering the most appropriate outcomes.

The aim of the research is to enrich the understanding of the interconnected relationships between co-creation, NPD and social media. A key notion shaping the researcher's philosophy and indeed the design of the conceptual framework is that each co-creation experience is unique. The nature of each co-creation project is likely to vary across a range of factors, e.g. the product category, the organisation, and the specific requirements and aims of the NPD project. Accordingly, the conceptual framework and factors that underpin it (co-creation factors/social media characteristics) are unlikely to behave rationally in a real-life NPD-scenario. As a result, this research does not seek to find replication across cases. The aim is to build an explanation of the research topic by exploring and capturing relevant and new knowledge.

In the co-creation paradigm, markets are viewed as open systems of collaboration whereby the stakeholders are responsible for the co-creation of value and compete for the extraction of this value. In the context of this research, the stakeholder perspectives of interest are that of the brand and the consumer. When considering the case study design, the researcher initially favoured an approach that explored the collaboration between brands and consumers on specific NPD projects. However, after careful consideration, this was considered to deviate from the view that value is co-created through networks and was not in line with the research philosophy.

Consequently, it was regarded as more beneficial to explore the market as an open system of collaboration to contribute a holistic knowledge of the research topic. In this regard, the market is viewed an agencial assemblage of artefacts, interfaces, processes and persons (Ramaswamy and Ozcan, 2018). Rather than limiting the investigation to specific NPD projects, the case study design must seek to explore the perspectives of the brand and the consumer across the market as a whole. Accordingly, the case study design is not bound by brand(s) or NPD project(s) but as

an industry sector (consumer goods). This provides the opportunity to build a depth of perspectives of the brand and consumer, by not limiting the investigation to specific NPD projects, but throughout the market. This is considered a key strength of the case study design as the results are likely to be more generalisable as they are built from a depth of perspectives.

After careful consideration of the nature and aims of the research, a single case design with embedded units is considered most appropriate. The case context is bound to the consumer goods industry, the unit of analysis, i.e. the case, is co-creation in NPD, and the embedded units are represented by the two key stakeholder perspectives. Figure 4.2 displays the case study design:

Figure 4.2: Case study design
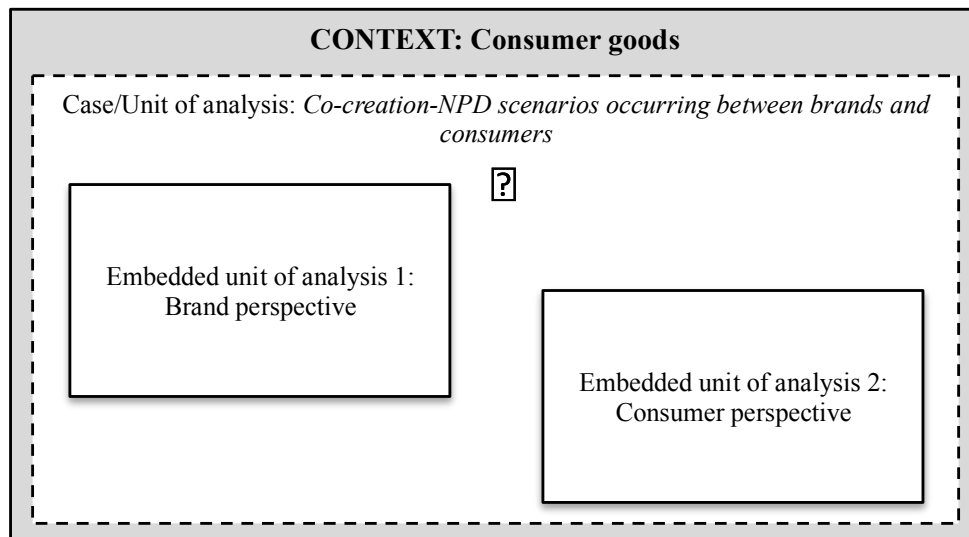
4.3.3 Key Stakeholder Perspectives

At this point, it is clear how and why data is being collected. It is now imperative to outline where and from whom the data will be collected. In order to gain access to relevant data, careful consideration must be given to the selection of participants. The considerations regarding participant selection are outlined below.

4.3.3.1 Brand perspective

The discussion and review of examples of co-creation in the previous chapter (Table 3.1) focus on the consumer goods sector. A key insight gained from these examples is that co-creation efforts are evident in respect to specific NPD projects, rather than an organisation-wide approach to NPD. To date, it appears co-creation is seldom embedded in a brand's culture. As a result, value is placed on the expertise of

individuals who have extensive knowledge of co-creation in NPD, rather than on specific brands. This specifies a focus on research 'in' organisations, rather than 'on' organisations. The appropriate data is likely to reside with individuals who have been responsible for implementing a co-creation approach in NPD in the case context.

Consequently, the brand perspective collects data from subject matter experts (SMEs) regarded as authorities in this specific domain. The population of subject matter experts is built from industry practitioners and co-creation specialists. The following discussion outlines the characteristics of SMEs in the context of this research.

Industry practitioner: Rather than targeting specific brands, the relevant knowledge is likely to reside with individuals who have been involved in designing, implementing and managing co-creation experiences (industry practitioners). In regards to the case study method, rather than conducting research in organisations, it is beneficial to conduct research on organisations. This involves targeting individuals, who on the behalf of brands have gained experience and developed expertise in co-creation.

The process of developing a new product usually involves number of organisational strategic functions. Most commonly, the NPD process is designed and managed by those within the R&D, innovation and marketing functions of an organisation. As the research focuses on the design, implementation and managing of co-creation experiences at a high level, senior individuals in these strategic functions are most likely to possess the relevant knowledge.

Co-creation specialist: The literature review leans on a number of consultancy reports produced by co-creation specialists, i.e. consultants who advise brands on their co-creation approach. One of the core sources of value of these reports is that they are context based, using case studies of co-creation as evidence in regards to the content of the report. As a result, co-creation specialists are considered valuable sources of knowledge, as their expertise not only focuses on co-creation but also spans a wide range of brands.

Co-creation specialists provide a breadth of knowledge as their expertise across co-creation spans a range of brands. This is regarded as highly valuable as the diversity of knowledge in regards to co-creation experiences, i.e. a wide range of projects

across different categories and brands, provides a more holistic view of the research topic and is vital in ensuring data saturation.

4.3.3.2 Consumer perspective

The consumer perspective requires data collection from members of the consumer population who have experience of co-creating with brands in NPD. In order to collect data relative to the research aim and conceptual framework, the experience of the consumer participants must be centred within the case context (consumer goods). As the research focuses on social media as an enabler of co-creation, it is particularly desirable to collect data from consumers who have co-created through DESNs and VCCs.

The most desirable participants will have co-created on numerous projects. Consumers with an extensive experience of co-creating with brands through social media are considered particularly valuable, as they are likely to have greater experience of the co-creation factors. Moreover, as the case seeks to derive analytic generalisations, consumers with an experience of co-creating on multiple NPD projects across a range of brands are likely to provide more in-depth knowledge, building a holistic view of the consumer perspective. The sampling logic applied to both the brand and consumer perspectives is discussed in greater detail in the research design (Section 4.5).

4.4 Data Collection

The discussion to this point has outlined the key components of the case study design guided by the relevant literature. The discussion now focuses on the choices made in terms of data collection. The narrative that follows concentrates on data collection, particularly from which sources and how the data are collected.

It is important firstly to look at the literature regarding data collection in case studies to guide this study. The data collection process relies heavily on the guidance of the literature. Yin (1994) suggests three principles of data collection for case studies:

1. Use multiple sources of data

2. Create a case study database

3. Maintain a chain of evidence.

The rationale for using multiple sources of data is the triangulation of evidence. Triangulation increases the reliability of the data and the collection process (Tellis, 1997). The use of triangulation serves to corroborate the data gathered from multiple sources. The collection and comparison of this data boosts data quality based on the ideologies of idea convergence and the confirmation of findings (Knafl and Breitmayer, 1989). As the framework and research questions are typified by a range of factors and characteristics, the use of multiple data sources is beneficial to ensure that all aspects are explored.

The principles outlined above address the data collection process and the actions taken to ensure it is organised and structured. The data collected need to be organised and documented to aid the analysis phase. Yin (1994) suggests two types of database that may be required. Respectively, these are the data and the report of the investigator. The design of the databases should be such that other researchers would be able to use the material based on the reports covered in the documentation. All types of relevant documents should be added to the database, as well as tabular materials, narratives, and other notes (Tellis, 1997).

In recommending that a chain of evidence be maintained, Yin (1994) provides a way for the researcher to increase the reliability of the study. Yin outlines that the procedure should include an external observer, following the derivation of evidence from initial research questions to final case study conclusions. The case study report should have references to the case study database where the actual evidence is to be found (Tellis, 1997).

4.4.1 Data Instruments

Having understood the key principles behind data collection in a case study method, it is now important to look at the tools used to collect data. A hallmark of case study research is the use of multiple data instruments, an approach that also enhances data credibility (Patton, 1990; Yin, 2003). Baxter and Jack (2008) outline potential data sources to include: documentation, archival records, interviews, physical artefacts, direct observations, and participant-observation. Each data source is one piece of the 'puzzle', with each piece contributing to the researcher's understanding of the phenomenon as a whole (Baxter and Jack, 2008). This convergence adds strength to the findings, as the various strands of data are merged together to achieve a greater understanding of the case.

This research project gathers data from multiple sources. The primary focus is on qualitative data as the research seeks to uncover a deep, rich understanding of the phenomena at hand. Qualitative data uncovers emerging themes, patterns, concepts, insights and understandings (Malterud, 2001). Its form results from the data collection method employed, which includes interviews, focus groups, ethnography, sociometry, unobtrusive measures, historiography and case studies, among others (Robson, 2002). The collection method should provide the best avenue to collect valid and reliable data (Remenyi et al., 1998; Robson, 2002). These methods vary in terms of appropriateness and strengths and weaknesses, dependent on the research being carried out (Bryman and Bell, 2003).

Yin (1994) identifies six primary sources of evidence for case study research. Not all sources are regarded as necessary, however the importance of using multiple sources to the reliability of the study is stressed (Strake, 1995; Yin, 1994). Table 4.1 (below) outlines the different data sources and also indicate the strengths and weaknesses of each type.

Table 4.1 Data sources

Data sources in case study research		
Source	**Strengths**	**Weaknesses**
Documentation	• Stable - repeated review • Unobtrusive - exists prior to case study • Exact - names etc. • Broad coverage – extended time span	• Retrievability - difficult • Biased selectivity • Reporting bias - reflects author bias • Access - may be blocked
Archival Records	• Same as above • Precise and quantitative	• Same as above • Privacy might inhibit access
Interviews	• Targeted - focuses on case study topic • Insightful – provides perceived causal • Inferences	• Bias due to poor questions • Response bias • Incomplete recollection • Reflexivity - interviewee expresses what interviewer wants to hear
Direct Observation	• Reality - covers events in real time • Contextual - covers event context	• Time-consuming • Selectivity - might miss facts • Reflexivity - observer's presence might cause change • Cost - observers need time
Participant Observation	• Same as above • Insightful into interpersonal behaviour	• Same as above • Bias due to investigator's actions
Physical Artefacts	• Insightful into cultural features • Insightful into technical operations	• Selectivity • Availability

Source: Tellis (1997)

This research project focuses heavily on the use of interviews and documentation as the primary research instruments. Whilst these instruments will form the bulk of the data collection tools, any and all data collected through the instruments outlined in Table 4.1 can and will be considered. The key considerations regarding interviews and documentation are outlined in the following section.

4.4.2 Qualitative Interviews

One of the most significant aspects shaping the research method is collecting data from both the brand and consumer perspectives. Interviews are regarded as the most appropriate source to access this information in order to glean the relevant knowledge from the research participants.

Qualitative interviews allow the researcher to explore the key themes and concepts of the research in depth by gaining knowledge from representatives of the brand and consumer populations. Chapter 3 highlighted the complexity of each perspective, and the need to explore them with relative freedom. Moreover, as each perspective is underpinned by numerous factors (i.e. co-creation factors) the interview structure must allow the depth and flexibility to explore each of these perspectives in sufficient detail.

As a result, the researcher adopts a semi-structured interview format to address each stakeholder perspective. It is important to be prescriptive in the design of interviews to ensure they are effective in capturing the appropriate data. Semi-structured interviews are chosen to conduct discussions not only to understand the 'what' and 'how', but also to place more emphasis on exploring the 'why' regarding both stakeholder perspectives (Saunders et al., 2003). Semi-structured interviews may begin with defined questions, however they can change and evolve to respond to the interviewee's experience. This provides the researcher with rich, meaningful data relating to the research topic.

This research project is driven to explore a wide range of factors (co-creation factors and social media characteristics) and the complex interaction between the research elements. It requires an interview structure that provides the researcher with the flexibility to explore the participants' experience in detail. Semi-structured interviews allow the researcher to probe around the interviewee's responses (Lemanski and Overton, 2011). The interview questions are guided by the research questions. A key strength of the semi-structured interview format is in the ability to probe and clarify

the participant's answers, to ensure that they can fully articulate their knowledge in respect to the concepts discussed.

In order to guide the semi-structured interview protocol, McCracken's (1988) long interview technique is used. The semi-structured interview protocol is guided by the four-step model for designing and implementing a long qualitative interview (McCracken, 1988). This approach is vital in exploring the participant's view of the phenomena. The interview themes are derived from the discussion in Chapter 3, the conceptual framework and the research questions. The interview questions focus on resolving the co-creation-NPD relationship and the impact of social media in enabling co-creation.

Particular characteristics leading to the focus on semi-structured interviews include: flexibility, high response rate, facility to clarify ambiguous questions, probes and prompts, and non-verbal communication (body language) (Neuman, 2004). To fully explore the phenomena, the depth and flexibility of semi-structured interviews provides a significant collection instrument to gather relevant data. In order to structure and organise the data, interviews are recorded, transcribed and reviewed by interviewees.

The interviews are carried out through electronic means (computer-mediated interviews), specifically using Skype. Electronic interviews refer to interviews held in real time using the Internet (Morgan and Symon, 2004). A key benefit of electronic interviews is they allow data collection from geographically dispersed individuals. Moreover, the use of video (through Skype) allows the researcher to pick up on body language, and non-verbal cues, which are considered strengths of traditional face-to-face interviews (Saunders, Lewis and Thornhill, 2009).

4.4.3 Document Analysis

Secondary data are collected through document analysis, using journal articles, company publications and archival records, etc. Secondary data is a valuable source of information as it provides insight into previous co-creation efforts, the use of social media in co-creation and background information regarding the brands under exploration.

The majority of data collected through documentation addresses the research topic from the brand perspective. Prior to conducting the interviews, document analysis is

used to build a background on each participant and the brands their experience is derived from. In addition, any documents supplied by interviewees or relating to specific brands or co-creation projects are used to add depth to each perspective.

4.5 Research Design

This section outlines the research design in respect to this study, guided by the discussion thus far. In order to ensure a quality research design, the researcher uses the available literature as a guideline. The narrative details the key considerations given to the research design, and a design framework to display how the research is carried out. The research design outlines the progression of the research project, beginning by outlining the research to this point and the subsequent stages of data collection and analysis to follow. Figure 4.3 (overleaf) displays the design of the research project, outlining the research to this point and the intended plan of action for the next stages of the research and analysis. The discussion following Figure 4.3 explains each stage of the research design, identifying the relevant literature where appropriate and how this relates to the research project.

Figure 4.3: Research design

| Stage 1: |
| Research Aim and Objectives |

| Stage 2: |
| Conceptual Framework and Research Questions |

| Stage 3: |
| Design Data Collection Protocol |

Stage 4:
Conduct Single Case Study: Co-creation in NPD

Embedded Unit 1: Brand Perspective

Identify and target participants (sampling protocol)

Document collection and analysis

Semi-structured interviews

Embedded Unit 2: Consumer Perspective

Identify and target participants (sampling protocol)

Semi-structured interviews

Stage 5 (Preparation of data):
- Transcription of interviews
- Document analysis
- Thematic coding

Stage 6 (Brand analysis):
- Thematic analysis
- Morphological analysis principles
- Comparison across the data set

Stage 6 (Consumer Analysis):
- Thematic analysis
- Comparison across the data set

Stage 7:
Discussion and proposed frameworks

Stage 8:
Present conclusions and recommendations

4.5.1 Research Aim and Objectives

Chapter 1 (Introduction) provided an outline to the study, the rationale for undertaking the research and set out what the project seeks to achieve. The first stage of the research design is to revisit the key milestones in the research to this point. This is vital in providing the foundations to guide the research journey. The research aim and objectives shape the researcher's approach to exploring the research topic and are vital in shaping the research to this point.

The research to this point has been characterised by the review and discussion of the relevant literature in Chapters 2 and 3; a vital element in providing the foundations for the case study design as it outlined the research questions and conceptualised the key research elements (conceptual framework) to guide the inquiry.

4.5.2 Conceptual Framework and Research Questions

The conceptual framework provides guidance for the design and collection of data. The conceptual framework displays the interaction of the research elements and acts as a blueprint to guide the inquiry. In effect, the conceptual framework displays the researcher's view of the phenomena and serves the following three purposes (Miles & Huberman, 1994):

- Identifying who will and will not be included in the study

- Describing what relationships may be present based on logic, theory and/or experience

- Providing the researcher with the opportunity to gather general constructs into intellectual 'bins.

This is vital in providing guidance in the design of the research. The framework will continue to develop and evolve as this research progresses and the relationships between the research elements emerge through the data analysis. A final proposed framework is developed through the implications of the research findings (Chapter 7).

Research questions are vital in guiding the stages of inquiry, analysis and outcomes of the research. Yin (2003) outlines research questions as the starting point in the design of a case study. To deliver the appropriate results, research questions must guide the inquiry to address the research topic in such a way that it relates to the research aim. The research questions are as follows:

- What are the key driving factors of co-creation in NPD (brand and consumer perspective)?

- What are the key inhibiting factors of co-creation in NPD (brand and consumer perspective)?

- How do the co-creation factors differ across the NPD lifecycle?

- What are the key characteristics of social media in enabling co-creation?

- How does social media positively impact the co-creation-NPD relationship?

- How does co-creation enhance NPD competences?

The research questions aim to guide the investigation in relation to the conceptual framework. The use of research questions in case study research is highly recommended, as they are vital in narrowing the focus of the study to ensure it stays within its feasible limits (Yin, 2013). Yin (2013) postulates that without the use of research questions, the researcher may be tempted to collect 'everything' which is impossible to do. In regards to the case study, the research questions have significant design implications and are considered throughout the design process.

4.5.3 Data Collection Protocol

The next stage of the case design is the design of the data collection protocol. The data collection protocol provides a set of guidelines to structure and govern the case research project. It results from the discussion on the background to the research, the research design, data collection methods and analysis methods. In effect, the data collection protocol is a plan used by the researcher as a blueprint on how to conduct the case study. The data collection protocol uses the literature discussed in this chapter and the resultant methodological choices made by the researcher to inform the case study.

4.5.4 Sample Size and Participant Selection

The previous discussion specifies that data are collected from subject matter experts (brand perspective) and consumer co-creators (consumer perspective) in line with the case study design. This section outlines the logic applied to sample size and sampling protocol.

An appropriate sample size is a consideration continuously debated in the field of qualitative research. Yin (1994) stresses the point that the case study does not represent a 'sample'. The researcher's goal is to expand and generalise theory

(analytic generalisation) and not to enumerate frequencies (statistical generalisation). Accordingly, cases are not sampling units; individual cases are selected in regards to the topic of the research (Yin, 1984). Case studies do not seek to derive generalisations that can be used to apply to the universe as a whole; the goal is to derive generalisations that can be appropriated to the case populations (Yin, 1994). In the lens of this research, this is particularly apt as context is regarded as a significant factor affecting the outcomes of co-creation.

Rather than focusing on enumerating an appropriate sample size, the case study design is concerned with the issue of saturation. Yin (2003) argues that the use of a small purposive sample can be effective, especially when data is collected from multiple sources. In addition, the use of embedded units provides significant opportunities for extensive analysis on which inferences can be made. Yin (2003) proposes that researchers should aim for inferences through analytic generalisations rather than focusing on sample size. In this regard, the case study design seeks to collect data from multiple participants from each stakeholder perspective. This ensures that each stakeholder perspective is explored in sufficient depth to ensure data saturation is reached. The criteria and process used in selecting these participants are outlined below:

Brand perspective: The brand perspective is addressed through interviews with subject matter experts (*industry practitioners* and *co-creation specialists*). As the research specifies a purposive sample, it is important to target and collect data from individuals with extensive experience of co-creation in NPD. Additionally, the case is bound to the consumer goods industry; the expertise of the SMEs must be centred on this sector. Specific product classes where examples of co-creation are widespread are as follows: FMCG, footwear and sports apparel and toys.

Industry practitioners are individuals who have experience in implementing a co-creation approach in real-life NPD scenarios. The first stage in identifying individuals who fit this profile was a focused literature search to identify brands in the consumer goods sector that show evidence of a co-creation approach in NPD. Identifying brands that have co-created with consumers reduces the potential pool of subject matter experts. In respect to narrowing the search within these organisations, senior level management in the R&D, innovation and marketing functions of these brands were identified as most likely to possess relevant knowledge. There was a specific focus on senior management as they are responsible for deciding to adopt co-

creation approaches, and are most likely to understand the impact that co-creation has on their NPD processes and outcomes.

Co-creation is seldom embedded in a brand's culture; it is most commonly an approach employed by individuals within organisations, rather than an organisation-wide approach to NPD. In order to identify industry practitioners who have extensive experience of co-creation in NPD, the researcher undertook an in-depth search on LinkedIn (a business and employment-oriented social networking service) refining the search by brand, strategic function and any evidence of co-creation based competences on an individual's profile. The benefit of using LinkedIn is that it not only provides access to industry practitioners on a global scale, but the basic functionality of LinkedIn allows users to openly describe their work experience, skills and curriculum vitae. These tools are vital in conducting a targeted search of individuals who display extensive knowledge of co-creation in NPD.

In addition to evidence of the brand adopting a co-creation approach in NPD, and working in a relevant strategic function (in respect to NPD) the researcher outlined the following criteria in targeting individuals:

- Dedicated co-creation role

- Co-creation listed as a skill, competence or area of expertise

- Personal profile outlines projects where a co-creation approach was used in a consumer goods brand.

Co-creation specialists are consultants whose core competence is in providing advisory services to brands on their co-creation approach. Identifying co-creation specialists is more straightforward as consultants openly advertise their areas of expertise. The first step in identifying co-creation specialists was a literature search of consultancy reports and a web search of co-creation-based consultancies. From this, the researcher identified four consultancies, dedicated either exclusively to co-creation, or with a dedicated team or division focusing on co-creation, consumer engagement or innovation. LinkedIn was used once again to identify the relevant individuals within these organisations, and the initial introduction was made through the 'inmail' feature (direct messaging).

The use of social media (LinkedIn) represents a novel approach to the research design. This approach removes a number of traditional issues faced by researchers,

such as the geographical limits on data, or the costs of travelling to conduct interviews. This provides the researcher with the ability to search and target participants from a greater pool of SMEs, and to a degree, their knowledge and value to the study can be preliminarily assessed through the information they choose to share on their LinkedIn profiles. Moreover, by collecting data from geographically dispersed individuals, a more holistic knowledge of the research phenomenon is gained, as the participants possess experience over a wide range of brands in differing geographies. In effect, social media enables the research methodology, embodying a number of characteristics discussed in respect to the impact of social media in enabling co-creation. This global approach to data collection, enabled by social media, is illustrated by Figure 4.4 (overleaf).

Figure 4.4: Global research design (brand perspective)

Consumer perspective*:* The initial stage in targeting consumer participants entailed a focused literature and web search, with the aim of identifying co-creation-based online communities. This gives the researcher a pool of consumers who have some knowledge or experience of co-creation. A specific focus was placed on identifying online communities that are focused specifically on co-creation in consumer goods. An initial list of 32 online communities was identified as having some evidence of co-creation in consumer goods.

As the research focuses on a purposive sample, the researcher attempted to filter and select the best examples of co-creation-based online communities to access the most relevant knowledge. Whilst each of the 32 online communities showed evidence of co-creation, it became apparent that some were entirely dedicated to co-creation, whilst others were more general and there was less of a focus on co-creation. The 32 online communities were explored and observed by the researcher, and the following criteria were used to select the most relevant.

- *Size:* The largest VCCs (by active members) were most appealing.

- *Co-creation intensity*: VCCs were ranked depending on the extent to which they were geared towards co-creation. Certain VCCs were geared solely towards co-creation, whereas others were open forums for discussion between brands and consumers alike.

- *Co-creation outcomes:* Document analysis was used to identify co-created products that were developed with the use of the VCCs under observation.

Three online communities emerged as the most relevant, focused directly on co-creation in consumer goods. The most valuable data is most likely to reside with consumers who are highly active and motivated to co-create. In order to access this data, the sampling logic aims to identify and target 'top co-creators', i.e. consumers who are highly active and have extensive experience co-creating with brands. The benefit of the VCCs identified by the researcher is that they employ ranking systems, ranking the top co-creators based on successful co-creation projects, activity and peer reviews, amongst other factors. Consumers who are highly active, have contributed to numerous co-creation projects, and have achieved some success are likely to possess the most valuable and relevant knowledge in respect to this research project, and be amongst the highest ranked.

To describe the sampling logic, the LEGO VCC (Lego Ideas) is used as a working example. Lego Ideas has over 500,000 members; a traditional sampling method would include targeting a significant proportion of the population and would pose a significant challenge considering the time constraints of a PhD. In order to overcome this, the sampling logic utilises the ranking system of the VCC to reduce the sample population.

The Lego Ideas VCC is focused primarily on ideation with consumers submitting ideas, themes and designs for new Lego sets. In order for a submission to be reviewed by the brand (Lego), the submission must be supported by other users within the VCC. Lego Ideas uses a points system called *'clutch power'*. When a consumer submits an idea, it must be supported by 10,000 other users before Lego consider it as a potential new product concept. This peer support is a significant source of *'clutch power'*. The other sources of *'clutch power'* are outlined across the following four areas: individual, promotion, ideation and community (Lego Ideas, 2016). These four areas are all indicative of highly active and motivated consumer co-creators.

By utilising ranking systems such as Lego's clutch power, consumers are sorted into the most active and successful co-creators within the VCC. This approach was replicated across the three VCCs, targeting only the top 100 ranked consumers from each online community, giving a sample population of 300.

Sampling size in qualitative research is generally a subjective judgment (Sandelowski, 1995). The key issue considered regarding sample size was that of saturation. The researcher endeavoured to collect data until no new themes or factors emerged from the data. An initial convenience sample of five consumers from each VCC was taken. In order to target and connect with consumer participants, the researcher utilised the direct messaging tools available on the online communities, 14 positive responses were received. The researcher targeted English-speaking participants to overcome any language constraints. After conducting 10 interviews, no new factors emerged from the data. The researcher proceeded to undertake a further four interviews to ensure the saturation point was reached. Once again, the use of VCCs to target consumer participants is signified by the collection of data from geographically dispersed individuals, this is evident in (Figure 4.5, overleaf):

Figure 4.5: Global research design (consumer perspective)

It is important to state that whilst collecting data from geographically dispersed individuals has several strengths, the researcher also considered the potential limitations of this. Both brands and consumers in different geographies are likely to be impacted by different contextual conditions such as political, economic, cultural and social factors to name a few. The difference in contextual conditions across geographies is likely to bear an impact on the data collected. Accordingly, the data collection and analysis approach must recognise and consider these potential limitations of this approach.

To overcome this, the analysis and research contributions do not seek to generalise or prescribe a strict methodology across geographies. In respect to the brand perspective, the research contributions outline an in-depth insight into the research topic, but also outline the need for brands to adapt and create a synergy between the research outcomes and their specific NPD project. In respect to the consumer perspective, the researcher adopts and approach to clearly evidence the heterogeneity of the consumer population and states the need for brands to understand this and apply the contributions of this research with this in mind. Whilst efforts have been made through the data collection and analysis to reduce the impact of this limitation, it is important to recognise this in respect to the research design.

4.5.5 Conduct Case Study

The narrative explaining the research method outlined a single case method, bound to the consumer goods industry, with the brand and consumer perspectives as embedded units. In addition, the significance and relevance of semi-structured interviews and document analysis as data collection instruments was outlined.

At this point, it is clear how and why the case is being conducted. Going forward, it is important to outline the key data themes guiding the interviews. The data themes relate to the conceptual framework, theoretical research propositions and overall research aim. The following list outlines the key data themes explored through the research instruments

- The NPD process
- Co-creation
- Complete co-creation
- Driving factors of co-creation
- Inhibiting factors of co-creation

- High-level impact of co-creation

- Impact of social media in enabling co-creation

- Use of social media in managing co-creation experiences.

These data themes derived from the discussion in the previous chapters and the conceptual framework, and relate to each of the research questions. Outlining the data themes is important in guiding the use of the research instruments to explore the research topic in line with the research aim. The semi-structured interviews explore these data themes from both the brand and consumer perspective, while the document analysis centres on collecting data relating to these themes.

4.5.6 Data Analysis

The research design clearly sets out how data is collected and also the design implications addressing data analysis. It is now important to outline the specific analytic tools used in line with research design. The case study design outlines two embedded units, the brand perspective and consumer perspective, respectively these form two distinct data sets. Each perspective is built from multiple participants with relevant experience regarding the case context. The data analysis focuses firstly on the brand perspective (Chapter 5) and secondly, the consumer perspective (Chapter 6). The first stage of analysis was to prepare and code the data.

4.5.6.1 Coding

To prepare the collected data for analysis, the interviews were transcribed and coded. In order to interpret and analyse the data from each participant, thematic coding and analysis is used to pinpoint, examine and record patterns within the data (Braun and Victoria, 2006). Two sets of coding frameworks are used, one for the brand perspective and one for the consumer perspective. The coding frameworks are derived from the discussion in Chapter 3 and are outlined below:

Brand perspective coding frameworks

In line with the discussion in Chapter 3, the analysis of the brand perspective explores the brand co-creation factors in relation to the NPD lifecycle (co-creation-NPD relationship) and the impact of social media on the co-creation-NPD relationship. Accordingly, four coding frameworks are used: brand driving factors, brand inhibiting factors, social media characteristics, and stages of the NPD lifecycle.

Consumer perspective coding frameworks

The analysis of the consumer perspective focuses primarily on the consumer co-creation factors, and how co-creation experiences can be designed to promote consumer involvement. Accordingly two coding frameworks are used: consumer driving factors and consumer inhibiting factors.

The taxonomies of co-creation factors (both brand and consumer), social media and characteristics, and NPD lifecycle outlined in Chapter 3 present the basis for the initial coding frameworks. Any additional factors or characteristics arising from the data were assigned additional codes to expand the taxonomies.

With regards to the analysis of each data set, the initial focus is on analysing the responses of each participant separately to explore the relationships between the research elements in depth. As each participant possesses a unique experience in respect to co-creation, NPD and social media, it is vital to explore this topic using the individual responses of the interview participants. This approach also aims to reveal new information regarding the phenomena under investigation, in order to expand the conceptual framework and underlying knowledge.

Following this, comparisons are made across each data set in order to derive analytic generalisations. A key notion shaping the research design is the perception that each NPD project is unique; as a result, the experiences of the interview participants are likely to vary. As the research seeks to build a greater fundamental understanding of the research topic, comparisons across each data set allow the researcher to build a holistic understanding of the potential relationships between the research elements in real-life NPD scenarios. Comparisons across each data set are vital in building a depth of knowledge and outlining the likely co-creation, NPD and social media scenarios in respect to the brand and consumer perspectives.

4.5.6.2 Thematic analysis (brand and consumer perspective)

Thematic analysis is regarded as a useful tool in identifying themes in data in order to generate knowledge regarding a specific research question (Daly and Gliksman, 1997). Thematic analysis allows a researcher to identify implicit and explicit ideas from each participant's responses (Guest and MacQueen, 2012). The identification of explicit ideas can be used to identify fundamental drivers and underlying impacts within the 'themes'. Identification of implicit ideas builds a greater fundamental knowledge of the phenomena and explores any new factors emerging from the data. It is important to explore the

various factors on which the conceptual framework and research questions are built with the aim of validating and expanding the conceptual framework.

This approach is used in analysing both the brand and consumer perspective, examining the responses of each interview participant against the respective taxonomies of co-creation factors and social media characteristics. Moreover, the high-level impact of co-creation is a key focus through the analysis of the brand perspective. Thematic analysis has been identified as the most appropriate tool to address this research. With regard to validating the various aspects of the framework, it is important to consider specific thematic analysis tools that can address the specific aspects of the framework in line with the underlying discussion in Chapter 3.

There is a specific focus on implicit themes that emerge from each perspective. This is important as it is a first step in expanding the underlying knowledge of the phenomena and useful in updating and improving the conceptual framework. It is important to pay attention to implicit ideas or themes that are not considered in the conceptual framework, as they may provide sources of new knowledge regarding the research topic.

4.5.6.3 *Morphological analysis principles (brand perspective)*

The research also seeks to explore the significance of the co-creation factors across the NPD lifecycle. This is explored through the brand perspective. Brands maintain control over the design of the co-creation experience and the degree to which they co-create in NPD. Accordingly, it is of greater significance in understanding how the brand co-creation factors vary in significance across the NPD lifecycle. The brand must be able to design an effective co-creation experience (promoting driving factors and reducing inhibiting factors throughout the NPD lifecycle from their perspective), as the first step in promoting a complete co-creation approach. Once the brand is willing and motivated to co-create throughout the NPD lifecycle, the consumer is empowered to co-create.

An additional consideration in placing the focus of this analysis on the brand perspective is the nature of the co-creation factors. The brand co-creation factors embody tangible benefits or costs/risks that the brand can experience throughout the NPD lifecycle. The consumer co-creation factors represent a greater focus on intangible or experience-based driving or inhibiting factors. In this regard, the brand co-creation factors are likely to assume greater significance in respect to the stages of the NPD lifecycle, as the nature of each stage may impact how the co-creation factors manifest in context. As the consumer co-creation factors are primarily experience-based, the stages of NPD

assume less significance (the co-creation factors relate to the experience of interaction and collaboration).

The research requires exploration of the potential relationship and interaction between the research elements. In order to achieve this, morphological analysis (MA) principles are used to identify and investigate the possible relationships or 'configurations' contained in the research problem (Ritchey, 1998). The primary focus of this approach to analysis is in identifying the potential co-creation-NPD scenarios (i.e. the co-creation factors that manifest at each stage of NPD) based on the collected data. This is considered an appropriate option as many of the factors identified in the discussion in Chapter 3 are non-quantifiable, rendering traditional quantitative methods relatively useless (Ritchey, 1998).

The dimensions or parameters of the research problem are summarised in Chapter 3, through the identification of the research elements (specifically co-creation and NPD). Each parameter requires a spectrum of values; this is apparent through the six stages of the NPD lifecycle and the taxonomies of brand co-creation factors.

The aim is to identify a holistic set of relationships between the brand co-creation factors and the NPD lifecycle. This is likely to contribute a greater understanding of the potential co-creation-NPD scenarios that brands face and how co-creation experiences can be designed appropriately. This approach maps the interaction of these research elements by setting the parameters against each other (Zwicky, 1969). In effect, employing morphological analysis principles identifies the interaction between the research elements, using the data collected from each participant. This is a vital step in expanding the knowledge on which the conceptual framework is based, resolving a key aspect of the co-creation-NPD relationship.

A particular principle of morphological analysis influencing that data analysis was that of cross consistency assessment (CCA). As the aim of this stage of the analysis is to explore the specific relationships between the brand co-creation factors and the stages of the NPD lifecycle, using CCA principles serves as a check of the integrity and clarity of the concepts explored. Moreover, this allows the research to examine the connective relationships between the parameters of a model's problem space, i.e. the research elements (Ritchey, 1998). The parameters are outlined as the stages of NPD and co-creation factors. In addition, this approach identifies and weeds out incompatible relationships in order to find a set of internally consistent configurations representing a

solution space (Ritchey, 1998). Essentially, employing these principles explores the compatibility of the co-creation factors against the stages of the NPD lifecycle. The outcome of this analysis approach is a set of co-creation factors that populate/are relevant each stage of the NPD; this addresses the notion that the co-creation factors vary in significance throughout the NPD lifecycle.

The benefit of this approach is that each of the parameter values can be compared with one another and judgments can be made as to whether, or to what extent, the pair can coexist or maintain a consistent relationship, i.e. whether a co-creation factor is considered to be relevant/significant at a specific stage of NPD (Ritchey, 1998). As an analytical tool, CCA principles present the ideal base to compare and contrast the determinants of the conceptual framework (i.e. the interconnected relationships between the research elements).

The outcome of this is an understanding of the relationships between the research elements that can be used to validate and expand the conceptual framework outlined in Chapter 3. Effectively, employing MA principles allows the researcher to adopt a process of mapping the interactions of the research elements based on the data collected. This delivers a greater understanding of the research topic; the results of this analytical process are used to validate and expand the conceptual framework.

4.5.6.4   *Comparison across the data set (brand and consumer perspective)*

A key aim of the research is to deliver a greater fundamental understanding of the interconnected relationships of co-creation, NPD and social media A central notion shaping the research design is the idea that each NPD project is unique, and as a result the experiences of the interview participants are likely to vary somewhat. This shapes the analysis to not only focus on the interview responses individually, but to build a holistic view of each perspective based on comparisons across each data set (brand and consumer).

This approach extends the researcher's expertise beyond a single interview to further articulate the concepts in regards to the research topic (Khan and Van Wynsberghe, 2008). This allows the researcher to aggregate the collected data to build an in-depth picture of the likely co-creation, NPD and social media scenarios that brands and consumers face in NPD. This approach allows the researcher to mobilise knowledge across each data set, in order to refine and develop the concepts discussed in the

research (Ragin, 1997). This method is regarded as an approach that aids in producing and sharing new knowledge (Khan and Van Wynsberghe, 2008).

The specific analytic approach employed is cross-comparison across each data set. Comparison is a key aspect of validation and creating analytic generalisations. This ensures that the outcomes of the research are not limited to one particular brand or consumer, and in turn the results can be considered more reliable and robust (Yin, 1994). Comparisons among participants can construct and yield meaningful linkages that are not openly evident in the individual participant analysis. This process of analytic generalisation and comparison is key in developing a greater explicit knowledge of the phenomenon and delivering a significant contribution to knowledge.

In order to validate the conceptual framework and supporting discussion, cross-comparison is used to compare and confirm the interaction of the research elements in the case context. Cross-case comparison is used to identify the similarities and differences across each stakeholder perspective and to build a holistic knowledge of the co-creation-NPD scenarios brands and consumers are likely to face. This is vital in validating the conceptual framework by examining whether the discussion in Chapter 3 accurately reflects the patterns gleaned from the collected data, in regards to the interaction of the research elements.

In addition to delivering explicit knowledge regarding the interaction of the research elements (e.g. how the co-creation factors align with the stages of NPD, or the specific ways in which social media characteristics impact the co-creation-NPD relationship) the data will also include tacit knowledge providing greater insight into the research topic. Cross-comparison allows the researcher to create meaningful connections between the participants' responses to be made explicit (Khan and Van Wynsberghe, 2008). This is done through exploring the replication between tacit themes with the aim of converting these into explicit knowledge and updating or expanding the conceptual framework and underlying knowledge on which it is based. Commonalities across multiple participants can contribute to conditional generalisations (Miles and Huberman, 1994). Therefore, the researcher can demonstrate that the outcomes of the responses are in fact enough alike to be treated as instances of the same thing (Khan and Van Wynsberghe, 2008). Cross-comparison allows for the analysis of certain aspects of the case without obscuring it. This is a useful way to produce analogies, make inferences and develop conditional generalisations.

4.5.7 Proposed Framework

Based on the results of the data analysis, the research findings present a proposed framework. This is aimed at conceptualising the interaction of the research elements, built on a greater knowledge of the case context and how the research elements interact in the research setting.

The proposed framework accurately portrays the interaction of the research elements and ultimately conceptualises the impact of social media on co-creation in NPD. In addition, the final framework should take the contextual conditions gleaned from the data into account to provide guidance as to how utilise social media can drive a greater degree of co-creation.

4.5.8 Conclusions and Recommendations

The conclusions and recommendations will outline the new knowledge uncovered, supporting the proposed framework. This describes the key findings in relation to the research aim, and the implications in respect to the proposed framework. It is anticipated that a greater knowledge of the research topic will provide brands with valuable information on how to design effective co-creation experiences enabled by social media. This is built on a greater knowledge of the co-creation factors across the NPD lifecycle, the impact of social media characteristics in enabling co-creation and the competitive impact of co-creation in NPD. The outcome of this is a potential high-level impact of co-creation in NPD; once again, this is explored through the data collection and analysis.

In many ways, this study is the first of its kind, and it is important to provide recommendations into further research in this field. This study will deliver a greater fundamental knowledge of the research topic; future research recommendations are made in order to drive knowledge creation in this area and address the concepts of this study in greater detail.

4.6 Ensuring the Quality of the Research Design

The final consideration of the research design outlines the tactics utilised to ensure the quality of the research. It is important to reflect on the research design prior to data collection, not only to ensure that the data collected are what was intended by the researcher, but are also relevant and quality data.

It is vital to guarantee that the research delivers relevant and 'quality' results in order to meet the research aim. In the research design, the researcher placed particular attention

on understanding how quality is ensured in empirical research. There are a number of tests commonly used to establish the quality of any empirical social research. These are widely acknowledged and covered extensively in the relevant literature. The tests considered in the design of this research are outlined below:

- *Construct validity:* establishing correct operational measures for the concepts being studied.

- *Internal validity* (for explanatory or causal studies only, and not for descriptive or exploratory studies): establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships.

- *External validity:* establishing the domain to which a study's findings can be generalised.

- *Reliability:* demonstrating that the operations of a study – such as the data collection procedures – can be repeated, with the same results (Yin, 1994).

These tests are regarded as critical to ensure the quality of the research design. In ensuring the research takes these into consideration, Yin (1994) suggests a number of tactics to ensure the quality of the research. These tactics play a vital role in the design of the research to ensure that the outcomes of the research are of a high quality and are robust. The tactics are outlined in Table 4.2.

Table 4.2: Quality of research designs

Ensuring the quality of research designs		
Tests	**Case Study Tactic**	**Phase of research in which tactic occurs**
Construct Validity	Use of multiple sources of evidence (triangulation) Establish chain of evidence Have key informants review draft case study report	Data collection Data collection Composition
Internal Validity	Do pattern-matching Do explanation-building Do time-series analysis	Data analysis Data analysis Data analysis
External Validity	Use replication logic in multiple-case studies	Research design
Reliability	Use case study protocol Develop case study database	Data collection Data collection

It is clear that the research design addresses each of these tactics at the relevant stages of the research. The 'tactics' outlined in Table 4.2 provide clear guidelines as to how to

ensure the quality of the study. These are built into the research design to address the quality aspects at each research phase; the tactics were key considerations in the research design and analysis.

4.7 Ethical Considerations

The nature of this research requires human participants; as a result, there are a number of ethical issues that must be taken into consideration. These are derived from the university guidelines and as per the ethical guidelines determined from the literature.

Research participants will be informed both verbally and in writing as to the outline, purpose and procedures of the research project. This will ensure that their participation is voluntary. Dienar and Crandall (1978) define informed consent as the procedures whereby individuals choose whether to participate in an investigation after being informed of facts that may be likely to affect their decisions. Moreover, they have segmented the ethical principles that occur in research into four main sections:

- Whether there is harm to participants?

- Whether there is a lack of informed consent?

- Whether there is an invasion of privacy?

- Whether there is deception involved?

In the case of this research, it is clear that the researcher nor the data collection processes will cause harm to the participants. As mentioned, there must be informed consent. Anticipating there is full cooperation and consent, there will be no invasion of privacy. In addition, collected data will only be used for the purposes of the research as described by the researcher, therefore, there will be no deception. Moreover, the researcher will inform participants of the following information to ensure they are fully aware of their position in the data collection phase.

- Why the data is being collected

- How it will be collected

- What it will be used for

- How it will be protected

- How they can obtain this data

- How long it will be kept for

- What will happen if they wish to withdraw

The researcher ensured that this research was designed with and approved by the University's code of ethics and ethical approval board.

4.8 Chapter Summary

This chapter shed light on research planning, design, research method selection and the methodological considerations that researchers must address. The chosen methodology, as well as justification for the choices and the subsequent procedures, were highlighted in this chapter. This methodology will shape and guide the next stage of the research process.

The researcher highlighted the case study as the best approach to answer the 'what', 'why' and 'how' questions arising from the research. This involves adopting an exploratory, empirical philosophy focusing on qualitative data to best address the research aims. It is clear that this research adopts an inductive approach to develop a greater fundamental understanding of the research topic. In addition, a case study approach allows exploration into the research topic within its context, collecting data from both the brand and consumer perspectives.

The case is bound to the consumer goods industry and includes the brand and consumer perspective as embedded units. The use of multiple participants for each perspective ensures a thorough analysis can be undertaken, addressing the key aspects of the conceptual framework and building an in-depth knowledge of the research topic. The analysis approach entails an individual participant approach to explore the relationships between the research elements, and comparison across data sets to deliver a holistic knowledge and derive analytic generalisations.

It is clear that the researcher has used an array of methods in the collection and analysis of data, thus, should be left with a comprehensive overview of the results. Using this foundation, the following chapter will look at the qualitative analysis of the brand perspective.

Chapter 5: Brand Perspective Analysis

5.1 Introduction

This chapter presents the analysis and research findings in respect to the brand perspective. The narrative in this chapter analyses the data collected through the various interviews with subject matter experts. The analysis approach is guided by the discussion in Chapter 3, in particular, the conceptual framework research questions; these provide a blueprint to ensure the data collection and analysis are in line with the overall research aim.

In respect to the brand perspective, a number of aspects of the conceptual framework and supporting discussion assume significance. This research project is focused on co-creation as a competence enhancing approach to NPD. This is underlined by a high-level impact of co-creation on NPD, realised by adopting a co-creation approach in value creation. In order to maximise the high-level impact of co-creation, the discussion in Chapter 3 stressed the need for brands to adopt a complete co-creation approach. This is characterised as ongoing and intense collaboration between the brand and consumer throughout the NPD lifecycle.

A complete co-creation approach is implemented through co-creation experiences; these are considered the locus of value co-creation and defined as the interaction and collaboration between brand and consumer in respect to NPD projects. In order to promote a complete co-creation approach, brands must design and manage effective co-creation experiences. An effective co-creation experience must enable and motivate both brands and consumers to collaborate in value creation (i.e. the driving factors must outweigh inhibiting factors at each stage of the NPD lifecycle). Chapter 3 recognised that the design and management of effective co-creation experiences is regarded as an antecedent of a high-level impact of co-creation on NPD. This directs the analysis to focus firstly on the design of effective co-creation experiences in reference to a complete co-creation approach. Following this, greater consideration is given to the high-level impact of co-creation on NPD.

A key consideration in a brand's design of co-creation experiences is the platform used to engage and collaborate with consumers. The discussions in Chapters 2 and 3 stress the role of social media in shifting innovation management strategies towards co-creation, providing a platform whereby brands and consumers can interact

relatively easily and cheaply. Social media has emerged as an enabler of co-creation experiences, connecting brands and consumers on an unprecedented scale. Accordingly, the research also seeks to explore the use and role of social media (DESNs and VCCs) in the design of effective co-creation experiences.

To explore these aspects of the research from the brand perspective, the conceptual framework is built of taxonomies of co-creation factors (factors that drive and inhibit co-creation factors from the brand perspective) and social media characteristics (characteristics that positively impact the co-creation-NPD relationship). These provide the parameters to conduct a thematic analysis in respect to the design of effective co-creation experiences. An additional aspect of the conceptual framework explored is the significance of the co-creation factors across the NPD lifecycle. This was achieved through cross consistency assessment, identifying the set of relationships between the driving and inhibiting factors and the stages of NPD. The results of this contribute a significant understanding to the subject.

In addition, the conceptual framework displays the high-level relationships between co-creation, NPD and social media. This guides the research to explore the competence enhancing impact of co-creation on NPD, and the impact of social media on the co-creation-NPD relationship. The data collection and analysis are directed by the conceptual framework (Chapter 3), with the aim of exploring and expanding the framework guided by the research questions.

5.1.1 Chapter Structure

The initial discussion of this chapter provides an overview of the data set, outlining the relevant expertise of the interview participants through their roles within consumer goods organisations, and the brands from which their experience is built. This provides an insight into the value of their knowledge as subject matter experts.

Following this, a thematic analysis was carried out focused on the co-creation-NPD relationship. The first stage of this approach focuses on the factors that shape the design of co-creation experiences, validating the taxonomies of driving and inhibiting factors, and identifying additional factors that emerge from the data. The results of this are expanded taxonomies of co-creation factors, supported by the rich understanding gained from the data.

Brand Perspective Analysis

The next stage of analysis explores the expanded taxonomies of co-creation factors across the NPD lifecycle. This focuses deeper on a complete co-creation approach (as an antecedent to a high-level impact of co-creation on NPD). This was done through cross consistency assessment, examining the significance of the driving and inhibiting factors at each stage of NPD. This utilises the expanded taxonomies of co-creation factors to identify the relevant factors at each stage of NPD, based on the responses of the interview participants. The aim of this was to identify the set of relationships between the co-creation factors and the stages of new product development. Emphasis is placed on building an explanation as to how and why the co-creation factors are relevant across the respective stages of NPD, and how they manifest in a real-life NPD context, in order to deliver vital knowledge on which effective co-creation experiences can be built.

Continuing with a focus on the design of effective co-creation experiences, the analysis explores the impact of social media in enabling co-creation. The aim of this is to explore the suitability and impact of social media in the design and management of co-creation experiences. The narrative seeks to build a greater understanding of how and why social media positively impacts co-creation, by examining the responses of the interview participants in respect to the social media characteristics (Chapter 3). This results in the validation of the taxonomy of social media characteristics and a deeper understanding of how and why each social media characteristic positively impacts the co-creation-NPD relationship. In addition, a number of key social media impact themes emerge from the analysis. The social media themes detail the high-level impact of social media on the co-creation-NPD relationship. The outcome of this is a deep understanding of each impact theme, built by mobilising the knowledge across the data set and delivering a holistic understanding of the high-level impact of social media on co-creation.

The final focus of the analysis examines the research findings in respect to the high-level impact of co-creation on NPD. This directly supports the research aim, identifying the key themes emerging in respect to the high-level impact of co-creation in enhancing a brand's NPD competences. This was done by identifying recurrent themes across the data set, and building a deep understanding of the ways in which co-creation impacts NPD. The results provide a holistic summary of the key findings and learning points relating to the ways in which co-creation can enhance NPD competences.

5.1.2 Interview Participants

This section provides an overview of the interview participants, outlining their relevant roles within consumer goods organisations, and a selection of the brands from which their expertise is built. The interview participants were identified and targeted based on the protocol set out in Chapter 4 (Research Methodology). Chapter 4 also outlined the rationale for undertaking research on organisations. Data was collected from subject matter experts; a key benefit of this was the scope of expertise and access to a depth of knowledge spanning multiple brands and co-creation projects.

The interview participants were selected as subject matter experts based on their expertise in co-creation and NPD in consumer goods. It is important to understand how and why the interviewees are regarded as experts in the context of this research. The 'how' was discussed in Chapter 4 through the protocol of identifying and targeting interview participants. This section will focus on the 'why', outlining the interview participant's relevant experience in regards to this research.

The dataset is comprised of 14 industry practitioners and co-creation specialists (Participants A-N). Table 5.1 summarises the relevant experience of each interviewee in the field of co-creation within consumer goods organisations:

Table 5.1: Experience of brand participants

Participant	Relevant experience in consumer goods
A	- Global Brand Strategy Lead - Global Brand Director - Country Marketing Director - Brand Strategy and Innovation Director
B	- Managing Director and Founder (co-creation consultancy)
C	- Category Innovation & NPD problem solver - CEO (consumer goods company) - Global Head of Brands - Innovation Leader - Marketing Director
D	- Principal in the Advisory, Performance Improvement Services - International Advisory Digital Leader - Global Leader for the Customer Advisory Business
E	- Co-founder (co-creation consultancy) - Innovation and Brand Marketing Manager
F	- Head of Co-creation and User Experience - Co-creator and Cofounder (co-creation consultancy)
Table 5.1 continued overleaf	

G	- Global Brand and Business Director - International Marketing and Innovation Business Director - Category Global Marketing Lead
H	- Global Business Director - Head of Global Marketing Innovation
I	- CEO and Founder (consumer goods company)
J	- Group Leader, Future Development
K	- Strategic Planner (online co-creation platform)
L	- Managing Director (International Region) - Global business Director and Crowd Creativity Consultant
M	- President (user centric and co-creation 'think network')
N	- Global Chief Experience Officer (marketing, strategy, innovation and digital)

Table 5.1 provides a snapshot of the experience of each interview participant in respect to this research project. Generally, the NPD process involves a number of strategic functions within an organisation. Different stages of the NPD lifecycle require differing skillsets and expertise. Table 5.1 displays a focus on individuals with extensive experience in co-creation and NPD (through relevant strategic functions, e.g. marketing and innovation) at a senior level. The depth of perspectives was built through interviewing industry practitioners (senior management in the R&D, marketing or innovation functions of an organisation) who have co-created in NPD, and co-creation specialists (consultants specialised in co-creation) with an extensive knowledge of co-creation across a wide range of consumer goods brands.

The research is bound to the consumer goods sector – this further refined the search to subject matter experts whose experiences of co-creation in NPD have been built in this sector. This is clearly exhibited in Table 5.2 (overleaf) through a collection of global consumer goods brands and consultancies from which the interview participants derived their expertise.

Tables 5.1 and 5.2 provide an insight into the expertise of the interview participants through exhibiting their experience of co-creation in consumer goods organisations. The purpose of this discussion was to validate the interview participants as subject matter experts and provide the context upon which their perspective of co-creation in NPD is based. The following sections outline the analysis and key findings with respect to the transcribed interviews.

Table 5.2: Relevant brands

Brand	Description
Beiersdorf	A German personal care company, parent company of one of the world's largest skin care companies, NIVEA.
JTI	A cigarette manufacturing company, flagship brands include Camel, Winston, SILK CUT and Benson & Hedges.
Campbell's	An American brand of canned goods. Campbell's products are sold in 120 countries around the world.
Clorox	An American worldwide manufacturer of consumer products. A global leader in cleaning products, brands include Clorox, Brita and Glad bags.
Mars	An American global manufactory of confectionery and food products. Brands include Mars, Snickers and M&Ms.
Yakult	A Japanese-based manufacturer of a leading pro-biotic drink sold across 38 countries.
Unilever	A Dutch-British transnational consumer goods company. Brands include Lynx, Dove, Hellman's and Magnum.
PriceWaterhouseCoopers	A multinational professional services network.
Coca-Cola	An American, multinational beverage company, best known for Coca-Cola, Fanta and Sprite.
Constellation brands	A leading international brand and marketer of beer wine and spirits. Brands include Corona Extra, Modelo Especial and Casa Noble Tequila.
eYeka	An online co-creation platform boasting over 370,000 consumer co-creators from over 170 countries. Co-creation success stories include Nestle, Coca-Cola and Samsung amongst others.
SAB Miller	A multinational brewing and beverage company with a range of over 150 beers. Brands include Fosters, Peroni and Carling Black Label.
Ernst & Young	A multinational professional services company. Specialities include advisory services to global brands in innovation and digital.
Phillips Lighting	A division of Royal Phillips Electronics focusing on the general lighting market.
Mondelez	An American multinational confectionary, food and beverage company. Brands include Oreo, Chips Ahoy!, TUC and Cadbury.
Nicoventures	A wholly owned subsidiary of British American Tobacco focusing exclusively on the development and commercialisation of regulatory-approved, non-tobacco nicotine products.
Grupo Bimbo	A Mexican multinational bakery product manufacturing company. Operating more than 100 trademarks, including Bimbo, Wonder and Tia Rosa.
Absolut Vodka	Owned by French group Pernod Ricard, Absolut is one of the largest brands of alcoholic spirits in the world, sold in 126 countries.
Tg Green Tea	An award winning manufacturer and retailer of hot and chilled beverages.
Appy Food and Drink	An award winning, fast growing manufacturer of 'healthy' food and drink. Products are sold in over 27 countries.

5.1.3 Construction of Tables and Presentation of Data

In addition to providing an overview of this chapter and data set, it is helpful to understand the steps taken by the researcher in the construction of the tables used to present the research findings in this chapter. The analysis approach firstly focuses on the individual perspective of each interview participant. This is done by examining the transcripts of each individual interview against the factors and characteristics

raised. Following this, the analysis aims to mobilise the collective knowledge of the subject matter experts and derive analytic generalisations across the data set as a whole. Consequently, each stage of the analysis follows a process of individual participant analysis, and then comparison across the data set. The result of this is a large volume of tables relating to the relevant aspects of the brand perspective under exploration. This discussion outlines the process in producing and presenting the research findings to ensure the discussion in this chapter is clear.

The initial focus of the analysis is on the co-creation factors outlined in Chapter 3. The aim of this is to explore and expand the taxonomies of driving and inhibiting factors based on the collected data. To do this, the first step taken in the analysis is an individual thematic analysis of the perspective of each interviewee. The results of this are 14 tables (as there are fourteen brand perspective participants) summarising the interview reactions of each participant in respect to both the driving factors and inhibiting factors. For the benefit of the flow of this chapter, one analysis example is presented in section 5.2.1.1 (driving factors) and section 5.2.1.2 (inhibiting factors). The remainder of the results of the individual participant analysis are included as appendices (Appendix I & II). Following an in depth thematic analysis of the results of the individual analysis, expanded taxonomies of co-creation factors are presented through comparison across the data set. This is as a result of combining the key learning points and identifying emerging factors across the data set. The expanded taxonomies of co-creation factors (Section 5.2.3) are built from the collective wisdom of the subject matter experts.

The next stage of analysis seeks to examine the relationships between the expanded taxonomies of co-creation factors and the stages of the NPD lifecycle. This is a key aspect of the discussion and conceptual framework in Chapter 3, with the aim to contribute a greater understanding of how and why the co-creation factors vary in significance throughout the NPD lifecycle. To achieve this, morphological analysis principles are used to identify the set of relationships between the co-creation factors and the stages of the NPD lifecycle from the collected data. The taxonomies of co-creation factors and stages of the NPD lifecycle provide the parameters on which the responses of the participants are examined.

To do this, a similar process of individual participant analysis was firstly carried out. This involved analysing the coded transcripts of each individual interview participant, selecting the data linking each co-creation factor and the stages of the NPD lifecycle.

The results of this are 14 matrixes identifying the relationships between both the driving and inhibiting factors and the NPD lifecycle. Once again, one analysis example is used for the driving factors and inhibiting factors to illustrate the results of the individual participant analysis (section 5.2.4.1). The remainder of matrixes are included as appendices (Appendix III). The individual matrixes of the co-creation factors across the NPD lifecycle examine the set of relationships between the co-creation factors and the NPD lifecycle identified by each individual interview participant.

The analysis then seeks to leverage the collective knowledge of the data set by outlining potential co-creation-NPD scenarios through holistic matrixes of the co-creation factors and the stages of the NPD lifecycle. These are built by comparing and combining the results of the individual participant analysis. The outcome of this is a total set of relationships between the co-creation factors and the NPD lifecycle based on the collective experience of the data set. This is achieved by summarising the key learning points in respect to each co-creation factor and each stage of the NPD lifecycle. The outcome of this is two matrixes outlining the potential driving and inhibiting factors that manifest at each stage of the NPD lifecycle (section 5.2.4.3).

The final stage of the analysis focuses on exploring and expanding the taxonomy of social media characteristics. This approach is similar to that of the co-creation factors. The first step of this is thematic analysis of each individual transcribed interview, focusing on the social media characteristics. The outcome of this is 14 tables collecting the relevant data from the perspective of each interview participant. An example of the results of this is presented in Section 5.3.1.1, with the remainder included as appendices (Appendix IV). Following an in-depth thematic analysis regarding key learning points and themes, mobilising the collective knowledge of the data set produces an expanded taxonomy. This summarises the key learning points in respect to the social media characteristics across the data set as a whole. The expanded taxonomy of social media characteristics is presented in Section 5.3.3.

The following discussion presents the analysis of the brand perspective, including the approach and tables discussed in this section and an in depth discussion of the key findings and learning points.

5.2 Co-creation-NPD Relationship (Co-creation Experience Design)

The analysis begins with a focus on the relationship between co-creation and NPD (co-creation-NPD relationship). The literature outlined in Chapter 2 necessities a complete co-creation approach in order to deliver the greatest impact in enhancing NPD competences. A complete co-creation approach is achieved through the implementation of effective co-creation experiences, whereby brands and consumers are motivated to co-create at each stage of the NPD lifecycle. In order to deliver a greater fundamental knowledge in respect to the design of effective co-creation experiences, the data collection and analysis were directed towards understanding the underlying driving and inhibiting factors faced in guiding the design of co-creation experiences. An effective co-creation experience must be designed to maximise the driving factors whilst minimising the inhibiting factors throughout the NPD lifecycle. This is vital in promoting a complete co-creation approach, and delivering the greatest high-level impact of co-creation on NPD.

The initial analysis of the co-creation-NPD relationship is focused on validating and expanding the taxonomies of brand co-creation factors (drivers and inhibitors) outlined in Chapter 3. This is the first stage in resolving the co-creation-NPD relationship, understanding the factors that brands face when adopting a co-creation approach in NPD.

5.2.1 Co-creation Factors

The co-creation factors form a key construct of the conceptual framework, and categorise the fundamental factors that both drive and inhibit brands from implementing co-creation in NPD. Validating and expanding the taxonomies of co-creation factors was done through thematic coding frameworks and analysis. The interviews were transcribed and coded and the responses of the interview participants were examined against the taxonomies of driving and inhibiting factors outlined in Chapter 3.

The aim was to ascertain the relevance of each co-creation factor, gain a deeper understanding of each factor in the research context, and identify any additional factors emerging from the data. This approach provides a profound understanding of the factors that brands face when considering the design of co-creation experiences. In turn, the understanding gained can be leveraged to inform the design of effective co-creation experiences and encourage favourable trade-off of co-creation factors (i.e. maximising driving factors and minimising inhibiting factors).

The analysis of the brand co-creation factors firstly seeks to examine the driving and inhibiting factors identified by each interview participant. The interview transcripts were firstly analysed separately to examine the responses of each participant. Following this, a comprehensive list of driving and inhibiting factors was built by grouping the responses of the data set as a whole. This is the first step in identifying 'what' the relevant driving and inhibiting factors are in co-creation from the brand perspective. In effect, this delivers a greater knowledge of the factors brands potentially face when co-creating, and factors that the design should seek to boost (driving factors) or avoid (inhibiting factors).

When initially analysing the transcribed interviews separately, it was important to also explore the expertise of each interviewee. Each NPD project represents a unique challenge to a brand. Consequently, it was important to explore the individual responses of each participant, as their knowledge is built from their experience in unique co-creation-NPD scenarios. The purpose of this is to validate the inclusion of each factor as a significant driver or inhibitor on co-creation in NPD. The following sections present examples of how the responses from each participant were analysed.

5.2.1.1 Driving Factors: Thematic Coding and Analysis Template (PARTICIPANT A)

This section provides an example of how the responses from each participant were analysed in respect to the brand driving factors. To validate the taxonomy of driving factors, emphasis was placed on identifying driving factors mentioned by each interviewee. Following this, the focus was on summarising the qualitative explanation of the relevance and impact of each driving factor based on the interview participant's experience in real-life NPD scenarios.

Fifteen driving factors were examined in this area, with the aim to validate and understand each factor in the context of NPD. The coding framework used in the transcription and analysis was derived from the 15 driving factors outlined in Chapter 3, e.g. *BD1: Virtually costless acquisition of consumer ideas, BD2: Outsourcing of NPD efforts, BD 3: Greater solution information,* etc. Additional codes were assigned to any new factors emerging from the data analysis.

Tables 5.3 & 5.4 (overleaf) display how the data regarding the co-creation factors are summarised for each interviewee. Tables 5.3 & 5.4 reflect a summary of the

transcribed responses from *PARTICIPANT A* in regards to the driving factors of co-creation in NPD. Emphasis was placed on firstly identifying the co-creation factors from the interviewee's responses, and then summarising the explanation of the nature and characteristics of each factor in a co-creation-NPD scenario.

Table 5.3: Brand driving factors: interview reaction, PARTICIPANT A

Brand Driving Factor	Factor mentioned in data
BD 1: Virtually costless acquisition of consumer ideas	• The creativity is coming from the consumer, the consumer does not expect to get paid as much • Co-creation is way cheaper because you don't have to pay marketing agencies, you can brief consumers directly
BD 2: Outsourcing of NPD efforts	• Cut out marketing agencies, you can actually brief consumers directly • Maintain a creative force (consumers) who are basically an extension of your marketing team • Co-create the brand from scratch before having a product • Consumers vote or comment on ideas, submit designs and challenge R&D to develop the best product • Interact with consumers about specific product characteristics, invite them to submit designs (e.g. a lid design/ design for a can) • You can brief creative consumers and they express visually their different interpretation of a marketing brief • Co-creation is vital with the positioning and full communications campaign
BD 3: Greater solution information	• Co-create with influencers to develop key insights • Co-creation can inform the strategy, the marketing platform, positioning, and the media strategy and the touch point strategy • Fine tune product concepts with consumers • Consumers challenge R&D to develop the best solutions (out of the box thinking) • Co-creation allows you to improve the product and gives you more than one option to see which solution is the strongest (open feedback) • Co-creation allows you to create a clear definition of the target consumer • Consumers are creative, consumer ideas are often winning ideas • Consumers give you so much more richness and diversity of ideas, consumers give you out of the box thinking because they're not restrained by anything • Consumers can come up with solutions driven by their vision of what they want the product and brand to do (submit ideas and designs) • People in the company aren't necessarily more creative than people outside of the company
BD 4: Reduced risk of product failure	• Consumers can vote and comment on product designs, to ensure the strongest solutions are launched • Co-creation improved the brand KPI's dramatically (reversed a declining category) • Co-creation allows you to get quantitative feedback in terms of which concepts are stronger than others, or which ones are actually going to be chosen and can be built on and developed • Staying close with the consumers lets you sense check and get some new ideas as they fine-tune the prototype • Develop the strongest solutions through consumer ideas, feedback and fine-tuning
BD 5: Leagile manufacturing	• The net effect is higher efficiency (although it might be a more complicated tender process) • Complete co-creation raises the questions of whether you should be doing testing
BD 6: Faster speed-to-market	• Complete co-creation raises the questions of whether you should be doing testing • The net effect is higher efficiency (although it might be a more complicated tender process)
BD 7: Greater consumer understanding of NPD process	• Brief consumers when they're creating, give them strict guidelines on what you want them to create • Brief creative consumers and they express visually their different interpretation of a marketing brief in line with the aims of the brand

Table 5.4: Brand driving factors: interview reaction, PARTICIPANT A cont.

Brand Driving Factor	Factor mentioned in data
BD 8: Adjustments of consumer preferences	• Co-creation reversed the decline of the brand (30% per year), we were able to target the younger generation by co-creating the experience • By understanding consumers expectations and experiences, we were able to build affinity towards the brand and in turn this impacted the brand's KPIs.
BD 9: Better appreciation of the product	• The product itself is going to be absolutely geared towards a specific group because they have designed it with you • If you involve consumers more they're going to buy your products more
BD 10: Strengthening of brand-consumer relationship	• Co-creation's purpose is to build a stronger connection between brand and consumer • By involving the consumer to the absolute maximum, you will maximise the affinity that the consumer has with your brand • Co-creation leads to consumers not only choosing your brand but actively advocating your brand
BD 11: Positive attitudes toward the product	• By involving the consumer to the absolute maximum you will maximise the affinity that the consumer has with your brand • So what we saw that is the number within the younger age group, their affinity towards the brand and products grew massively in time
BD 12: Post launch gains	• Co-creation leads to consumers not only choosing your brand but actively advocating your brand
BD 13: Closer market fit	• The product itself is going to be absolutely geared towards a specific group because they have designed it with you • As you develop and fine tune a prototype, characteristics can be discussed with consumers as it evolves • Market research has evolved into a co-creation platform • Co-creation allows you to sense check to decide on the strongest concepts
BD 14: Higher commercial potential	• Co-creation leads to consumers not only choosing your brand but actively advocating your brand • If you co-create you have the strongest most powerful form of advertising also at your disposal • Co-created ads can go viral, co-created communications campaigns can be more powerful than those from traditional agencies • Co-creation can result in a competitive advantage, if you gain consumer affinity with your brand then of course it's more efficient • The brand had lost relevance totally to the young generation of product consumers in the market totally. It was declining by 30%, what we saw is that within just half a year we completely reversed the decline (through co-creation)
BD 15: High expectations and novelty	• If you involve consumers more they're going to buy your products more • If you involve them in the brand more, they going to love your brand more, what do you do if you love the brand, you advocate it

PARTICIPANT A identified and discussed each of the fifteen driving factors. A rich explanation of each factor is evident through the summarised content alongside each factor in Tables 5.3 & 5.4. This is a significant contribution to the underlying knowledge of each factor in regards to the research context. Greater detail is shed on the roles and contributions of consumers in NPD and how the driving factors manifest in a real-life NPD scenario.

This approach was replicated across the data set, and the responses of each interview participant in respect to the driving factors were summarised in this manner. The remainder of the individual participant analysis are included as appendices. This vital in sorting the relevant data relating to the driving factors within the first stage of validating the taxonomy of driving factors outlined in Chapter 3.

5.2.1.2 *Inhibiting Factors: Thematic Coding and Analysis Template (PARTICIPANT C)*

This section provides an example of how the responses of each interview participant were analysed in respect to the brand inhibiting factors. This replicates the approach adopted in respect to the driving factors. The aim was to identify mentions of inhibiting factors and focus on the explanation provided by each interview participant.

Thirteen factors were examined in this area, a separate coding framework was used to identify the inhibiting factors based on the factors outlined in Chapter 3, e.g., *BI1: Diminished control over brand's strategic management and planning, BI2: Complexity of managing brand's objectives and interests of diverse stakeholders* and *BI3: Coordination requirements, constraints and other non-monetary costs.* Once again, additional codes were assigned to any emerging inhibiting factors,

Table 5.5 (overleaf) reflects a summary of the transcribed content of *PARTICIPANT C* in regards to the 13 inhibiting factors, and is an example of how the data regarding the inhibiting factors were summarised for each interviewee.

Table 5.5: Brand inhibiting factors: interview reaction, PARTICIPANT C

Brand Inhibiting Factor	Interview reaction
BI 3: Coordination requirements, constraints and other non-monetary costs	• It takes a lot of time, we had to employ somebody to help analyse the data • Co-creating with consumers can lead to contractual disputes (in regards to IP)
BI 4: Infeasibility of product ideas	• You still have 30 years of experience in a particular industry, and that is something which a co-creator has no knowledge of
BI 5: Consumer heterogeneity	• If you don't really target the right people (who will be consuming your products) then a lot of your research efforts come to nothing • The problem you have is trying to get people who are the early adopters • I don't think you can ask an average consumer what they want to eat or drink in three years' time (but you can certainly ask creative people) • Brands often co-create with people they like and you know. They don't necessarily end up co-creating with the right people, there is a risk of groupthink with the same sort of deficiency as you had before you were co-creating • There is a big issue around the recruitment of the co-creators to enable you to really and truly get under the skin of what the problem is
BI 9: Information overload	• There is no easy sort of filtering system (information) because you want to get to some core target insights, but are you looking for the right things? (It's quite expensive) • It takes a lot of time, in the end we had to employ somebody to help analyse the data • I think organisations forget that they've got to be able to process this data and handle this data • Really and truly it's still a huge body of data (but it's worth its weight in gold)
BI 11: Concerns about secrecy	• There is a risk of wholesale stealing • In prototype development, you are at the highest risk of intellectual property stealing, so organisations are very wary of letting products out of the hands
BI 12: Ownership of intellectual property	• There is a deep-seated fear or concern around intellectual property • Large organisations don't like sharing intellectual property and that's one of the biggest challenges • Even though you can create good contracts to assign rights to mitigate risk, it's never enough • Co-creating with consumers can lead to contractual disputes (in regards to IP)
BI 13: Risk of retaliation and defection	• You have to shoot NDAs across to consumers or incentivise them to release all rights and get access

As can be seen by Table 5.5 (above), *PARTICIPANT C* did not discuss all of the inhibiting factors outlined in Chapter 3; accordingly, Table 5.5 only includes factors that were identified and discussed by *PARTICIPANT C.*

Whilst not all of the factors were mentioned, factors that were considered relevant are explained in rich detail. Once again, emphasis was placed in firstly identifying the inhibiting factors from the interview participant's responses, and then understanding the nature and characteristics of each factor in a co-creation-NPD scenario.

As the aim of the analysis was to deliver a holistic knowledge of the co-creation factors, the following sections provide a synthesis of the key findings across the data set. This was done through cross comparison, combining the reactions of the interview participants as a collective. This includes frequency counts of the total number of interview participants mentioning each factor, identifying additional factors emerging from the analysis and a deeper focus on the qualitative explanation of each factor.

5.2.2 Co-creation Factors: Cross-Comparison (PARTICIPANTS A- N)

Following the individual analysis approach outlined in the previous sections, this section provides a summary of the co-creation factors (driving and inhibiting) through frequency counts of the total number of interview participants mentioning each factor in respect to co-creation in NPD.

Figures 5.1 and 5.2 (overleaf) outline frequency counts of the total number of interview participants identifying each driving and inhibiting factor. The identification of a co-creation factor by an individual participant is considered one mention (regardless of the amount of times the individual participant discussed it). As the data set is built of 14 subject matter experts, the maximum number of mentions for a factor is 14 (i.e. all of the subject matter experts identified the factor as a relevant driver or inhibitor of co-creation in NPD). The following is a summary of the responses in respect to the driving and inhibiting factors; this is vital in validating the taxonomies of co-creation factors (Chapter 3) based on the experience of the interview participants.

It is important to stress that the researcher was not seeking replication across the data set. Each co-creation project/experience is unique depending a wide range of variables, and a result, the experiences of the interviewees are likely to vary. The

purpose of this step of the analysis was to identify and understand the relevant factors in regards to co-creation in NPD, derived from the expertise of the interview participants. The aim was to build comprehensive lists of relevant driving and inhibiting factors based on the collectives responses of the interview participants.

Figure 5.1: Frequency count of the identification of brand driving factors (PARTICIPANTS A-N)
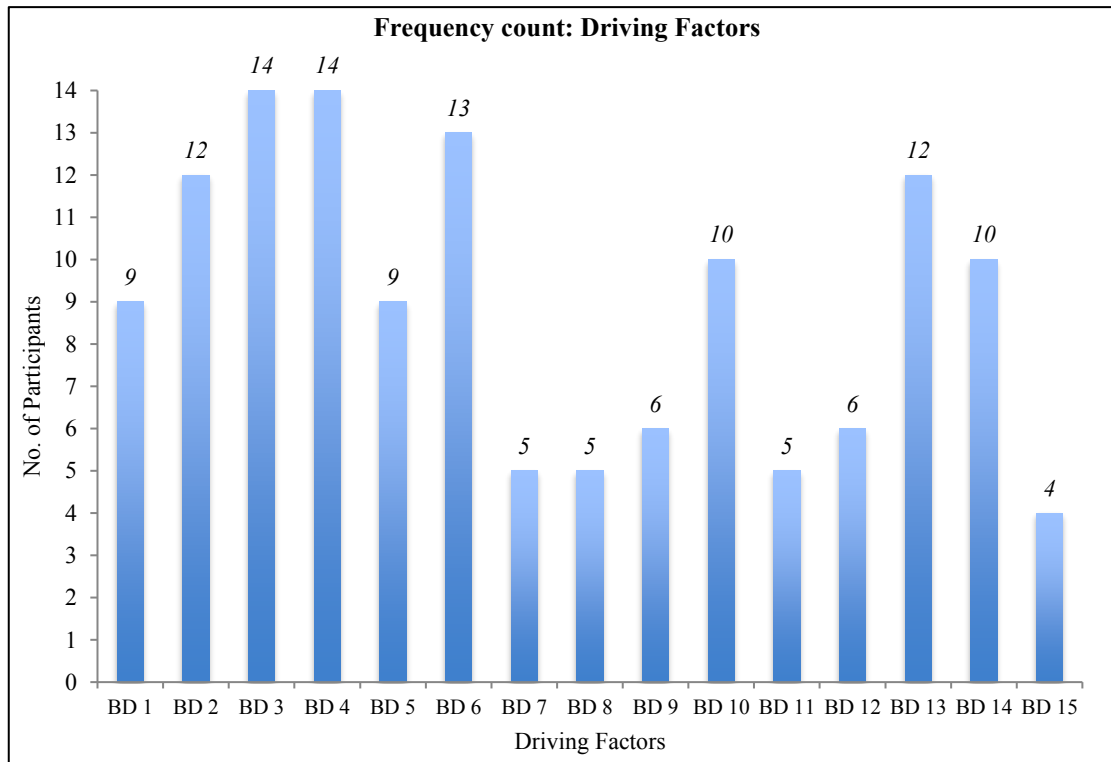
Figure 5.1 illustrates the frequency of the total number of interview participants identifying the driving factors as relevant in a co-creation-NPD scenario. This concisely summarises the reactions of the interview participants in respect to the driving factors of co-creation in NPD. This is of particular value as each of the 15 driving factors (outlined in the taxonomy in Chapter 3) was discussed by multiple participants, validating the taxonomy of driving factors in the research context. A more comprehensive analysis of the qualitative explanation in respect to each driving factor is apparent in section 5.2.3.1.

Figure 5.2 (overleaf) provides an overview of the number of interviewees that identified each of the inhibiting factors as relevant. The responses of the interview participants were more varied in respect to the identification of inhibiting factors.

However, any factor mentioned with enough supporting evidence was deemed a relevant inhibiting factor in the research context.

Figure 5.2: Frequency count of the identification of brand inhibiting factors (PARTICIPANTS A-N)
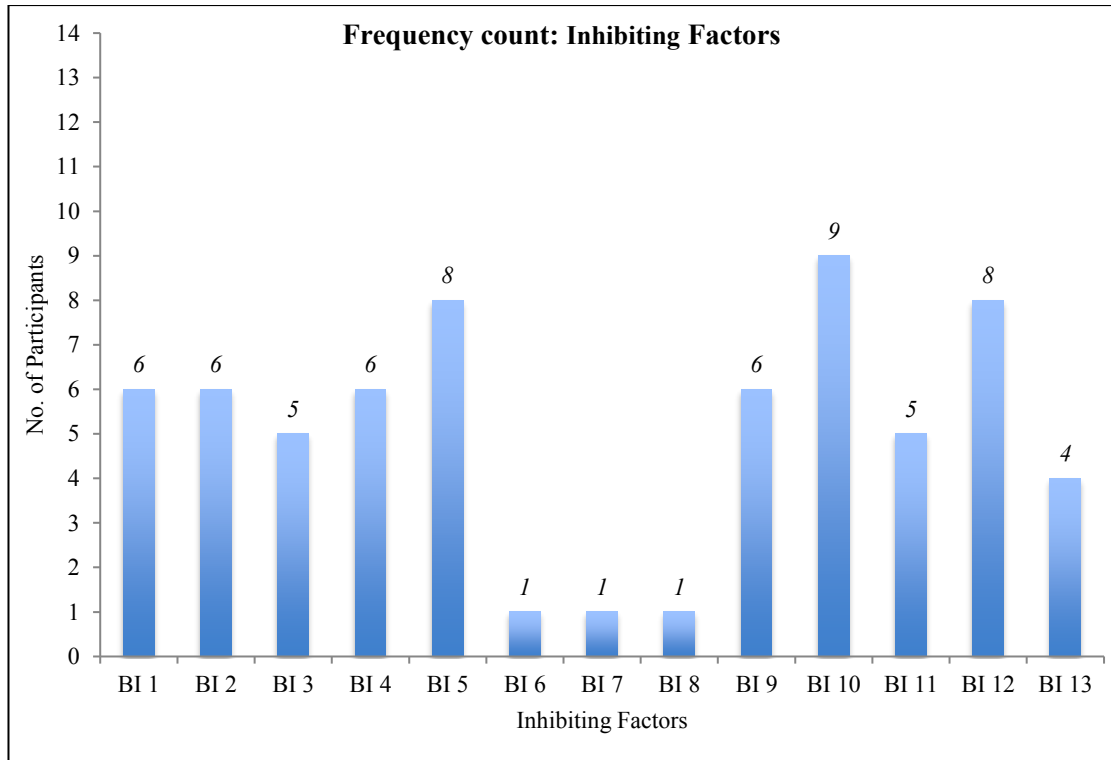
Figure 5.2 summarises the responses of the interview participants in respect to the inhibiting factors through a frequency count. Little or no emphasis was placed on the varying degree of the number of interviewees mentioning each factor. The researcher recognises the unique nature of each co-creation project, accordingly the responses in respect to the co-creation factors are likely to vary. The research seeks to deliver a holistic knowledge of the co-creation factors by mobilising knowledge across the data; accordingly, all factors identified and discussed are considered relevant in the research context.

A key attitude expressed by the subject matter experts was that inhibiting factors could be reduced or altogether avoided through the design of the co-creation experience. The interviewees, as experts in co-creation have extensive experience in how best to design and implement co-creation experiences to maximise value and minimise risk/cost. It was a common occurrence for an interviewee to identify the inhibiting factor, but then to outline that it was not relevant from their experience. For

example, for the inhibiting factor *'BI 1: Diminished control over brand's strategic management and planning'*, *PARTICIPANTs A* and *C* identified this as a common concern. However, it was not considered a significant inhibiting factor as this was negated by the design of the co-creation experience and the targeting and selection of consumer co-creators. This is evidenced by the supporting statements overleaf.

> *"People say we are going to lose control of the brand (…) My answer to that is you're not in control anyway in the digital age. Take control by inviting consumers and then controlling by briefing them."* (PARTICIPANT A)

> *"The keyword is co-create, not that you have handed over the creation to someone else."* (PARTICIPANT C)

Similarly, *PARTICIPANT M* only mentioned a small number of the inhibiting factors as relevant in regards to co-creation. The focus was less on the factors that inhibit the co-creation process, but on the mind-set of those within brands in regards to co-creation.

> *"The difficulty is not about tools or methods to co-create it's more psychological."* (PARTICIPANT M)

The expertise of the interviewees is built on a path-dependent approach across numerous brands and co-creation projects. The researcher considered this a likely explanation as to why the responses relating to inhibiting factors were so varied. Through trial and error, the interviewees have built the capability to design and implement co-creation experiences to add value in NPD and avoid some of the pitfalls associated with a co-creation approach.

This is a particularly valuable inference in respect to the analysis to this point, as going forward it signifies the importance of the design of the co-creation experience in either promoting driving factors or reducing inhibiting factors. Developing a rich knowledge of the nature and impact of the co-creation factors allows for a greater understanding of how to design effective co-creation experiences.

The results of this step of the analysis validate the taxonomies of co-creation factors (driving and inhibiting, as outlined in Chapter 3) through experience of co-creation in

a real-life NPD scenario. This is particularly valuable in confirming the co-creation factors collected from the literature, and validating their existence and impact in the research context.

In addition, a number of additional driving factors emerged across the data set. A key aim of the data collection and analysis was to expand the conceptual framework. Accordingly, this includes the taxonomies of driving and inhibiting factors as key constructs of the conceptual framework. Through the thematic analysis, a number of additional driving and inhibiting factors emerged across the data set.

As these represent factors that were not identified through the literature, the discussion not only identifies the additional co-creation factors, but greater emphasis is placed on defining each factor through the insight gained from the data collection. The following sections provide a summary of the key talking points of each additional co-creation factor, and a deeper analysis of each factor and its implications in respect to this research project.

5.2.2.1 Additional driving factors

In respect to the responses of the factors that drive co-creation across the data set, four additional driving factors emerged. The following discussion summarises the key discussion points regarding each additional driving factor, and provides a frequency count of the number of interview participants that identified each. In order to support the discussion, relevant quotations are used to substantiate the findings.

BD 16: Resource Impact: The first additional driving factor to emerge from the data set was the potential of co-creation to positively impact the resources employed in NPD. A number of interview participants identified a positive impact of co-creation on the resources utilised as a key driving factor. Co-creation was considered to boost the efficiency of the NPD process, providing the information to move quickly through the NPD lifecycle, reduce resource wastage, typically through prototype iterations or pivots, and replace 'traditional' NPD inputs with consumer input. Out of the participants who identified this factor, this was considered to particularly be pivotal by *PARTICIPANT F:*

> *"Co-creation has an effect over the whole product lifecycle, you don't need as many resources, you can allocate your funds much more specifically because you know where you're going"* (PARTICIPANT F)

Of particular significance is the increased solution information brands have access to, ensuring that there is a clear direction and strategy for their NPD project. By maintaining a close collaborative relationship with consumers, it ensures that the brand is equipped with relevant and valuable information, boosting the efficiency of their NPD project, as they are able to move quickly through the NPD lifecycle.

In a similar vein, access to greater information was widely considered to reduce resource wastage, as brands that co-create are less likely to need to pivot or make a course correction. This was emphasised strongly by *PARTICIPANT C,* who stated that brands are able to reduce the number of iterations of product prototypes, and *PARTICIPANT F,* who identified that brands can allocate funds more specifically as the product direction is clear. Creating prototypes was considered one of the most resource intensive stages. Consequently, reducing the number of iterations of prototypes or having the information to ensure that prototypes fit the needs of the market is vital in reducing both the monetary and non-monetary costs of NPD. Additionally, reducing or removing the need to make pivots or course corrections not only reduces the wastage of physical resources, but also reduces the overall timescale of the NPD lifecycle, allowing brands to deliver new products to market both faster and cheaper.

BD 16: Resource Impact also manifests in a number of other ways, these are summarised as follows. *PARTICIPANT A* highlighted a reduction in the use of marketing agencies as these 'traditional' inputs are replaced by consumer co-creation. When considering substituting consumer input with that of traditional methods, although it was recognised that consumers may need to be financially rewarded, a common consensus was that the remuneration afforded to consumer co-creators was far less than that of a traditional input, i.e. a marketing agency.

PARTICIPANT D not only highlighted the role of co-creation in replacing traditional market research methods, but also the falling cost of co-creation due to new technologies and social media. This introduces the role of social media in enabling co-creation. Social media platforms were regarded as providing relatively cheap and easy access to consumers, enabling interaction and collaboration. Social media was regarded as providing a cheaper alternative (in terms of both cost and time) to face-to-face co-creation, ultimately driving more brands to adopt a co-creation approach. The role of social media and digital technologies was also mentioned in regards to

tools such as brands being able to develop virtual prototypes to gain early consumer feedback. This is vital in reducing the resources employed in development, as iterations of early stage prototypes can be mocked up using digital technologies, reducing the cost at what is considered a very resource intensive stage (development).

BD 16: Resource impact encompasses a number of other driving factors such as *BD 1: Virtually costless acquisition of consumer ideas* and *BD 3: Greater Solution Information,* referring to the wider impact of co-creation on the resources employed in NPD. A comprehensive explanation of *BD 16: Resource Impact* is present in the expanded taxonomy of brand driving factors (section 5.2.3.1).

BD 17 Internal Empowerment: The second additional driving factor to emerge from the data analysis is termed 'internal empowerment'. This is characterised by the impact of the brand maintaining a close collaborative relationship with consumers and the motivation of those working within the organisation. Co-creation was regarded as empowering those within the brand, with both the information and motivation to ensure everybody within the organisation is working towards the same shared goal. Of the participants who identified this factor, *PARTICIPANT E* considered this particularly significant:

> *"Co-creation can positively impact internally; your team becomes much more collaborative."* (*PARTICIPANT E*)

Co-creation is fundamentally defined by collaboration; it is clear from the above statement that the impact of internal empowerment is vital in aiding the shift of those within organisations to a more collaborative mind-set. Internal empowerment comes as a result of a deeper knowledge of what consumers truly want, and how best to deliver these products. The ongoing interaction and collaboration through co-creation builds the voice of the consumer into the NPD project, and those within the brand have a clear picture of the wants and needs of consumers. This is important in providing a clear direction for NPD projects and uniting those within brands to work towards the same shared goal.

Another facet of this driving factor is the reduction of internal conflict within the brand, promoting collaboration and allowing those within the organisation to make decisions quicker (*PARTICIPANT A)*. This is once again as a result of the access to information

those within the brand have, reducing wastage from internal debate and boosting the speed of the NPD lifecycle. *PARTICIPANT G* discussed the synergies arising from internal empowerment, avoiding resource waste and being able to ideate, design and deliver solutions in a timely and efficient manner. In further support of this driving factor, *PARTICIPANT F* highlighted the role of co-creation in motivating the involved stakeholders (brand and consumers), avoiding conflict and organising the stakeholders to work towards the same mission and vision.

Internal empowerment is considered to promote collaboration and boost efficiency within organisations by equipping employees with the information to make informed and quick decisions throughout the NPD lifecycle. The information available through collaborating with consumers is recognised to both ensure a clear direction is maintained throughout the NPD lifecycle, but also motivate those within brands by encouraging a collaborative mind-set.

BD 18 New Experience Development: The third additional driving factor to emerge from the data analysis focuses on the notion of experiential value, a core principle underpinning the co-creation paradigm. The shifting nature of value from tangible products to valuable experiences (S-D logic and co-creation paradigm) was discussed in depth in Chapters 2 and 3. Whilst the co-creation literature emphasises the need to co-create valuable experiences, the examples of co-creation in the field of consumer goods (Chapter 3, Table 3.1) outlines an apparent product focus by brands, and a lack of evidence of any recognition of the value of experiences.

The emergence of this driving factor from the data is particularly significant as it endorses the core principles of co-creation, and evidences the recognition of the shifting nature of value by those adopting a co-creation approach in real-life NPD scenarios. This driving factor builds on the notion that brands are now motivated to deliver unique and customisable experiences to deliver the greatest value to their consumers. This is considered of particular value as the brand perspective recognises the shifting nature of value, and experience is now a key consideration in value creating processes (albeit it only discussed by a limited number of interviewees). *PARTICIPANT D* was a huge proponent of the concept of 'new experience development', developing experiences alongside tangible products:

> *"The experience really matters, and it matters more and more than price and function and features."* (*PARTICIPANT D*)

Building on the above statement and reactions of *PARTICIPANT D*, it is clear that approaches to value creation are shifting. This is characterised by a shift from a traditional value-chain approach, to one that is more of a 'value creation network', where experiences are co-created alongside tangible products. This embodies the mind-set and approach to value creation at the core of the S-D logic and co-creation paradigm (discussed in Chapters 2 and 3). The notion of new experience development (alongside new product development) was considered a necessary shift in the way in which brands must approach value-creation. *PARTICIPANT D* stated that experiences should be co-created alongside tangible products to understand the expectations of consumers and to design and deliver value-maximising experiences.

In addition to the characteristics of this driving factor, *PARTICIPANT I* discussed the importance of delivering customisable and unique experiences to consumers, in educating and promoting brand loyalty. Once again, this goes beyond just delivering a tangible product to the market, but value is considered to be derived from the product in use and what it 'means' to the consumer. This embodies the core principles of the co-creation paradigm, and is particularly pivotal in substantiating that those adopting a co-creation approach in real-life NPD scenarios are doing so in line with the mind-set stressed by the literature. This driving factor places a greater emphasis on a complete co-creation approach, as it is stresses that consumers should be involved across the whole NPD lifecycle to deeply understand the product functions and features, alongside delivering valuable experiences.

The discussion of new experience development as a significant driving factor of co-creation represents an impact on how value is both created and perceived. The emergence of this factor is pivotal in evidencing the application of the literature in real-life NPD scenarios, and illustrates the fundamental shift in value-creation on which the co-creation paradigm is built. However, this driving factor was identified by a relatively small number of interview participants, and the attitudes of the data set ranged from a strict product focus (G-D logic) to an experience focus (S-D logic). The contrasting views of the subject matter experts provides an indication of the wider marketplace, emphasising the need for a fundamental shift in the mind set in respect to value creation. One not shared by all interview participants.

BD 19 Limitations of Traditional Methods: The final driving factor to emerge from the literature contrasts the value of co-creation against traditional approaches to NPD.

The limitation of traditional methods embodies the discussion in Chapter 2, specifically the limitations of traditional approaches to NPD in delivering successful new products. It is noteworthy to include as the majority of participants stressed this as a key driving factor, stating that the way things were done in the past are no longer effective. The data contributes valuable insight from within organisations. The following statement from *PARTICIPANT C* corroborates this:

> *"Traditional market research is very much like looking in a rear view mirror." (PARTICIPANT C)*

The above statement illustrates one way in which traditional methods were considered ineffective compared to co-creation. In this case, co-creation was promoted as providing rich, fast, and real-time feedback directly from consumers, rather than traditional market research that provides outdated information. The discussion in Chapter 2 reflected the ways in which traditional approaches to NPD are ineffective in contrast to co-creation. The value of the data collected is that it provides a deep insight into the contrast between a co-creation approach and traditional methods in the research context.

To summarise the attitudes of the interview participants in respect to this driving factor, the following key sentiments were expressed. The interview participants expressed a wide range of characteristics in regards to this driving factor. Notably, the changing nature of the brand-consumer relationship (*PARTICIPANT C*), high failure rates in NPD (*PARTICIPANT M*), the need to deliver valuable and unique experiences alongside products (*PARTICIPANT D*), and the role of co-creation in giving brands access to real time, valuable and relatively inexpensive information and resources (*PARTICIPANT I*).

The discussion of this driving factor highlights the necessity to adopt a co-creation approach as changes in the market and business environment have rendered traditional methods obsolete to a degree. In this regard, co-creation is considered the most effective approach to value creation, and the support of this driving factor in the data corroborates this.

The discussion of the additional driving factors focuses on building an explanation of each factor based on the experiences of subject matter experts. In support of these factors, a number of attributable quotes are evident. In order to summarise the

responses of the data set in respect to these factors, Figure 5.3 provides a frequency count of the number of participants that identified each additional driving factor.

Figure 5.3: Frequency count, identification of additional driving factors
(PARTICIPANTS A-N)
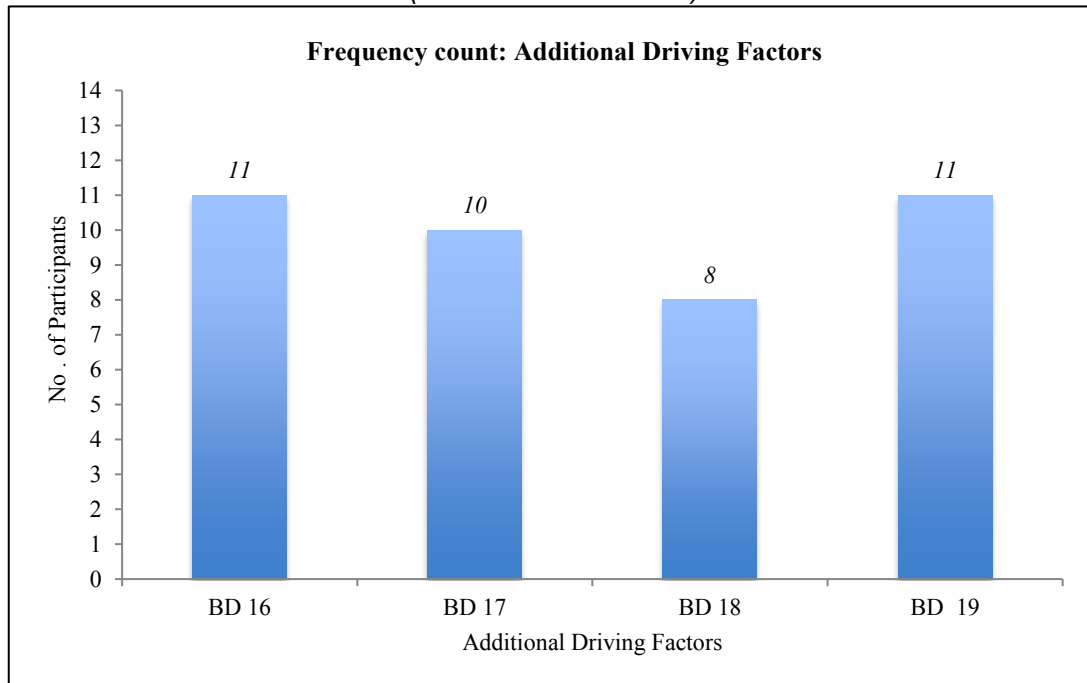
The evidence of multiple participants identifying and discussing each factor provides a rich understanding of their nature and characteristics in the research context. Moreover, this somewhat illustrates a consensus of the relevance and impact of these additional factors, as the expertise of the interview participants spans multiple brands and co-creation projects. In this regard, the additional driving factors are not limited to one person or one case, and each factor is explored in depth.

5.2.2.2   Additional inhibiting factors

In addition to the 13 initial inhibiting factors, four additional inhibiting factors emerged from the data. These factors were amongst the most mentioned factors; the background and supporting evidence is discussed below:

BI 14: Culture: This inhibiting factor was widely expressed as a key reason why brands and those within them resist a co-creation approach. Rather than focusing on a tangible or measurable impact of co-creation, culture refers to the mind-set and prejudices of those within brands with respect to adopting a collaborative approach. The identification and discussion of this factor by the interview participants was

particularly insightful, as it revealed a factor that is not overtly apparent from the outside in. That said, this factor was widely identified and discussed in depth by the interview participants and stressed as one of the most significant factors in inhibiting co-creation.

The discussion of co-creation in Chapters 2 and 3 highlights the considerable difference in the core principles and mind-set of a co-creation paradigm compared to traditional approaches to value-creation. This is evident through the emergence of this factor, stressing both the inability and unwillingness of individuals to adopt this 'new' mind-set. Particular emphasis was placed on the lack of individuals willing to risk adopting a new approach to NPD, or a closed-minded attitude leading to a focus on internal capabilities. This was described by *PARTICIPANT* B:

> *"There's a sort of arrogance, most of the time I don't think its deliberate, but it's just inherent, well you should know your products better than your customers but that isn't always true." (PARTICIPANT B)*

The above statement succinctly explains what was considered a widespread attitude towards co-creation, outlining the ego and closed-mindedness of those within brands in inhibiting co-creation. This presents a significant impediment to a complete co-creation approach as it goes beyond the physical or measureable impacts of co-creation, but pertains to the psyche of those working within organisations. This notion of an inherent arrogance or ego towards co-creation or opening up the NPD process was widely discussed. *PARTICIPANT I* shared the view that brands, and those within them may be fearful of looking weaker by asking external stakeholders for input or direction in NPD. This reflects the attitude that brands are more concerned with maintaining their 'power' in the brand-consumer relationship, rather than accepting that the dynamic of the marketplace has fundamentally shifted. The co-creation paradigm is fuelled by the changing nature of the brand-consumer relationship, categorised by a coalescing of roles and a fundamental shift in how value is created. However, the reluctance of those within brands to relinquish power presents a significant inhibitor of co-creation.

Another aspect of this factor is the likelihood of those within brands being fearful of taking a risk by adopting a novel and somewhat untested approach to value-creation. This was supported by a number of participants who highlighted the likelihood of

people within brands being fearful of the backlash of a failed co-creation project. A common sentiment was that co-creation can be seen as a risk, and individuals or decision makers are not ready to take the risk for fear of repercussions. *PARTCIPANT H* for example, stressed the need to hire managers who are willing to take risks and are regarded as mavericks. This sentiment was echoed by *PARTICIPANT F*, who stated that 'people within brands are resistant to change and prefer to do things how they have always been done'. This notion of people within organisations unwilling to take risks was widely shared amongst the interview participants. Similarly, the notion that decision makers, i.e. senior management, are slow or unwilling to try new methodologies was widely suggested. *PARTICIPANT I* stated the following:

> *"Once you get to a certain age, any person, and you've been taught a specific way, it's very difficult to change and accept that this is the way the world is going." (PARTICIPANT I)*

Co-creation represents a significant evolution of innovation management. The novelty of co-creation was recognised as a likely cause of this closed-minded culture. Both the risk and uncertainty surrounding the co-creation approach impede those within brands from adopting the mind-set associated with co-creation. The result is that co-creation is seldom embedded in a brand's culture. Examples of brands implementing a co-creation approach as an organisation-wide approach to NPD are few and far between. An underlying reason being that culture is a significant inhibitor of co-creation.

In order to overcome culture as an inhibiting factor of co-creation, the interview participants stressed the need to train or replace people stuck in an 'old' mind-set. *PARTICIPANT F* highlighted the fact that people are not 'taught' co-creation, a knowledge of co-creation is built through experience. In order to enhance NPD competences through co-creation, those within brands must be willing to take the risk and over time, implement a co-creation approach.

BI 15: Resource Impact: This factor is characterised by the potential negative resource impact of a poorly designed co-creation experience. The inclusion of resource impact as both a driver and inhibitor of co-creation corroborates the significance of the design of an effective co-creation experience with the potential to either deliver a benefit (through the driving factor) or incur a cost (through the inhibiting factor). The ways in which co-creation may incur additional or unexpected

costs were centred on poorly designed co-creation experiences, the added complexity co-creation can bring to NPD, the need for investment in co-creation platforms and rewarding consumer co-creators.

The discussion of this inhibiting factor included the results of poorly designed co-creation experiences in a real-life NPD context. This once again is valuable in underlining the significance of the design of co-creation experiences. As an example, *PARTICIPANT H* outlined a poorly designed co-creation experience and the resultant resource impact:

> *"I would not have adopted a co-creation approach with these projects had I known they required a modification of the production lines, that was very costly and took so much time." (PARTICIPANT H)*

A key learning point from the responses of *PARTICIPANT H* was that the design of the co-creation experience must be in line with the requirements of the specific NPD project in hand. This is evidenced by the above statement, as the design of the co-creation experience did not take into account the capabilities of the brand (in terms of production). As a result, there was a significant impact on the resources employed in the NPD project.

This was a common theme emerging across the data set. Early co-creation efforts by a brand may potentially incur significant costs due to the trial and error and poor design of co-creation experiences. The lack of understanding of how and where to implement co-creation can significantly impact the resources required in NPD. *PARTICIPANT G* highlighted the view that co-creation can be seen as another step in the process, and therefore another cost. Added complexity was considered to impact both the monetary cost and time of the NPD process. *PARTICIPANT B* emphasised that co-creation can cause confusion, thus impacting resources.

This necessitates the need for the effective design of the co-creation experience to ensure co-creation delivers a positive impact in NPD. A significant finding arising from this factor is the need to develop a deep understanding of co-creation in the context of a specific brand, or in respect to a specific NPD project. The design of the co-creation experience must align with the requirements of an NPD project and the capabilities of the brand. If not, the results of a poorly designed co-creation experience can add complexity and in turn both monetary and non-monetary costs.

In order to minimise the risk of this inhibiting factor, synergy must be achieved between the design of a co-creation experience and the NPD project in hand.

Aside from the potential resource impact of a poorly designed co-creation experience, an additional aspect of this factor was the need to invest in a co-creation platform when considering online co-creation. This represents the initial investment in a co-creation platform to host co-creation experiences. Whilst the need to invest in a co-creation platform was identified by a number of interview participants, the view was widely expressed that the initial investment is far outweighed by the benefits accrued from co-creating on a wider scale.

BI 16: Lack of co-creation methodologies: The discussion relating to the challenges in designing effective co-creation experiences exhibits a clear lack of guidance, tools or methodologies on which brands can build a co-creation approach. The novelty and transformation of approaches to value creation through co-creation was widely identified as a key inhibiting factor. This is characterised by an absence of applicable research and tools to guide brands to co-create in NPD. This factor stresses the unique nature of every co-creation project, and as of yet there is not a 'one size fits all' methodology towards co-creation. The novelty of co-creation stressed by *PARTICIPANT K:*

> *"Co-creation is in a renaissance stage." (PARTICIPANT K)*

This illustrates the notion that co-creation is somewhat in its infancy, and those seeking to implement a co-creation approach must do so with a lack of proven methodologies. Not only is this important in highlighting an emerging inhibiting factor, but also in the need to explore co-creation further, validating the reason for this research. A lack of co-creation methodologies suggests that those seeking to implement a co-creation approach must do so with a trial and error attitude, to build knowledge of co-creation over time. This embodies the characteristics of previously discussed inhibiting factors, as a lack of co-creation methodologies can potentially incur costs (through ineffective co-creation experience design) and is likely to dissuade brands from adopting a co-creation approach (through fear of taking risks i.e. *BI 15: Culture*).

This was particularly emphasised by *PARTICIPANT F,* who highlighted that the existing literature/theory on co-creation is very generic. Not only does this reinforce

this factor as a significant inhibiting factor, but reinforces the need for further research and in turn the research gap that this research seeks to address. A lack of applicable methodologies also refers to the lack of proof or consensus of the impact of co-creation in NPD. The discussion of the impact of co-creation on NPD in Chapters 2 and 3 largely explored this on a theoretical level; however, there is a scarcity of proof of a direct impact of co-creation on NPD success. This was expressed as a key reason as to why brands are hesitant or slow to adopt a co-creation approach. *PARTICIPANT L* underlined this point, maintaining that as co-creation is not yet a fool proof approach to achieving success in NPD, there is a natural wariness of adopting what is a 'new' approach to innovation management.

Coupling the lack of knowledge of how to implement a co-creation approach with the lack of proof of the deliverable impact of a co-creation approach is a significant inhibiting factor from the brand perspective. In order to overcome this, a greater fundamental knowledge of both how to implement a co-creation approach and the potential results of co-creation is required. This is directly in line with the research aim, identifying this as an inhibiting factor presents an explanation as to why brands are hesitant or unwilling to adopt a co-creation approach. The findings in this chapter and indeed the research project present a significant step in contributing valuable knowledge to reduce this inhibiting factor.

BI 17: Organisational structure: The vastly different nature of co-creation as compared to traditional approaches to NPD is continuously stressed throughout this thesis. One aspect of the impact in a real-life NPD scenario is the challenge to brands in adapting or changing their organisational structure to adopt a co-creation approach. Co-creation requires collaboration internally (across strategic functions) and externally (between the brand and consumer). This can have significant implications on the structure of organisation that traditionally, are not organised to promote this collaborative mind-set. This highlights the need for an organisation to be flexible and potentially restructure to promote collaboration both internally and with consumers, *PARTICIPANT D* identified that*:*

> *"… brands are organised poorly to do that (shift to a collaborative mind-set), it's rare that marketing, distribution, and post service folks come together to design an end-to-end set of processes for their customer population."* (PARTICIPANT D)

The above statement signifies the impact of a shift in mind-set (towards co-creation) on the organisational structure of brands. Embracing this mind-set can have a significant impact, as co-creation requires the brand to promote ongoing and intense communication and incorporate consumers into the organisation's architecture. The shift in mind-set and also the physical impact on the structure of organisations is a key inhibiting factor to co-creation. *PARTICIPANT M* highlights the need to adapt processes in order to be more collaborative, signifying a considerable reengineering of both how things are viewed (mind-set) and also how things are done (processes).

In respect to real-life NPD scenarios, *PARTICIPANT G* highlighted the profit-maximising nature of global brands, and the common occurrence of brands being driven by their operations team, with efficiency driving the innovation agenda. This presents the very real possibility that brands maintain a focus on efficiency and cost minimisation, and therefore resist implementing a co-creation approach. Brands who are driven by profit or efficiency are likely to struggle to come to terms with co-creation, as it may cause a drastic restructuring of both the organisational structure and the mind-set of those within.

This factor presents the wider impact of co-creation on the organisation as a whole. In order to overcome this, the impact of co-creation must be recognised and supported on an organisation-wide level. If not, implementing a co-creation approach in a rigid organisational structure with a lack of willingness to adapt existing processes is likely to remain a significant inhibit or co-creation.

Figure 5.4 (below) displays a frequency count of the number of interview participants who identified each of the additional inhibiting factors.

Figure 5.4: Frequency count of, identification of additional inhibiting factors (PARTICIPANTS A-N)

Frequency count: Additional Inhibiting Factors
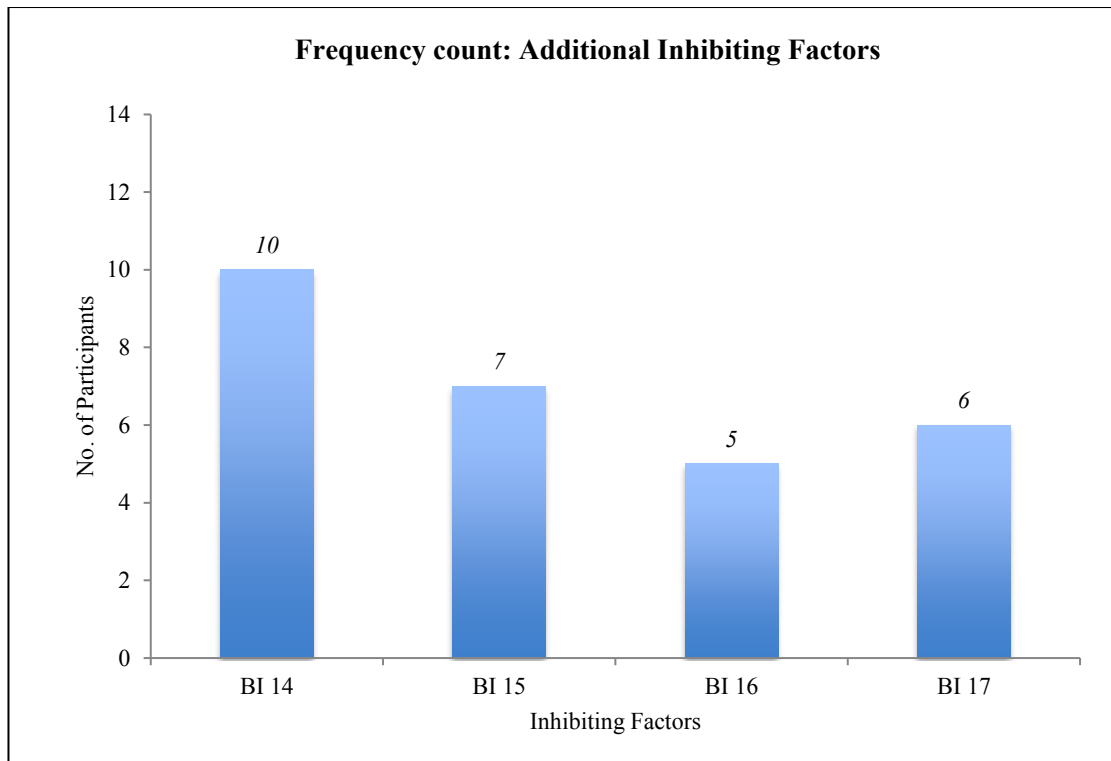
A key value attributed to the additional inhibiting factors is that they represent both factors that can result in a tangible impact on NPD projects (i.e. resource impact), but also intangible factors intrinsic to those within brands that are not overtly observable from the outside in (i.e. culture). The emergence of these factors provides a real world insight derived from those who have co-created in NPD. This identifies and explains the significance of not only the potential costs of co-creation, but also the mind-sets of those within brands in resisting a co-creation approach.

The validation of the taxonomies of driving and inhibiting factors and the identification and discussion of additional factors is a vital contribution to a key construct of the conceptual framework (co-creation factors). This elucidates the brand perspective on what the potential driving and inhibiting factors are, in the first step of guiding the design of co-creation experiences. In order to further expand this knowledge, it is important to pay attention to the qualitative explanation of how and why each co-creation factor is relevant and impactful in NPD.

5.2.3 Taxonomies of Co-Creation Factors
The analysis to this point has been concerned with identifying 'what' the co-creation factors are in the research context. The next stage of analysis focuses on how and why the co-creation factors are relevant, and how they manifest in a co-creation-NPD

scenario. The aim of this is to build a greater understanding of how the co-creation factors align with the specific tasks or requirements of a given co-creation project, and how the co-creation experience can be designed to deliver a favourable trade-off of co-creation factors. In order to build this explanation, the narrative presents expanded taxonomies of driving and inhibiting factors, summarising the key content and learning points from the analysis.

The co-creation factors loosely group the benefits and costs/risks of co-creation from the brand perspective. In effect, the driving factors signify the potential benefits a brand can realise, whereas the inhibiting factors embody the potential costs Consequently, when considering the design of effective co-creation experience, it is important to not only understand what the co-creation factors are (achieved through the analysis to this point), but also how and why they are relevant and manifest in real-life NPD scenarios. An understanding of such provides a greater basis on which to design effective co-creation experiences.

A key sentiment expressed across the data set was that each co-creation project is unique, with a significant number of variables impacting approaches towards co-creation. This indicates that co-creation factors are likely to vary project-to-project and brand-to-brand. This is evident by the supporting quote from *PARTICIPANT G*:

> *"The co-creation dynamic or paradigm needs to be fluid, flexible, built on springs. Because every situation, every brief, every requirement, every business opportunity is going to be unique, and therefore the co-creation experience needs to be unique."* (*PARTICIPANT G*)

The significance of this notion is in shaping the analysis approach to build a holistic understanding of the co-creation factors, by mobilising the knowledge across the data set as a whole, rather than seeking to find replication from participant to participant. This is done by summarising the key findings in respect to the co-creation factors. The aim of this was to filter and refine the explanation and understanding of the co-creation factors. This results in a deeper knowledge of how and why each co-creation factor is relevant in the research context. The results are demonstrated in expanded taxonomies of co-creation factors.

5.2.3.1   Taxonomy of driving factors

Brand Perspective Analysis

This section outlines the expanded taxonomy of brand driving factors resulting from the research findings (validated factors and additional factors). It provides a summary of the key findings and learning points alongside each factor. This provides a deeper insight into how and why each factor is relevant in an NPD context, outlining specific impacts on NPD and considerations given to the design of the co-creation experience to promote these factors. Effectively, this builds explanations derived from the relevant information across the data set, mobilising the knowledge of all interview participants to deliver a holistic taxonomy of co-creation factors.

Tables 5.6 to 5.10 (overleaf) display the expanded taxonomy of driving factors, summarising the key sentiments expressed across the data in respect to each driving factor. A rich explanation of each factor is apparent based on the responses of the interviewees (*Participants A-N*). This presents a vital foundation, underpinning a key aspect of the conceptual framework and enriching the knowledge base on which the conceptual framework is built.

Table 5.6: Brand driving factors BD: 1-3

Driving Factor	Explanation of Factor
BD 1: Virtually costless acquisition of consumer ideas	• Creativity comes from consumers, brands don't have to pay for volume, only winning ideas • The power of what consumers are willing to do on behalf of a brand is a great tool. In some circumstances, brands don't have to pay consumers or do anything beyond just being authentic • Consumers deliver a greater impact at a fraction of the cost • Ideas are cheap and meaningless, there is an infinite number of them • Insights gained through co-creation can be leveraged across projects and categories
BD 2: Outsourcing of NPD efforts	• Brands can brief consumers directly to develop product mock ups and marketing solutions • Creative consumers can be considered an extension of the marketing team • Cut out marketing agencies, substitute traditional research with co-creation • Co-creation is not limited just to product development, co-create the brand and strategy • Send product concepts out to consumers for enhancement, refinement and improvement • Continuously test and get feedback with consumers
BD 3: Greater solution information	• People in the organisation are not necessarily more creative than those outside of it • Consumers can know the business better than the employees and be experts in a category (the street knows something the brand doesn't) • Traditional market research data is like looking in a rear view mirror, go out and ask people, understand their purchase and consumption decisions, co-creation can reveal insights/problem states that traditional research doesn't • Iterate and fine tune concepts with consumers, maintain a close relationship between consumers and the brand so they constantly challenge and provide insight • Consumers might not articulate what the next product will look like, but they can give the parameters of what it needs to do • The more data brands have to understand consumers, the quicker they can design products and services that are going to achieve a particular objective • Consumer feedback is unadulterated feedback • Co-creation with influencers leads to developing key insights and a knowledge of the target market • Co-creation puts consumers at the heart of innovation. Brands can understand their problems much better, co-creation is the perfect way of getting it straight from the horse's mouth • The volume, depth and diversity of concepts is by far larger than other traditional methods • Online co-creation provides volume, diversity and richness in graphical assets. It gives the consumer more ways of expression, not only in a verbal form • Co-creation gives fresh ideas from the outside world, the organisation can then leverage their internal expertise • Consumers have different creative mind-sets – they're not restricted. Diversity of perspectives and skills strengthens the NPD process • Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts

Table 5.7: Brand driving factors, BD: 4-7

Driving Factor	Explanation of Factor
BD 4: Reduced risk of product failure	• Co-create throughout NPD to get consumer feedback, get consumers to vote on concepts, iterate and validate to make sure products meet their expectations. This gives brands leading indicators as to whether the product is going to be successful • Co-creation delivers more effective products overall, brands get early feedback and reduce the risk of failure • There has been compression in the time that a product has a competitive advantage, brands have to get it right from the start (have the right data) • Stay close with consumers to lower the risk when launching products • Embrace co-creation and a failing-fast mind-set, this stops the brand pursuing unsuitable product concepts • Brands avoid the pitfalls of making assumptions, co-creation removes uncertainty, reduces internal conflict and waste of resources • Co-created products are more credible to potential end-users, the consumer has co-developed them
BD 5: Leagile manufacturing	• The net effect is higher efficiency, brands are able to move fast with self-validated (consumer led) concepts • Brands can test and learn right up until launch, the test and learn approach and richness of information can remove traditional NPD stages • Co-creation allows the brand to be responsive, actively listen, create forums, create experiences with people, and from that change as and when needed quicker • Co-creation gives the answer to the brands problem, but you a lot of other answers. The insights and databanks created through co-creation can be leveraged across categories and brands • Brands can leverage internal resources and know-how to pursue a co-created concept from idea to launch state • Brands are able to innovate and gain first mover advantages with limited resources and time
BD 6: Faster speed-to-market	• Co-creation can have a net effect on efficiency. Involving consumers saves time and money, the brand is much more efficient in bringing something to market that people actually want • Brands can access huge amounts of data in a short time period • The test and learn approach and iteration gives instant feedback and can remove a validation gating stage • Co-creation done well reduces the risk of going down blind allies, the NPD process is better, faster and cheaper • The more data that brands have to understand consumers, the quicker they can design products and services that are going to achieve the particular objective • The collaboration aspect of co-creation is vital, this boosts the which brands move, and the agility with which they need to build in today's environment • Social media platforms significantly speed up the requirements building phase • Brands now have the ability to create communities very rapidly, and get feedback from those communities • Co-creation empowers the internal team; everyone is in agreement and moving in the same direction. The product is going to get to launch quicker • Co-creation negates the need for pivots in NPD
BD 7: Greater consumer understanding of NPD process	• Briefing consumers on the requirements of an NPD project educates them and enlarges their skillset • As consumers are directly involved, they are likely to support the process/results and take joint ownership of the outcome • The consumer understands that the brand is doing all they can to create an offer that truly matches the customer's needs and wishes

Table 5.8: Brand driving factors BD: 8-12

Driving Factor	Explanation of Factor
BD 8: Adjustments of consumer preferences	• The consumer target has become much more diffuse, it's no longer structured by simple demographics, so there is a lot more fragmentation and personalisation going on, brands have to adapt through co-creation • Co-creation can be used in repositioning products to make them more appealing to everyone • Co-create products and experiences to make the brand relevant to your consumer target • Educate confused consumers through involving them in the NPD process, they will adjust their preferences • Co-create with product dissenters to produce products that meet their needs
BD 9: Better appreciation of the product	• Co-created products are geared towards a specific group because they have designed them with the brand • If brands involve consumers more, they're going to buy the brand's products more • Bringing consumers on the NPD journey early creates strong advocates • Co-creation brings consumers close to the core of the propositions that are offered to them, they are involved in making the products respond to their needs • Co-creation creates loyalty, engagement and willingness to buy
BD 10: Strengthening of brand-consumer relationship	• Co-creation's purpose is to build a stronger connection between brand and consumer (meaningful two-way relationship) • By involving the consumer to the absolute maximum, brands maximise the affinity that the consumer has with the brand, this can result in a competitive advantage/strategic benefit • Co-creation is about building a community around a brand or product • Bringing consumers on the NPD journey early and co-creating throughout the product lifecycle builds the brand's advocacy reach • Co-creators have a sense of satisfaction of being involved in the development, they look on with pride, at the brand or product being successful because they have had a hand in it • Co-creation allows organisations to develop a better brand that is relevant for consumers and creates more loyalty • Interactivity is the new vector of innovation for the brand
BD 11: Positive attitudes toward the product	• By involving the consumer to the absolute maximum, brands maximise the affinity that the consumer has with a brand • Delivering co-created products and experiences can dramatically improve brand KPIs as products link to experiences and expectations • Co-creation creates a marketing and resonance advantage • Brands experience a boost when launching co-created products • Co-creators have a sense of satisfaction of being involved in the development, they look on with pride, at the brand or product being successful because they have had a hand it • Bringing consumers on the NPD journey early and co-creating throughout the product lifecycle builds advocacy reach
BD 12: Post launch gains	• The net effect is higher efficiency • Co-creation leads to consumers not only choosing a brand but actively advocating the brand • Co-creation boosts marketing, word of mouth, brand loyalty and customer loyalty • Advocacy reach is crucial once the product is launched

Table 5.9: Brand driving factors BD: 13-16

Driving Factor	Explanation of Factor
BD 13: Closer market fit	• The product itself is going to be absolutely geared towards a specific group because they have designed it with the brand • Co-created products are more credible to potential end-users, because they have co-developed them • Key insights gained through co-creation ensure the brand is thinking much deeper in terms of how the product will fit their consumer lives • Co-created products are linked to consumers perceptions and expectations • Staying close with consumers allows the brand to sense check, select the strongest concepts and fix functions and features problems • Iteration allows the brand to fine tune, understand how the product will be used and customise the experience
BD 14: Higher commercial potential	• Co-created communications campaigns can be more powerful than those from traditional agencies (co-created ads can go viral) • If brands give consumers an experience or the opportunity to tell stories, that's really powerful marketing • Co-creation allows brands to get true consumer pull • Co-creators become early adopters and then became advocates • Co-created products are highly attractive for the consumer as they have worked to get the results and have been involved in every major decision • Consumers will be aware of the value proposition before the results are even tangible • Co-creation leads to consumers not only choosing a brand but actively advocating the brand. This is the strongest, most powerful form of advertising • Complete co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics
BD 15: High expectations and novelty	• The advocacy reach brands can gain from co-creation is something they can't buy • Co-created products are highly attractive for the consumer as they have worked to get the results and have been involved in every major decision • Co-creation creates a marketing and resonance advantage • As words spreads (WOM) the brand will experience a 'boost' when introducing the offering to the market • Co-creating the experience delivers significant value • Consumers will be aware of the value proposition before the results are even tangible. Co-creation 'pre-markets' the product
BD 16: Resource Impact	• Co-creation is more cost-effective; brands can cut out marketing agencies and brief consumers directly • The creativity is coming from the consumer and of course the consumer does not expect to get paid as much • Instead of spending 'millions of dollars' on traditional research, go out and really research consumers • The cost of co-creation has come down because of new technologies, crowdsourcing technologies, open source, etc. • Traditionally an enormous amount of resources (time, money, manpower) are wasted. Co-creation in the long run gives a more efficient outcome quicker • Co-creation allows avoiding making wrong decisions based on assumptions, avoids the unnecessary waste of time, money and energy that can lead to conflicts and an outcome that is not fully supported by the intended user groups • The insights and databanks created through co-creation can be leveraged across categories and brands • Co-creation maximises the brand's ROI in NPD • Brands are able to innovate and gain first mover advantages with limited resources and time • The complete co-creative process is effective and efficient on a resource level, co-creating with a group of consumers can reduce the costs of having to create prototypes over and over again • High quality consumer contributions can be used for prototypes. This is faster, cheaper and powerful • Brands can flex their spend on traditional media, co-creation gives them a powerful form of advertising

Table 5.10: Brand driving factors BD: 17-19

Driving Factor	Explanation of Factor
BD 17: Internal empowerment	• Brands are now much closer to consumers or to target groups than ever before, that really has a huge benefit to fire up the organisation • Internal teams become much more collaborative, direct communication with consumers puts everybody on the same page • Brands have diverse groups internally (e.g. technical, marketing, R&D). Consumer feedback allows everybody within the organisation to come to agreement quicker • True co-creation is highly motivating. From the start it is clear how stakeholders will be organised and every participant will have the same mission and vision • Co-creation provides internal alignment/empowerment, reduces time wasted on discussion/debates • Co-creation helps R&D to immerse and orientate itself in the consumers' world (align consumer input with the various strategic functions involved in NPD) • Complete co-creation guarantees a broad support among the stakeholders, since they are directly involved
BD 18: New experience development	• Brands should seek to own relevant cultural territories and link this to the brand, this is a good enabler of co-creation • Co-creation is the next evolution of marketing. It has transitioned to digital and experience marketing • Social media is important in involving consumers in the brand experience, e.g. a participatory social media campaign • The experience really matters – it matters more than price and function and features. The consumer experience matters so much in addition to the product that companies absolutely have to move to a co-creation type of environment • To get the experience right, brands really need to understand how consumers are engaging both with the products and the business processes. This involves interacting with consumers about this continual experience reengineering, which is a very outside-in reengineering • More and more of the value is moving toward the experience, experience has to be designed to understand what a consumer's experience expectations are • The product should not be developed in isolation, the brand concept around the product, has to be developed at the same time • The integration of product and experience development and delivery at the same time is really fundamental • Customisation issue is the next stage of co-creation. Brands co-create customisable products and experiences
BD 19: Limitations of traditional methods	• Co-creation has disrupted the whole former method of marketing, consumers know see that it is their right to be involved in NPD • Co-creation is an unstoppable evolution of marketing. Traditional methods are not redundant, but brands have to build, stretch, and push the limits because the relationship between the brand and consumer has changed • Traditional market research is very much like looking in a rear view mirror, traditional market research gives you insights filtered by one-way glass mirrors • Categories are colliding, need states are blurred, the traditional way of analysing and understanding the marketplace has literally gone out of the window • There's a failure culture (products) and resource constraints forcing companies to think smarter, simpler, and quicker ways of testing the market for new ideas • The consumer target is much more diffuse, it's no longer structured by simple demographics. There is a lot more fragmentation and personalisation going on • The product and experience have to be built in parallel, organisations have to figure out how to align a much closer relationship between R&D and the experience delivery aspects of product launch going forward • The world has shifted; 'The methods of the past got us to where we are but they're not going to get us to where we're going' • Classic methodologies are slow • Organisations think within their border of limitations • If you wait for market research data, it can take 3-5 months. Social media allows brands to instantly connect with masses of consumers • Traditional marketing and advertising is a sea of sameness. Co-creation provides a fresh approach

Tables 5.6 to 5.10 outline the updated taxonomy of driving factors as a result of the findings from the analysis. An explanation of each factor is built through summarising the key talking points across the data set. This approach provides a profound knowledge of the relevance, nature and characteristics of each driving factor in the research context. This is particularly valuable in not only identifying and explaining each driving factor, but in elucidating how each factor aligns and impacts with the activities associated with NPD.

The expanded taxonomy of driving factors provides an in-depth knowledge of the factors brands should seek to promote through the design of the co-creation experience. Tables 5.6 to 5.10 are valuable in describing the impact of each driving factor, how the co-creation experience can be designed to promote each factor and the underlying reasons as to how and why each driving factor is relevant in the research context. This is a key contribution to resolving the co-creation-NPD relationship and provides a vital underpinning to the design of effective co-creation experiences.

5.2.3.2   *Taxonomy of inhibiting factors*

Tables 5.11 to 5.14 outline the expanded taxonomy of brand inhibiting factors, resulting from the research findings. This includes factors from the literature validated through the analysis, and additional emerging factors. The key findings and learning points are summarised alongside each factor. This provides a deeper insight into the factors that the design of an effective co-creation project should seek to circumvent or minimise. In order to guide this, a rich explanation of how and why each factor is relevant in an NPD context is apparent. This details the potential impact of a poorly designed co-creation experience or the risks brands should be aware of when considering co-creation. This is built by collectively summarising the relevant information the data set, presenting the key findings in respect to the brand inhibiting factors.

Table 5.11: Brand inhibiting factors, BI: 1-4

Inhibiting Factor	Explanation of Factor
BI 1: Diminished control over brand's strategic management and planning	• Brands can lose control over the direction of their NPD projects. Collaborating with consumers can make the brand look weaker, and in turn their product offerings look weaker • Brands sometimes adopt the mind-set that they can do everything themselves and must manage every part of the NPD lifecycle • If co-creation is very open and exploratory in the early stages, it might trigger a change of strategy • As a brand grows, they are less inclined to share their strategy, For instance consumers are unable to engage in a strategy in three years' time for instance • Asking the consumer what the brand should do next, is too big of a question to ask. It can negatively impact the NPD direction • At the beginning of the NPD funnel, consumers are likely to put forward ideas that are off strategy
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• Co-creation can increase complexity of the NPD process because of all the internal debates, discussions and barriers, it may require some internal reorganisation • Co-creation requires brands to involve more people than they would traditionally, this can add more complexity and confusion • Brands can be organised poorly to adopt a co-creation approach, it's rare that marketing, distribution, and post service functions come together to design an end-to-end product • Opening the NPD process requires restructuring/management of more stakeholder perspectives • Co-creation can slow down the NPD lifecycle. Brands who are trying to be nimble/agile and deliver an offering faster than their competition are wary of this (i.e. going from ideation to commercialisation) • Complete co-creation is the most complex way of doing any type of product development • To continuously involve people requires empathy, knowledge, experience with different ways of thinking, understanding of different tools • Effective co-creation requires a proper structure and project management
BI 3: Coordination requirements, constraints and other non-monetary costs	• Co-creation can be more complex to arrange compared to traditional methods. Iterative co-creation is time hungry • Co-creation requires a more complex methodology in terms of involving different consumers at different stages of the product lifecycle • The brand risks getting into contractual disputes over Intellectual Property • People within the brand may not possess the skills to collaborate and communicate with consumers • Co-creation can be another step in the NPD process, therefore another cost, and adding more time • Co-creation for smaller brands can incur significant costs as they don't have the headcount to manage the complex process • Face-to-face co-creation with consumers can be very time consuming
BI 4: Infeasibility of product ideas	• A lot of consumers' ideas are completely unrealistic • Consumers do not possess the experience that the brand has developed over time in the industry • Consumers rarely come up with new ideas, they don't have the technical know-how • Consumers may come up with ideas that the brand can't produce in their factory

Table 5.12: Brand inhibiting factors, BI: 5-11

Inhibiting Factor	Explanation of Factor
BI 5: Consumer heterogeneity	• Co-creation doesn't work just by reaching out to a mass audience, the brand needs a deep understanding of their target consumer • Brands often fail by asking the wrong people or asking too few consumers • The brand must be able to target and recruit the right consumers (early adopters, target consumers, consumers who can articulate their needs) • The co-creation platform is only as good as the people who use it and the community that are attracted to it. If they are not target consumers, the co-creation effort is likely to fail • Sometimes consumers are not even aware of their own biases and their own choices • Consumers are unable to articulate their future needs • If a brand opens up their NPD process to consumers, they can almost get too much feedback, consumers all want different things
BI 6: Asymmetrical effects	• Consumers may not have a vested interest in the project, brands can only keep their attention for a limited period • If the co-creation experience is not designed properly, the minute co-creation becomes hard for a consumer, they lose interest and the brand does not get the value from them
BI 7: Conflicting preferred outcomes	• A tension exists between operational efficiency and proactive consumer sovereignty
BI 8: Consumers as competitors	• Brands have to ensure co-creators are not working for the competition
BI 9: Information overload	• It is costly, time hungry and complex to filter consumer information • Input from consumers can be a significant body of data, there's a limit to how many co-creators a brand can handle • Brands may struggle to identify what they are looking for, how do they know if it's the right data • An effective process is required to digest and interpret the data
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• Consumers may say things they don't really mean, they may tell the brand what they think they want to hear • Sometimes consumers are not even aware of their own biases and their own choices • The brand must understand which parts of consumer feedback to listen to and which to ignore • Henry Ford once said *"If I had asked people what they wanted, they would have said faster horses"* (Harvard Business Review, 2011) • You can't give consumers a 'blank sheet of paper' to create solutions, they don't have the technological knowledge • Consumers can be confused about what they do or do not want, they're not educated in how to make a brand a success • Consumers may not always deliver very polished ideas • Consumers may not have the capacity to imagine what a future product may be
BI 11: Concerns about secrecy	• To ensure secrecy, the brand must get consumers to sign NDAs • You have to ensure co-creators are not working for the competition • The brand is at a risk of IP stealing, brands may not want to socialise good ideas • There is a risk of wholesale stealing, a commercial paranoia exists • Transparency in co-creation can be a competitive threat

Table 5.13: Brand inhibiting factors, BI: 12-14

Inhibiting Factor	Explanation of Factor
BI 12: Ownership of intellectual property	• Brands do not like to share IP, this can cause a deep-seated fear or concern • The intellectual property framework can cause problems, brands can create good contractual contracts to assign rights to mitigate risk, but sometimes it not enough • There is a deep-seated fear or concern around intellectual property • IP is harder to secure through online co-creation, co-creation efforts are very visible
BI 13: Risk of retaliation and defection	• Brands have to ensure co-creators are not working for the competition, the brand must incentivise them to release all rights • Brands are fearful of letting good ideas that they are socialising getting into the hands of the competition, through social media or through consumer groups
BI 14: Culture	• Senior management may see co-creation as an add-on because they have no experience in it • Senior marketers may see co-creation as a risk, people are afraid to take a risk as it can lead to them losing their job • People within organisations feel threatened by new forms of marketing, they can be stuck in a traditional mind-set • Brands sometimes view co-creation as an afterthought, or a bit of a buzz word, they don't do it authentically • There can be an inherent arrogance that brands know their products better than the consumers. The internal team can become blinded in their organisation and make assumptions on product characteristics • People are often slow to take on new methodologies, the lack of tangible proof that co-creation is effective means that people resist it • Early co-creation efforts must deliver results quickly, failed co-creation projects inhibit co-creation being embedded in a brand's culture • People have not been taught co-creation, it can be difficult to transition to new things and accept that this is the way the world is going • To embed co-creation within the culture of a brand can take time • Senior management must buy into co-creation, this will then spread across the whole organisation, and those lower down will have access to the required resources • Value is increasingly moving towards experience, this is really a hard message for most R&D engineers • It can be tough to have people buy-in to the process (internally). In order to collaborate, brands need people from different strategic functions with different expertise to commit to the project • People within the brand often have an ego, the degree of co-creation is a question of personal culture and organisational culture, the difficulty in co-creating does not surround the tools or the methods, it is psychological

Table 5.14: Brand inhibiting factors, BI: 15-17

Inhibiting Factor	Explanation of Factor
BI 15: Lack of co-creation methodologies	• Co-creation is in its infancy, it's in a renaissance stage, no one has an extensive knowledge of co-creation • There can be a learning curve for brands that have never co-created before, it's quite a big transformation of the whole marketing model, it can be quite risky • Every co-creation project differs; you can never get it right. It differs from brand to brand where co-creation adds value • Co-creation is very new, large organisations may find it hard to transition their IM approach • The co-creation literature is very generic, each project differs and the co-creation approach needs to be flexible and built on springs • Co-creation experiences must designed with a clear brief of the product, you need to understand what the requirements of the project are, the direction, the resources and where consumers can add value, otherwise the project can fail
BI 16: Resource impact	• Co-creation can cause confusion and therefore more time and cost, co-creation can be seen as an additional and extensive step in the NPD process • Filtering and making sense of the information from co-creation is expensive • You can co-create in prototype development but it's a very expensive part of the process • You have to redistribute your resources, there is a greater emphasis on building both the product and experience in tandem • Early stage co-creation can be expensive • Consumers expect financial rewards, it is vital to incentivise your target consumers so your sample is effective • Face-to-face (qualitative) co-creation is very resource heavy • The organisations may need to make an investment in a web platform (online co-creation) • Adopting a co-creation approach can impact in terms of resources, time, money, costs, and other types of pressures
BI 17: Impact on organisational structure	• Co-creation can impact organisational structure, different strategic functions must work together, organisations can be poorly arranged to do this • Some brands are ultimately being driven by their operations teams. It's really the plant efficiency that's driving the innovation agenda • Brands don't want to talk to consumers about something the consumer may want, that they can't produce in their factory • Brands are used to a certain process, which is their methodology of arriving at either successful communication or product • Organisations might have to adapt their processes to be more collaborative, this requires a very different mind-set when you introduce a co-creation approach

Tables 5.11 to 5.14 outline the expanded taxonomy of inhibiting factors as a result of the findings from the analysis. This provides a summary of the key findings in respect to the potential costs/risks brands face when implementing a co-creation approach in NPD. The varying attitudes of the interview participants in respect to the inhibiting factors, coupled with the rich explanations in Tables 5.11 to 5.14, underline the significance of the design of the co-creation experience in minimising inhibiting factors. The findings in Tables 5.11 to 5.14 essentially illustrate how and why an ineffective design of co-creation experiences can negatively impact co-creation from the brand perspective. This completes the validation and expansion of the co-creation factors from the brand perspective and is a vital contribution to a key construct of the conceptual framework.

5.2.3.3 *Summary of co-creation factors*

The expanded taxonomies of driving and inhibiting factors significantly contribute to the knowledge on which the conceptual framework is built. This is achieved through building a greater fundamental understanding of the driving and inhibiting factors and identifying additional factors that emerged from the data analysis. This is a major step in resolving the co-creation-NPD relationship, and is of particular significance in respect to designing effective co-creation experiences to foster a complete co-creation approach. The expanded taxonomies contribute an in-depth knowledge of the factors brands should seek to promote and reduce through the design of the co-creation experience.

Tables 5.6 to 5.14 are valuable in describing the impact of each co-creation factor, how the co-creation experience can be designed to promote or mitigate each factor, and the underlying reasons as to how and why each co-creation factor is relevant in the research context. In order to design effective co-creation experiences, the requirements or goals of a specific NPD project can be examined against the co-creation factors to ensure a synergy is achieved, promoting driving factors and reducing inhibiting factors. This is significant in ensuring the brands (or the brand perspective) are motivated to co-create throughout the NPD lifecycle in line with a complete co-creation approach.

Defining and building an understanding of the co-creation factors was vital as a first step in promoting a complete co-creation approach. In order to further explore this aspect of the conceptual framework, it is important to examine the taxonomies of co-

creation factors against the stages of the NPD lifecycle. A key assumption underpinning the discussion in Chapter 3, the design of the conceptual framework and the research to this point, is that the co-creation factors are likely to vary across the NPD lifecycle. Each stage of the NPD lifecycle categorises a unique set of requirements and activities. Accordingly, the co-creation factors are likely to vary in line with this.

The initial research shaping this derives from the examples of co-creation (Chapter 3), where a clear trend of brands co-creating at select stages of the NPD lifecycle was apparent. This shaped the view that it is more challenging to implement a co-creation approach or design effective co-creation experiences at certain stages of NPD. In order to maximise the high-level impact of co-creation on NPD, a complete co-creation approach must be implemented through intense collaboration across all stages of the NPD lifecycle. Consequently, it is important to explore this aspect of the research through the research findings. The following sections build on the findings to this point, by examining the taxonomies of co-creation factors against the NPD lifecycle.

5.2.4 Co-creation Factors across the NPD Lifecycle

The conceptual framework (Chapter 3) illustrates the six stages of NPD (upfront homework, ideation, feasibility, development, testing and launch) that are used to define the NPD lifecycle in the context of this research. The review of the literature (Chapter 2) outlines the unique nature of each NPD stage, with each stage based on differing objectives and underpinned by various activities. The six stages of NPD provide the parameters on which to measure a complete co-creation approach. In the context of this research, complete co-creation is apparent when co-creation occurs at each stage of the NPD lifecycle.

Co-creation experiences must be designed in line with the respective objectives and activities that underpin each stage of NPD to ensure that a positive impact is delivered on the NPD lifecycle as a whole. From the brand perspective, it is vital to ensure that the design of the co-creation experience delivers a positive trade-off of co-creation factors at each stage of NPD to promote a complete co-creation approach. This stage of analysis seeks to explore the significance of the co-creation factors across the NPD lifecycle, with the aim to deliver a greater knowledge of the most significant co-creation factors at each stage of NPD. This represents a deeper analysis of the co-

creation-NPD relationship and aims to provide even greater guidance in the design of effective co-creation experiences.

This research seeks to narrow the gap between theory and practice. In a real world scenario, a co-creation project and the factors that underpin it are unlikely to behave rationally. The purpose of this analysis is to examine the possible set of relationships between the co-creation factors and stages of NPD based on the perspective of the interview participants. This is valuable in contributing a greater knowledge of the co-creation-NPD relationship across the NPD lifecycle in real-life NPD scenarios. Overall, the emphasis was on understanding which co-creation factors are most pertinent at each stage of NPD. Particular attention was given to the responses of the interview participants when discussing the differing nature of each stage of the NPD lifecycle and the relevance of the co-creation factors in line with this. The aim of this is to build a holistic knowledge of the possible scenarios that brands may face when adopting a co-creation approach.

This approach firstly focuses on the driving factors across the NPD lifecycle, and following this the inhibiting factors. The expanded taxonomies of co-creation factors and the six stages of NPD provided the parameters on which to conduct this analysis. The responses from each participant were examined against these parameters, with the aim to identify and understand the set of relationships between the co-creation factors and the stages of the NPD lifecycle. To build a holistic knowledge of the possible set of relationships between the co-creation factors and the NPD lifecycle, the responses of each participant were initially analysed separately. Emphasis was placed on the qualitative explanation of how and why a co-creation factor assumed significance at a given stage of NPD.

Following this, the collective findings were used to derive analytic generalisations, building a set of potential relationships between the co-creation factors and the NPD lifecycle as a whole. This combines the collective findings of this aspect of the research to outline the potential co-creation-NPD scenarios a brand may face. The following section provides examples of the template used in analysing the perspective of each interview participant in respect to the significance of the driving and inhibiting factors across the NPD lifecycle.

5.2.4.1 Co-creation factors across the NPD lifecycle: Individual participant analysis template (PARTICIPANT A)

To identify and understand the set of relationships between the co-creation factors and the stages of the NPD lifecycle, the relevant content is analysed for each interviewee in two-dimensional matrixes. These are built from the parameters of the driving factors, inhibiting factors and the stages of the NPD lifecycle. Tables 5.15 and 5.16 (driving factors) and 5.17 (inhibiting factors) overleaf, display examples of the template used in the analysis of each participant's responses.

Tables 5.15 to 5.17 identify the relationships between the NPD lifecycle and the co-creation factors resulting from the analysis of the responses of *PARTICIPANT A*. The rows in the tables represent the co-creation factors, whilst the columns are representative of the stages of the NPD lifecycle. Any factors not mentioned in respect to a certain stage of NPD were omitted. In some cases, the explanation of a co-creation factor related to multiple stages, or the whole NPD lifecycle. For instance *BD 18: New Experience Development* (Table 5.16) was discussed in respect to a complete approach to co-creation. *PARTICIPANT A* stated that brands should develop the product, brand concept, the messaging and experience in tandem. The impact of this factor was not limited to a specific stage and it was deemed that brands should co-create across all stages of NPD to boost this driver. Accordingly, *BD 18: New Experience Development* is separated into two rows. One to include the discussion of the factor that spans multiple stages of NPD, and one to summarise the explanation of the factor in respect to specific stages of NPD (see Table 5.16).

Table 5.15 Driving factors across the NPD lifecycle (PARTICIPANT A)

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 1: Virtually costless acquisition of consumer ideas		- Consumers ideas are winning ideas, they give richness and diversity for free	- Consumers can come up with solutions driven by their vision of what they want the product and brand to do			
BD 2: Outsourcing of NPD efforts			- Consumers vote/ comment on ideas - Interact with consumers to refine product characterises	- Consumers submit designs and early stage prototypes		- Brief consumers to visually express their interpretation of a marketing brief - Co-create the positioning/ communications campaign
BD 3: Greater solution information	- Co-create from the beginning of the brand definition/strategic positioning - Recruit influencers to develop insights - Co-creation allows a clear definition of the target consumers	- Consumers submit product ideas	- Consumers challenge R&D to develop the best solutions (out of the box thinking)	- Consumer submit designs and early stage prototypes	- Co-creation allows the brand to improve the product develop the strongest solution - Co-creation provides open feedback	
BD 4: Reduced risk of product failure			- Consumers vote on product concepts - Co-creation allows quantitative feedback in terms of which concepts are strongest	-Consumers vote and comment on product designs - Co-creation allows brands to fine-tune broad product concepts, sense check and fine-tune the prototypes	- Co-creation ensures the strongest concepts reach the testing stage	
BD 6: Faster speed-to-market					- Complete co-creation can remove the need for traditional testing	

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Table 5.16 Driving factors across the NPD lifecycle (PARTICIPANT A)

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 7: Greater consumer understanding of NPD process						- Educate consumers to co-create marketing campaigns
BD 11: Positive attitudes toward the product						- Consumers not only choose a brand but actively advocate a brand
BD 13: Closer market fit			- Interact with consumers to develop and fine tune concepts	- Fine tune prototypes and product characteristics with consumers	- Market research has evolved into a co-creation platform - Co-creation allows brands to sense-check and decide on the strongest concepts	
BD 14: Higher commercial potential						- Consumers not only choose a brand but actively advocate a brand - Co-creation is the strongest most powerful form of advertising
BD 15: High expectations and novelty						- Co-creation increases the likelihood of them buying products - Co-creation creates affinity and advocacy towards the brand
BD 17: Internal empowerment				- Invite consumers in to speak to R&D and other functions and develop ideas further		
BD 18: New experience development		- Link cultural spheres to co-creation projects (submit your designs,)	- Link cultural spheres to co-creation projects (vote on designs)			
	- Develop the product and brand concept, the messaging and experience in tandem					

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Table 5.17 Inhibiting factors across the NPD lifecycle (PARTICIPANT A)

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	- Co-creation can increase complexity because of all the internal debates discussions and barriers					
BI 3: Coordination requirements, constraints and other non-monetary costs						- Co-creation can be more complex to arrange compared to just briefing an agency
	- Co-creation requires a more complex methodology in terms of involving different consumers at different stages of the NPD lifecycle					
BI 4: Infeasibility of product ideas		- A lot of consumer ideas are unrealistic				
BI 5: Consumer heterogeneity	- It is difficult to 100% know the brand's target consumer, this makes targeting co-creators difficult					
BI 8: Consumers as competitors				- Ensure co-creators are not working for the competition		
BI 11: Concerns about secrecy				- Get consumers to sign away all rights in terms IP		
BI 12: Ownership of intellectual property				-Get consumers to sign away all rights in terms IP		
BI 13: Risk of retaliation and defection				- Ensure co-creators are not working for the competition		
BI 14: Culture	- Senior marketers may see co-creation as a risk, they might feel worried about losing their jobs - Senior marketers who have never done co-creation before may be afraid of newness, they have no experience in it - People within organisations feel threatened by new forms of marketing - People stuck in an old mind-set, need to be trained or replaced					
BI 15: Lack of co-creation methodologies	-No one has an extensive knowledge of co-creation because it's still in its infancy -There can be a learning curve for organisations that have never co-created before, it's quite a big transformation of the whole marketing model -Co-creation experiences must designed with a clear brief of the product, it would inhibit if you don't have a really clear brief or scope					

Tables 5.15 to 5.17 display the analysis template used in identifying the set of relationships between the co-creation factors and the stages of the NPD lifecycle. The responses *of PARTICIPANT A* are used as an example. This approach identifies the set of relationships between the co-creation factors and each stage of the NPD lifecycle from the perspective of each interview participant. The results also summarise the key talking points of how and why a co-creation factor assumes significance at a given stage of NPD.

This is valuable in building on the expanded taxonomies of co-creation factors and exploring the co-creation-NPD relationship in greater depth. In respect to the design of co-creation experiences, this provides an early insight into what the potential driving and inhibiting factors are at each stage of NPD and how and why they manifest in context. This is vital in firstly resolving the co-creation-NPD relationship, and also building an explanation of how and why the co-creation factors vary across the NPD lifecycle. This approach was replicated for each interview participant. The following section provides a summary of the research findings in respect to the data set as a whole.

5.2.4.2 Summary of co-creation factors across the NPD lifecycle (PARTICIPANTS A-N)

A key aim of this stage of the analysis was to deliver a holistic understanding of the potential co-creation-NPD scenarios that brands might face. This was achieved by examining the data set as a whole, to firstly build a total set of relationships, and then to develop a greater understanding of each relationship (i.e. how and why each co-creation factor assumes significance at a given stage of NPD).

Identifying the relationships was done by examining the reactions to each co-creation factor at a given stage of NPD. The nature of in-depth interviews meant that when co-creation factors were linked with specific stages of NPD, the researcher was able to probe for an explanation as to how and why the co-creation factor was relevant. This is used in building the understanding of the relationships between the co-creation factors and NPD lifecycle, summarising the relevant explanation of each co-creation factor across the stages of NPD.

This approach mobilises the knowledge of multiple subject matter experts, who have co-created on multiple NPD projects in multiple brands. The value of this is in building an understanding of the potential relationships that exist in the research context.

Through this, the possible co-creation-NPD scenarios are evident. The in-depth discussion of each factor provides an understanding of how and why a brand may experience a given co-creation factor in respect to their NPD lifecycle. Building this holistic knowledge equips the brand perspective with the information to design a co-creation experience to promote driving factors and reduce inhibiting factors.

Tables 5.18 to 5.19 (overleaf) provide frequency counts of the total number of interview participants mentioning the driving factors (Table 5.18) and inhibiting factors (Table 5.19) at each stage of NPD. This enumerates the set of relationships identified between the co-creation factors and stages of NPD, and summarises the results of the individual analysis. One mention signifies one interview participant identifying the significance of a co-creation factor at a particular stage of NPD. As the data set is built of 14 participants, the maximum number of mentions for a co-creation factor at a stage of NPD is 14. The purpose of Tables 5.18 and 5.19 are to summarise the results of the individual analyses as the first step in outlining the potential co-creation-NPD scenarios that brands face.

Tables 5.18 and 5.19 clearly illustrate the varying significance of the co-creation factors across the NPD lifecycle. This is vital in confirming the notion that the brand co-creation factors vary in significance across the NPD lifecycle and the co-creation experiences should be designed on this knowledge. This provides a likely reason as to why a complete co-creation approach is seldom evident. The varying significance of co-creation factors across the NPD lifecycle is likely to present a challenge to both the ability of brands to design effective co-creations and their motivation to do so. For instance, stages of NPD that are characterised by a high number of inhibiting factors, or where certain inhibiting factors are of particular significance are likely to present more of a challenge in the design of co-creation experiences.

This is the first step in identifying the set of relationships between the co-creation factors and the NPD lifecycle. Great attention was placed in not only identifying the relationships between NPD and the co-creation factors, but on the explanation of each factor at each respective stage in NPD. This not only allowed the researcher to identify the set of relationships, but also understand how each factor manifests in context and also how this impacts the actions that underpin each stage of NPD.

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Table 5.18: Summary of the driving factors across the NPD lifecycle (No. of mentions)

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
Virtually costless acquisition of consumer ideas	1	5	0	1	0	0
Outsourcing of NPD efforts	4	9	2	4	3	3
Greater solution information	13	13	10	9	7	5
Reduced risk of product failure	5	9	8	10	11	3
Leagile manufacturing	2	3	3	4	1	1
Faster speed-to-market	8	11	10	9	6	7
Greater consumer understanding of NPD process	0	0	0	1	1	1
Adjustments of consumer preferences	0	1	1	0	1	2
Better appreciation of the product	3	3	3	4	3	3
Strengthening of brand-consumer relationship	5	5	5	6	7	7
Positive attitudes toward the product	1	1	1	0	0	5
Post launch gains	1	1	1	2	1	5
Closer market fit	5	4	3	4	6	3
Higher commercial potential	3	4	3	3	3	7
High expectations and novelty	1	1	1	1	1	4
Resource impact	6	6	5	7	5	6
Internal empowerment	6	6	6	8	6	6
Experience development	2	2	2	3	2	2
Limitations of traditional methods	1	1	1	1	2	1

Table 5.19: Summary of the inhibiting factors across the NPD lifecycle

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
Diminished control over brand's strategic management and planning	2	1	0	0	0	0
Complexity of managing brand's objectives and interests of diverse stakeholders	5	5	6	6	6	5
Coordination requirements, constraints and other non-monetary costs	2	3	2	4	3	2
Infeasibility of product ideas	1	2	2	1	0	0
Consumer heterogeneity	3	3	3	0	0	0
Asymmetrical effects	1	1	1	1	1	1
Conflicting preferred outcomes	0	0	0	0	0	0
Consumers as competitors	0	0	0	1	0	0
Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	2	3	1	1	2	0
Information overload	1	2	1	1	0	0
Concerns about secrecy	1	1	1	2	0	0
Ownership of intellectual property	0	1	0	2	0	0
Risk of retaliation and defection	1	1	1	1	1	0
Culture	6	6	6	6	6	6
Lack of co-creation methodologies	9	9	9	9	9	9
Resource impact	1	3	3	4	3	2
Organisational structure	3	3	3	3	3	3

Tables 5.18 and 5.19 summarise the results of the analysis in regards to the co-creation factors across the NPD lifecycle. It is clear that based on the experiences of the subject matter experts, both the driving and inhibiting factors vary in significance across the stages of the NPD lifecycle. This validates a key assumption on which the design of the conceptual framework was based and confirms the need for the design of co-creation experiences to be tailored to each stage of NPD. This outlines the findings of the potential co-creation-NPD scenarios that brands may face in the research context. For instance, in considering the design of a co-creation experience in ideation, Tables 5.18 and 5.19 illustrate both the potential driving and inhibiting factors that are likely to exist at this stage. This is based on the perspective of subject matter experts who have experienced these factors in real-life NPD scenarios and can be used to inform the design of effective co-creation experiences.

In order to build a deeper knowledge of how and why the significance of the co-creation factors varies at each stage of NPD, the following section presents a summary of the key learning points in respect to the explanation of the co-creation factors across the NPD lifecycle.

5.2.4.3 Co-creation factors across the NPD lifecycle

This section seeks to build a greater understanding of how and why the co-creation factors differ in significance across the NPD lifecycle. This begins with a focus on the driving factors across the NPD lifecycle and then the inhibiting factors. In order to contribute a greater understanding, the key talking points are summarised in respect to the factors stressed as most significant at each stage of NPD. This includes identification of factors, and a discussion relating to how and why they assume significance at a given stage of NPD. The outcomes of this analysis are matrixes that summarise the set of relationships between the co-creation factors and the NPD lifecycle. This is built by combining the perspectives of the interview participants to build a holistic understanding of this aspect of the co-creation-NPD relationship.

5.2.4.3.1 Driving factors

The following discussion outlines the findings in respect to the most significant driving factors stressed at each stage of the NPD lifecycle.

Upfront homework: As the initial stage of the NPD lifecycle, the upfront homework stage seeks to build key insights, uncover need and problem states and develop a deep understanding of the target consumer. This knowledge is vital in providing a

clear direction for the subsequent stages of NPD and ensuring product solutions are developed in line with the needs of the market. The discussion of this stage of NPD in Chapter 2 highlights it as a very knowledge intensive stage, with a significant portion of relevant knowledge residing almost exclusively with the consumer.

In respect to the research findings, this can be seen by a high number of factor mentions (13 mentions) for *BD3: Greater solution information*. The interview participants shared the general view that brands should co-create with consumers as early as possible to produce products they truly want and need. In regards to solution information, the benefits of engaging, watching and listening to consumers to uncover problem states were widely discussed. Co-creation was regarded as an efficient way to access consumer knowledge, or integrate them into the NPD process early on to ensure a clear direction was maintained through the lifecycle.

In addition, and apparent across all stages of the NPD lifecycle, there was a focus on efficiency and in particularly *BD6: Faster speed to market.* Eight interviewees discussed this factor at this stage; co-creation was widely regarded as a way to develop key insights in a relatively short period of time. Co-creation was deemed to be far superior to traditional market research, in terms of the volume and depth of information it can deliver, and also the speed of execution. Accordingly, this emerged as a key driver at this stage and throughout the NPD lifecycle.

BD17: Internal empowerment was consistently mentioned across all stages of NPD. Six interviewees mentioned internal empowerment at this stage. This was in regard to providing the brand with knowledge on which to motivate and ensure everybody internally is working towards the same shared goal. In respect to upfront homework, early stage co-creation provides the foundations to develop a clear NPD direction and reduce uncertainty that can cause internal conflict.

Ideation: This embodies a very knowledge intensive stage, with the knowledge of what the market wants residing with the consumer. The NPD literature outlines the notion that brands should solicit ideas from all sources and any product concept should be considered regardless of the source. Consumers are regarded as being able to not only define or give the parameters of what a product idea should do, but also have the potential to submit valuable product ideas that those within the brand may not have considered.

As a result, this was signified by a high number of factor mentions (13 mentions) for *BD3: Greater solution information.* Consumer knowledge was described as 'out of the box' and 'fresh'. Co-creation at this stage was considered to not only deliver valuable ideas but also a high volume of ideas. As ideation represents the 'wide-end' of the NPD funnel, a volume of ideas is considered beneficial in exhausting all possible viewpoints for new products. In addition, the notion was widely expressed that consumers can be experts in a product category based on their experience, and sometimes know the products better than those within the brand. Consumers develop extensive knowledge through their day-to-day use of products within a category. Co-creation is effective in integrating the knowledge of those who are actually going to use the product (consumers) and can define their needs and the parameters of what a product should do.

Similarly*, BD2: Outsourcing of NPD efforts* was mentioned by nine interviewees for this stage. Consumers are seen as vital providers of product concepts and mock-ups. The value of these consumer-created concepts was widely stressed as consumer-led concepts directly tie in to their needs and expectations. This reiterates the fact that consumer can deliver ideas that those within brands may not consider, based on their knowledge of the product in use. Moreover, as consumers are not limited by the constraints faced by those within brands (i.e. hierarchy or groupthink) this provides a fresh perspective on NPD problems. Brands are able to open up the ideation stage of NPD to solicit ideas from consumers, reducing the need for an internal focus at this stage of NPD.

BD4: Reduced risk of product failure was mentioned by nine interviewees. The notion emerged that co-created concepts are self-validated as they are consumer-led, directly linking to the consumer's perceptions and expectations. Co-created concepts were seen to reach launch stage quicker and less likely to fail. As co-created ideas come 'straight from the horse's mouth', they are more likely to align with needs of consumers. This provides benefits both to the appropriateness and effectiveness of new product ideas, but also in respect to speed as ideas derived from consumer knowledge are more likely to test better and reach the latter stages of co-creation quicker. This notion was also discussed in respect to *BD17: Internal empowerment* (six mentions). This factor was regarded as reducing internal conflict by equipping the brand with consumer-led product concepts, and a deep understanding of the functions and features that consumers value.

BD6: Faster speed-to-market was amongst the highest number of factor mentions (11 mentions). In this case, the general view was proposed that brands are able to get a significant volume of product ideas in a relatively short period of time. The volume of ideas was widely recognised, but also the quality of consumer co-created concepts, especially when brands put to them some sort of stimulus or brief. Co-creation is considered to speed up both the requirements-building phase and the generation of ideas for product concepts. This is based on both the direct input of consumers and a deep knowledge of their needs through interaction and collaboration.

Feasibility*:* This stage is characterised by matching the internal capabilities of the brand with the potential product concepts, and selecting the strongest product concepts to move forward. The aim of this is to match the most effective or need reducing product concepts with the capabilities of the brand. In order to do so, this requires a deep knowledge of the products that consumer's value and knowledge of what an effective product consists of. Consequently, *BD3: Greater solution information* was widely mentioned (10 mentions). In particular, the interview participants stressed the benefit of fine-tuning and sense checking product concepts to make sure they meet the needs of the market. The role of the consumer in challenging and providing feedback for the R&D function was promoted, in ensuring that the strongest product concepts are selected. The constant interaction between the brand and the consumer ensures that product concepts evolve in line with consumer expectations, and any information asymmetries between what the brand thinks consumers want and what they actually want are reduced.

The result of this is the selection of the best and most appropriate product concepts. This can be seen by a high number of interview participants identifying *BD4: Reduced risk of product failure* (eight mentions) at this stage. This was based on the role that consumers play in selecting product concepts, providing feedback and ensuring product concepts pass through the screening stage quicker. Through a deep knowledge of consumer wants and needs and actively involving them in the NPD process, the strongest product concepts are selected to move on to the next stage of NPD, reducing the potential for a product solution to fail.

BD6: Faster speed to market (10 mentions) was widely mentioned in regards to gaining fast feedback and allowing consumers to vote on product concepts. Co-creation was regarded to speed up the go/kill decision brands have to make when selecting concepts to move to the next stage of NPD (development). Consumers are

responsible for validating and selecting product concepts, both boosting the effectiveness and the speed at which brands are able to move through the NPD lifecycle. Moreover, the view was proposed that co-created products are self-validated, and in turn can potentially remove the need for this gating stage. A number of interview participants discussed the possibility of removing the traditional feasibility stage as consumers adopt the role of selecting the best product concepts.

Development: At this stage, prototypes are built of product concepts that have passed through the feasibility stage. This was widely regarded as the most 'expensive' stage in NPD due to the cost of creating prototypes. A key benefit of co-creation at this stage was discussed in regards to the test and learn approach, or the iteration of prototypes by continuously gaining feedback from consumers. This ensures that product prototypes meet both the explicit and implicit needs of the market and brands are able to move quicker through what is a very costly stage of the NPD lifecycle.

This is evident through the significance placed on *BD16: Resource impact* (six mentions). Development was considered the most expensive stage, co-creation was widely regarded as a way to avoid resource waste and reduce the number of iterations of product prototypes through the direct involvement of consumers. In addition, the benefit of using high quality consumer contributions as prototypes was discussed in regards to reducing the resources employed at this stage. This stresses the value of staying close with consumers and constantly interacting and soliciting feedback in respect to prototypes. The notion of consumers being able to submit high-quality designs or even physical prototypes highlights the potential of consumers possessing valuable skills and technical knowledge in respect to this stage of NPD. This a particularly revealing insight, as the value of consumers' technical knowledge is widely underplayed and little recognition is given to the potential value they can contribute to building product prototypes.

The outcome of a close collaborative relationship with consumers not only impacts the resources employed at this stage, but also reduces the risk of product failure. *BD4: Reduced risk of product failure* (10 mentions) was discussed in regards to iterating with consumers to make sure prototypes are meeting their needs and understanding any functions and features issues. This builds on the ongoing notion that involving consumers at each stage of NPD ensures a clear direction is maintained

throughout the NPD process and products evolve in line with the expectations of consumers.

Additionally, the collaboration between brand and consumer at this stage was deemed to significantly impact the speed and agility at which brands can move through development. *BD5: Leagile manufacturing* (four mentions) was mentioned most at this stage, as brands are able to move quickly in prototype development by leaning in on consumers and gaining instantaneous feedback. This also relates to the speed at which brands are able to move though this stage with *BD6: Faster speed-to-market* being particularly stressed (nine mentions). The value of tools such as augmented reality and online platforms were considered particularly impactful in producing early stage virtual prototypes for consumer feedback. This was both in respect to speeding up the time spent in development and also the cost of producing iterations of prototypes. This couples both the impact of co-creation and digital technologies in allowing brands to be more flexible, leverage digital tools and integrate consumers with the aim to move faster, leaner and be more agile. A good example was brands' ability to 3-D print high-quality customer created concepts, moving quickly from ideation to commercialisation, reducing development time.

BD10: Strengthening of brand-consumer relationship (six mentions) was widely mentioned at each stage of the NPD lifecycle. In respect to development, allowing consumers to be hands-on was considered vital in promoting advocacy and brand loyalty. Co-creation in prototype development was recognised to promote engagement, loyalty and willingness to buy. This not only delivers an impact in the development stage, but also outlines the potential of a further impact once the product is launched through an awareness of the co-created product (i.e. pre-marketing the product) and the advocacy of consumer co-creators.

Testing: This stage is characterised by ensuring product prototypes meet the needs of the market to lower the risk of failure. It is vital that product prototypes are effective in reducing the wants and needs of consumers and meeting the objectives originally set out in the early stages of the NPD project. Co-creation in the stages prior to testing was considered to reduce the risk of major problems arising as the consumers' knowledge and voice is incorporated throughout the NPD lifecycle.

Of particular significance was *BD3: Greater solution information* (seven mentions) and *BD4: Reduced risk of product failure* (11 mentions), discussed with the general

view that brands should stay close with consumers throughout all stages of the NPD lifecycle. This was particularly relevant at this stage in making sure that once product concepts reach the testing stage, they pass through it relatively easily, as the consumer has been involved in all of the previous major decisions. Rather than having a direct impact on this stage of NPD, the existence of these factors in the stages leading up to testing was considered to ensure that product prototypes reaching this stage were representative of the needs of the market and built in collaboration with consumers.

BD10: Strengthening of brand-consumer relationship (seven mentions) and *BD13: Closer market fit* (six mentions) were prominent at this stage. Co-created products were considered highly relevant to the consumer, maintaining a close relationship throughout NPD allows the brand to sense check and validate the pre-launch bundles. This further strengthens the connection between the brand and the consumer and also is likely to boost the effectiveness of products, as the consumer is continuously involved. By involving consumers at this stage, brands are able to flag up any functions and features issues. A test-and-learn approach to co-creation was widely discussed in reducing the risk of product failure. Co-creation in the upstream stages of NPD ensures that as product concepts pass through each stage, they are constantly refined and validated to safeguard from any problems arising in the downstream stages of NPD. The discussion of driving factors at this stage arises both from their existence in the prior stages of the NPD lifecycle and their direct impact during the testing stage.

Launch: The launch stage is characterised by the full-scale ramp-up, rollout and promotion of new products. A common theme emerging was that co-creating extensively across the whole NPD lifecycle can significantly impact the launch of a new product. Through a complete co-creation approach, a number of driving factors manifest at this stage in relation to the activities associated with the successful launch of a product.

BD14: Greater commercial potential (seven mentions), *BD15: High expectation and novelty* (four mentions) and *BD11: Positive attitudes towards the product* (five mentions) were particularly stressed at this stage. This was regarding the notion that consumers are aware of value propositions prior to launch, and in ensuring co-created products are highly relevant for consumers. This is signified by both the development of effective productive solutions, but also the benefits of word-of-mouth

advertising and product advocacy from co-creators involved throughout the product lifecycle. Co-creation was considered to deliver a marketing and resonance advantage, reducing the need for aggressive sales tactics with co-creation being described as the 'strongest, most powerful form of advertising'. This presents significant implications on the launch of new products, as the outcomes of co-creation are highly relevant, need-reducing solutions of which consumers are aware and actively promote.

Similarly, *BD16: Resource impact* (six mentions) was discussed in respect to the word of mouth and consumer advocacy gained through extensive co-creation. This presents an opportunity to brands in reducing the need for traditional marketing and promotions, relying on consumers as co-creators of marketing solutions and promoting new products. Brands are able to flex their spending on traditional media, co-create high quality promotions and boost the consumer awareness of value propositions before they are even tangible.

BD6: Faster speed-to-market (seven mentions) was stressed; co-creation throughout the NPD lifecycle was seen to boost the efficiency of the NPD process. This characterises the speed at which brands are able to move from ideation to launch. This not only denotes an impact on the NPD lifecycle as a whole, but also outlines the possibility of the brand having a first-mover advantage, as they are able to move from an idea to a product quicker. This once again outlines the effect of co-creation in the upstream stages of NPD and throughout the lifecycle in delivering a downstream impact.

The discussion of the driving factors at each stage of NPD summarises the factors stressed as most significant at each stage of the NPD lifecycle. The key findings in respect to the total set of relationships between the driving factors and stages of the NPD lifecycle are displayed in Tables 5.20 to 5.23. The tables provide a holistic view of the set of relationships between the driving factors and the stages of the NPD lifecycle and an explanation of how and why each factor assumes significance at a stage of NPD.

Table 5.20: Driving factors across the NPD lifecycle, BD: 1-4

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BD 1: Virtually costless acquisition of consumer ideas	Develop insights for both current and future projects	Brands don't pay for volume, only for winning ideas; Consumer co-creators don't expect to get paid as much as agencies		Consumers deliver a greater impact at a fraction of the cost		
BD 2: Outsourcing of NPD efforts	Substitute field research for co-creation (develop key insights in a short time frame)	Consumers give mock-ups of new products	Consumers vote and comment on concepts; Consumers enhance, refine and improve ideas	Consumers submit designs for new products; Iterate with consumers on product characteristics; High quality consumer concepts can be 3-D printed for evaluation	Consumers test products in live production	Co-created positioning and advertising campaigns can be high quality; Consumers provide fresh thinking in response to a marketing brief
BD 3: Greater solution information	Co-create with influencers to develop key insights; Create a clear definition of target consumer; Listen to consumers in a community, they can inadvertently reveal insights; Co-create as early as possible to deliver products consumers truly want and need	Co-creation gives access to more and better ideas; Watch and listen to consumers, they will articulate what they need; Co-created hypotheses feed ideation; Consumers deliver out-of-the-box thinking; Product ideas link directly to consumers perceptions and expectations	Consumers challenge R&D to develop the best concepts; Consumers verify and give immediate feedback on product concepts	Fine tune prototypes with consumers; Identify functions and features issues; Understand how the consumer is going to experience the product; Consumers are able to translate technology from different categories and propose technical solutions; Iterate with large numbers of consumers	Consumers provide open feedback; Understand consumer challenges in product adoption; Test with consumers to get the experience, functions and features of the product right	Consumers inform packaging and promotion
BD 4: Reduced risk of product failure		Consumers vote on product concepts	Validate the results of ideation; Co-created concepts are self-validated; Consumer-led ideas pass through screening easier	Stay close with consumers and iterate in development to make sure the products meet their expectations; Fine tune and sense-check broad product prototypes	Validate pre-launch bundles with consumers; Test and learn to lower risk when launching a product; Failing fast is important, co-creation embraces this culture; Co-created concepts test better with consumers	

Table 5.21: Driving factors across the NPD lifecycle, BD:5-10

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BD 5: Leagile manufacturing	Develop insights and databanks to dive into an adjacent project; Databanks of insights can be collided with other categories	Richness in ideation may mean that other stages in a traditional process can be merged, combined or removed	Hypotheses or propositions are derived from the co-creation source, they are self-validated; Remove a validation gating stage	Consumer contributions can be so high quality they can be 3D printed and go straight to evaluation; Iteration lets the brand react to instantaneous feedback	Co-created concepts are likely to test better and reach launch faster	
BD 6: Faster speed-to-market	Get huge amounts of data in a significantly short time period; Understand and explore the benefits spaces in a category much faster than a traditional research project	Consumers look at problems in different ways to researchers; Ideation can be done quickly (volume and quality of submissions); Creative questions prompt fast, creative answers	Brands get feedback immediately	Less loops are required in development – no need to pivot; Feedback allows brands to address issues immediately; Speed of execution helps quicker agreement on which direction to follow	Complete co-creation raises the question if brands need to do testing, The test and learn approach gives feedback right away;	
BD 7: Greater consumer understanding of NPD process				Consumers give brands ideas and feedback in response to a brief	Allow consumers to buy product prototypes and get their feedback on the functionality and marketing issues	Give consumers strict guidelines on the marketing and promotions vehicle, let them create their own promotions
BD 8: Adjustments of consumer preferences	Consumers can be confused – educate consumers about products so they understand and adjust their preferences				Co-create with product dissenters to meet their needs	Brands must customise through co-creation to meet consumer preferences
BD 9: Better appreciation of the product				Co-creation creates loyalty, engagement and willingness to buy		Gain insight into how consumers use the product and their experiences
BD 10 Strengthening of brand-consumer relationship						Boost advocacy reach, this is crucial in the early stages of the product launch
	Complete co-creation allows the brand to stay close with consumers and understand what's going on					

Table 5.22: Driving factors across the NPD lifecycle, BD:11-14

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BD 11: Positive attitudes toward the product						Brand will experience a 'boost' when introducing offering to the market (WOM); Yield products that customers want, without having to be persuaded by aggressive sales tactics
	Co-create to 'pre-market products'					
BD 12: Post launch gains	Co-creation allows the brand to stay close with consumers and understand what's going on when the product goes 'live'					
BD 13: Closer market fit	Develop key insights to think much deeper as to how the product better fits consumers' lives	Consumer is an information/idea provider, ideas link to their perception, their expectations	Develop concepts further, interact to develop and fine tune a concept	Develop and fine tune prototypes, discuss characteristics as they evolve; Customise experiences to understand expectations, have them in the loop to understand prototypes	Sense check to decide on the strongest concepts; Co-create to understand how people use the product, to fix functions and features problems	
	Co-created products are highly relevant, consumers have worked with and been involved in every major decision					
BD 14: Higher commercial potential						Gain a marketing and resonance advantage; Yield products that customers want without being persuaded by aggressive sales tactics; Consumers choose your brand and actively advocate it; Co-creation is the strongest form of advertising
	Co-created products are highly attractive, consumers have worked on and have been involved in every major decision; Consumers will be aware of the value proposition before the results are even tangible					

Table 5.23: Driving factors across the NPD lifecycle, BD:15-19

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BD 15: High expectations and novelty						Consumers will advocate the brand more; Co-create the marketing campaign that goes with the product
	Consumers will be aware of the value proposition before the results are even tangible					
BD 16: Resource Impact				Co-creating with a group of consumers reduces the costs of having to create prototypes over and over; Use high quality consumer contributions as prototypes, this is faster, cheaper and powerful		Flex the spend on mass media to more personalised marketing (through social media)
	The complete co-creative process is effective and efficient on a resource level; Over the course of the product lifecycle, co-creation saves money					
BD 17: Internal empowerment	Complete co-creation guarantees a broad support among the stakeholders; Align consumer input with relevant strategic functions at each stage of NPD					
BD 18: Experience development				Customise the experience to understand expectations; Have consumers in the loop to understand prototypes	Test through co-creation get the experience, functions and features right	Co-create the delivery and sales mechanisms, distribution channels, and the experience that the consumer has
	Don't develop the product in isolation, the brand concept, the messaging and the packaging should all be developed at the same time; Experience has to be designed to understand what the consumers experience expectations are; The integration of product and experience development at the same time is fundamental; Invite consumers to be hands on, this delivers value through experience					
BD 19: Limitations of traditional methods	Co-creation has disrupted the whole former method of marketing; Co-creation is an unstoppable evolution of marketing; The relationship between the brand and the consumer has fundamentally changed					

Tables 5.20 to 5.23 summarise the research findings across the data set to deliver a holistic set of possible co-creation-NPD scenarios in respect to the driving factors across the NPD lifecycle. This presents a clear picture of the factors that assume significance at each stage of NPD. The data is derived from the expertise of subject experts and their experience of co-creation in a real-life NPD context. This presents a significant implication in guiding the design of co-creation experiences, contributing a deep understanding of the factors that brands should seek to promote through the co-creation experience design at each stage of NPD. The explanation of the significance of each driving factor across the stages of NPD outlines their potential to directly impact the activities and goals associated with each NPD stage. The purpose of the focus on the driving factors across the NPD lifecycle is to guide the design of effective co-creation experiences to promote a complete co-creation approach. This is vital in maximising the high-level impact of co-creation on NPD.

To complete this stage of analysis, this approach was replicated in respect to the inhibiting factors. Firstly summarising the key learning points in respect to the most significant inhibitors at each stage of NPD and then contributing a holistic understanding of the significance of the inhibiting factors cross the NPD lifecycle (Tables 5.24 to 5.26).

5.2.4.3.2 Inhibiting factors
The following discussion provides a synthesis of the key learning points emerging from the data set in respect to the inhibiting factors across the NPD lifecycle. These are outlined below, focusing on the key sentiments expressed in respect to each inhibiting factor across the data set.

It emerged from the analysis that a number of inhibiting factors remained constant across the NPD lifecycle, and were considered relevant at every stage. For instance*, BI 14: Culture* (six mentions) was not limited to a specific stage and was discussed as an overall attitude towards co-creation. As this factor is typified by an ego, arrogance or a lack of willingness to take risks, this presents an overarching factor impacting the decision to co-create and is considered a potential inhibiting factor at each stage of NPD.

Additionally, *BI 6: Asymmetrical effects* (one mention) was discussed in reference to the fact that consumers may lose attention or interest in a co-creation project. This was not in reference towards a specific stage of NPD, but the inability of brands to capture and hold

the attention of consumers. Whilst the brand may seek to co-create across the whole product lifecycle, there is only a finite amount of time they are able to keep somebody's attention that doesn't have a vested interest in the product. As the consumer does not experience the same benefits as the brand, consumers may lose interest, drop out or not give the co-creation project the required effort or attention.

BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders (five mentions) was common across all stages of NPD. Specifically the idea that co-creation can add complexity and confusion. The implementation of co-creation at any stage of NPD can impact the complexity of managing both the brand and consumer interests. As co-creation is signified by a shift in power towards consumers, enabling consumers to co-create presents the risk to brands that they will experience this inhibiting factor. This risk is apparent across all stages of NPD, as loosening control over the NPD lifecycle (through co-creation) requires effective management throughout the NPD lifecycle.

BI 15: Lack of co-creation methodologies (nine mentions) was discussed regarding the effect of co-creation over the whole NPD lifecycle. Particularly the notion that every co-creation project is unique, and the areas in which co-creation can add value differs project-to-project and organisation-to-organisation. This in effect echoes the sentiments and purpose of this research, as currently, methodologies guiding the design of co-creation experiences and implementation of a complete co-creation approach are few and far between. This is relevant at each stage of the NPD lifecycle as there are no clear guidelines on how to design co-creation experiences at each stage of NPD. A lack of co-creation methodologies signifies that those with limited expertise in co-creation may incur costs or fail with early co-creation efforts, due to the ineffective design of co-creation experiences and the likelihood of experiencing inhibiting factors.

BI 17: Organisational structure (three mentions) related primarily to the difficulty of shifting towards a collaborative mind-set, due to the fact that brands are often poorly organised to promote both internal and external collaboration. Once again, this addresses an overarching impediment of co-creation. Of particular relevance is the lack of internal communication channels between strategic functions, inhibiting the ability of those within brands to collaborate on an 'end-to-end' set of co-creation processes. In addition to the

factors discussed above, a number of factors emerged as significant in respect to the stages of the NPD lifecycle. These are discussed below.

Upfront homework: The discussion of the inhibiting factors at this stage focused mainly on the complexity of opening up the NPD process, the potential loss of control brands may face and the difficulty in targeting consumer co-creators. This stage seeks to build the requirements of the NPD project though a deep knowledge of consumer wants and needs. The ineffective design of co-creation experiences can inhibit through the potential loss of control and the costs involved in managing the co-creation experience.

BI 1: Diminished control over brand's strategic management and planning (two mentions) was identified as a possible risk if co-creation projects are too open. The notion that brands need to have a strategy to adhere to prior to the co-creation project was expressed; otherwise, the co-creation project may trigger a change of strategy. This signifies that brands cannot approach co-creation with a 'blank sheet of paper' as this bears the risk of losing control of the brand or NPD direction. The brand must define the parameters of the co-creation project and specify what the role of the consumer will be. In respect to this stage of NPD, this means that an initial strategy must be in place on which the brand can explore and collaborate with consumers to refine the NPD direction.

In addition, it was discussed that open or exploratory co-creation projects at this stage may make the brand appear weaker to consumers. From the outside in, it may seem that the brand does not have a clear strategy in place. This does not directly impact the specific NPD project the brand is looking to co-create on, but it can be damaging to how consumers view the brand. Whilst both the brand and consumer are regarded as necessary contributors to value creation, the brand must drive the co-creation experience and this once again stresses the importance of clearly defining the parameters of the co-creation experience and having a strategy in place.

The notion that consumers possess valuable and relevant knowledge in respect to brand's NPD projects is key in underlining the value of co-creation. However, brands must seek out these consumers. Typically, this knowledge resides with consumers in the brand's target market, i.e. the people to which the brand is seeking to deliver a product. Consequently, *BI 5: Consumer heterogeneity* (three mentions) was mentioned in regards

to targeting consumer co-creators. The importance of targeting the 'right' people was stressed, as an inappropriate sample was deemed likely to add little or no value to the NPD process. Brands must have a clear definition of their target market or consumer prior to opening up their NPD process. This ties in to the need to have a clear strategy in place defining who with and how the brand will co-create.

Co-creation at this stage is signified by exploring the wants and needs of a volume of consumers to develop key insights. Whilst this can deliver significant value in respect to an NPD project, this may also be very time consuming and people within the organisation may have to commit to working unsociable hours to meet with consumers. This was discussed in regards to *BI 3: Co-ordination requirement*s (two mentions)*. Likewise, the difficulty of getting people within the organisation to commit time and resources to a co-creation project was highlighted. This presents the very real possibility that early stage co-creation can be very time consuming as it involves integrating the knowledge of a large amount of consumers. To overcome this, a number of interview participants stressed the need to co-create with key influencers and lead consumers who are representative of the wider market.

Ideation: The discussion of the driving factors at this stage highlighted the benefits of the volume of ideas as a result of co-creation. However, *BI 9: Information overload* (three mentions) was identified as a possible result of a greater volume of product ideas. Whilst a volume of ideas is considered a benefit in ideation, this involves filtering and making sense of a considerable body of information compared to traditional methods. Accordingly, brands need a process or a platform in place in order to sort and filter through product concepts. This was also linked to *BI 3: Co-ordination requirements* (three mentions) as the risk of information overload can impact the time it takes to identify suitable product concepts and potentially result in the need to employ someone to filter and sort through the volume of ideas.

A widely proposed criticism of co-creation is that consumers do not possess the technical knowledge to come up with suitable product concepts. This was apparent through the mention of *BI 4: Infeasibility of product ideas* (two mentions). At this stage, the likelihood of consumers proposing completely unrealistic ideas was stressed. Consumers do not

possess a deep knowledge of what is feasible in terms of a brand's capabilities consequently, impractical ideas can be proposed.

In addition to this, *BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs* (two mentions) was discussed in regards to the inability of consumers to articulate their future need states or problem definitions. This signifies the need for brands to put some sort of stimulus to consumers, as it is rare they can define what a future product should do. Moreover, the idea that consumers may tell the brand what they think the brand wants to hear was discussed, this potentially results in the outcomes of co-creation at this stage being unrepresentative or misleading.

This signifies the need for brands to design co-creation experiences that guide and stimulate consumers to deliver ideas in line with the requirements of the NPD project. This may include the brand asking what they want a future product to do, or specific problems with current products in the category, rather than a focus on polished ideas for new products. Brands must recognise the limitations of consumers in respect to this stage of NPD and design the co-creation experience in accordance with this.

Feasibility: This stage requires the selection of suitable product concepts and making the go/kill decision. The lack of consumer's technical knowledge was particularly relevant through the mentions of *BI 4: Infeasibility of product ideas* (two mentions). Consumers may favour ideas that are outside of the brand's capabilities and as a result should not be involved in the decision to move forward with a product concept. This being said, the co-creation experience can be built on the brand selecting a number of potential product concepts and then seeking to interact with consumers to select the strongest product concepts. This reduces the risk of this inhibiting factor whilst still deriving some benefit from co-creation at this stage.

A key discussion point was the possibility that consumers may not even be aware of their own biases, or the potential that they are misinformed. This is signified by *BI 5: Consumer heterogeneity* (three mentions) and results in a wide range of attitudes and preferences that may not accurately represent what their true expectations are. Brands must be critical in their interactions with consumers, probing and guiding interactions to ensure nothing is

misinterpreted and the consumer is able to fully articulate their knowledge. Moreover, this signifies the role of the brand in educating consumers to ensure they possess the knowledge and skills to contribute in NPD. The co-creation experience must be designed not only for the brand to maximise the value they can extract from consumers, but to empower consumers to contribute in value creation on an ongoing basis.

Development: At this stage, the risk of intellectual property stealing was considered highest. Brands may be fearful of socialising prototypes due to the risk of *BI 12: Ownership of Intellectual Property* (two mentions) and *BI 11: Concerns about secrecy* (two mentions). There was a natural concern that prototypes should be kept secret and socialising prototypes through co-creation opened up the risk of these two factors. These were stressed as perhaps the most significant inhibiting factors in respect to co-creation. Linked to these was also the risk of IP disputes with consumers, regardless of the framework in place, incurring legal costs.

In response to this, a number of interview participants outlined the possibility of co-creating with a small number of consumers. This reduces the risk of IP and secrecy issues, and prior to any collaboration at this stage of NPD, consumers must sign NDAs and relinquish all IP rights. Additionally, brands can seek to refine or co-create on specific product characteristics, rather than socialising the entire product as a whole. This limits the scope of the impact of co-creation at this stage, but also reduces the risk of these inhibiting factors.

Co-creation at this stage was regarded as the most expensive due to the nature of making prototypes*; BI 16: Resource impact* (four mentions) supports this. The reactions of the interview participants included the results of poorly designed co-creation experiences in leading to a significant impact on the resources employed. This detailed instances in which the co-creation of prototypes led to the need to invest in plant and machinery to produce co-created concepts. Prior to co-creation at any stage of NPD, the brand must design the co-creation experience to align with their capabilities and the specific requirements of the NPD project. For instance, in development, brands must know what their production capabilities are, to ensure co-created products fit within the limits and a significant cost is not incurred once full-scale production begins.

Finally, *BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders* (six mentions) and *BI 3: Co-ordination requirements* (four mentions) were considered significant as iteration in prototype development requires ongoing interaction, sorting and making sense of data, and the co-ordination of consumers and a number of strategic functions. Consumer feedback and collaboration in development is highly valuable in ensuring the product evolves in line with the needs of consumers. However, the brand must be able to efficiently manage the collaboration between consumers, and a number of strategic functions, if not this can result in increased complexity and difficulty in managing the process.

Testing: This is an information intensive stage, characterised by ensuring that product prototypes meet the needs of the market. This stage is often categorised by consumers testing product prototypes to gain feedback and identify any issues to be fixed prior to commercialisation. Whilst the value of consumer input is widely acknowledged, a number of inhibiting factors emerged as significant.

A key inhibiting factor discussed in respect to this stage was The *BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders* (six mentions). This is typified by the potential that consumers are likely to favour customisation, whereas brands focus on cost minimisation. In respect to testing, consumers may desire more customised products or identify functions or features issues that are expensive to develop, implement or produce. As brands are commonly driven by the efficiency of their operations and a profit-seeking motive, they are unlikely to yield entirely to the demands of consumers and have to manage the differences in preferences effectively. This can result in products that do not entirely meet the needs of consumers (as they are not feasible) and this can raise problems in the testing stage. In response to this, the need to continuously educate consumers in the challenges of the NPD process and the limitations placed on product concepts was discussed. This ensures the prototypes that reach testing do not significantly differ from the expectations of consumers. Consumers must possess an understanding of the constraints that brands face throughout the NPD lifecycle and recognise that the brand must adhere to a set of objectives. This is most likely achieved through transparency and information sharing throughout the lifecycle to ensure consumers understand what is realistic from the perspective of the brand.

Additionally, *BI 3: Co-ordination requirements* (four mentions) and *BI 9: Information overload* (two mentions) emerged in response to the sorting and analysing of data from a large volume of consumers. When testing product concepts both qualitatively and quantitatively, brands face the risk of amassing a 'huge body of data'. Making sense of this and managing the feedback from consumers presents a significant risk. The notion emerged that whilst it is good to get feedback at this stage, the brand can almost receive 'too much' causing confusion and conflict. Testing with consumers requires an effective process or structures in place to aid the digestion of data. If this is not the case, sorting and filtering the information can be expensive (in terms of both time and monetary cost). This was reflected by *BI 16: Resource impact* (three mentions). Brands must be certain of the volumes of data they can handle or seek to target specific leads or influencers to test products, rather than approaching the wider crowd. This signifies the importance of the brand in understanding the limitations of co-creation and designing co-creation experiences with this knowledge in mind.

Launch: The number of inhibiting factors mentioned at this stage was lowest. This stage is characterised by the full-scale ramp up, rollout and promotion of new products. The discussion of the driving factors at this stage highlighted the potential for early (upstream) co-creation to deliver benefits at this stage of NPD. Through effective co-creation experiences throughout the NPD lifecycle to this point, few inhibiting factors were considered particularly significant.

Of those that were discussed, the overriding factors impacting every stage were apparent, *BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders* (five mentions) and *BI 3: Co-ordination requirements* (two mentions). In respect to the launch stage, the relevance of these factors was focused on the management and preferences of consumers when co-creating in the promotion and advertising of new products. This requires the brand to provide guidelines, manage and sort the results of collaborative efforts with consumers. The value of co-created advertising and promotions was widely discussed, however the need for brands to provide a clear brief and stimulate consumer contributions was also stressed. Brands must continuously manage and foster co-creation at this stage to ensure value is derived from the co-creation experience. Moreover, whilst value may be gained through co-created promotions solutions, the likelihood of brands having to fine-tune and refine consumer created promotions was identified as a likely

cause of these inhibiting factors. This is once again characterised by an understanding of how and where consumers can contribute value to this stage of NPD, and the design of the co-creation experience to ensure this value is achieved.

The discussion of the most significant inhibiting factors emerging at each stage of NPD summarises the key learning points in respect to this aspect of the co-creation-NPD relationship. For a more comprehensive analysis of the research findings, Tables 5.24 to 5.26 display the set of relationships between the inhibiting factors and the stages of NPD. A deeper knowledge of the inhibiting factors across the NPD lifecycle provides an in-depth picture of the potential risks or costs brands may face through co-creation. Co-creation experiences should be designed in order to circumvent or reduce the impact of these inhibiting factors. This is done by firstly recognising how and why the inhibiting factors manifest in a co-creation-NPD scenario and designing the co-creation experience accordingly. Tables 5.24 to 5.26 provide explanations of the significance of an inhibiting factor at a given stage of NPD derived from the collective expertise of the subject matter experts. This is valuable in outlining how and why the inhibiting factors are significant and can potentially impact the respective NPD stage. Explanations of factors across stages or towards the NPD lifecycle as a whole are included to illustrate factors that the design of a complete co-creation experience must seek to avoid.

Table 5.24: Inhibiting factors across the NPD lifecycle, BI: 1-9

	Up Front Homework	**Ideation**	**Feasibility**	**Development**	**Testing**	**Launch**
BI 1: Diminished control over brand's strategic management and planning	If early co-creation projects are too open they can trigger a change of strategy					
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	Co-creation can increase complexity due to internal debates, discussions and barriers					
BI 3: Coordination requirements, constraints and other non-monetary costs	Co-creation requires more complex methodology, involving consumers at different stages of the innovation cycle or the communication development; It can be hard to get people across an organisation to commit time and resources to a co-creation project; Effective co-creation is very time-hungry; Co-creation can slow down NPD, especially if a brand is trying to move quickly and be agile					
BI 4: Infeasibility of product ideas		Consumer ideas can be completely unrealistic; Consumers rarely come up with new ideas, they don't have the technical know-how	Consumers don't know what's feasible and what's not feasible, keep feasibility within the internal expertise			
BI 5: Consumer heterogeneity	If a brand doesn't target the right people, research efforts may come to nothing	Recruiting co-creators to enable brands to really and truly get under the skin of what the problem is difficult	Sometimes consumers are not even aware of their own biases and their own choices			
BI 6: Asymmetrical effects	Consumers may not have a vested interest in the project, there's a limit to how much time you can keep someone's attention					
BI 8: Consumers as competitors				Ensure co-creators are not working for the competition		
BI 9: Information overload	There is no easy filtering system to gain core insights; There's a limit to how many co-creators brands can handle		The information from co-creation is a huge body of data			

Table 5.25: Inhibiting factors across the NPD lifecycle, BI: 10-13

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs		Consumers sometimes say things they don't really mean, or they tell brands what they think they want to hear; Sometimes consumers are not even aware of their own biases and their own choices; Consumers find it hard to articulate a solution, as they don't have the technical knowledge; Brands can't ask consumers what they want, they need some stimulus			Brands need to know which bits of consumer feedback to listen to and which to ignore	
BI 11: Concerns about secrecy				Get consumers to sign away all rights in terms of IP; This is the highest risk of IP stealing, organisations are very wary of letting prototypes out of their hands		
BI 12: Ownership of intellectual property				Get consumers to sign away all rights in terms IP		
BI 13: Risk of retaliation and defection				Ensure co-creators are not working for the competition		

Table 5.26: Inhibiting factors across the NPD lifecycle, BI: 14-17

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
BI 14: Culture	Co-creation can be seen as a risk, senior marketers may be worried about losing their jobs; There's an arrogance (inherent), the organisation should know their products better than the consumers; People can be very controlling, they rely on how things have always been done (ego); It's tough to have people buy into the process (internally); To collaborate, people from different strategic functions with different field of expertise need to commit to the project; The difficulty is not about tools or methods to co-create its more psychological					
BI 15: Lack of co-creation methodologies	No one has an extensive knowledge of co-creation because it's still in its infancy; It changes from project to project where co-creation adds value; There is a lack of evidence of the impact of co-creation on NPD; Brands can never get co-creation right, sometimes they should focus on their knowledge and gut; The co-creation dynamic needs to be fluid, flexible, built on springs, every situation, every brief, every requirement, every business opportunity is going to be unique, and therefore the co-creation experience needs to be unique					
BI 16: Resource impact		Face-to-face (qualitative) co-creation is very resource heavy	Co-creation is very time hungry	Filtering and making sense of the information from co-creation is expensive; Making prototypes is expensive, there are cost concerns that come with co-creation	Filtering and making sense of the information from co-creation is expensive	
	Co-creation can cause confusion and therefore more time and cost					
BI 17: Impact on organisational structure	It's hard to shift to a collaborative mind-set, brands are organised poorly to do that, it's rare that the strategies come together to design an end-to-end set of process for a particular persona; Co-creation can cause a dramatic change in organisational processes; Some brands are being driven by their operations teams, the plant efficiency is driving the innovation agenda; Brands rely on the process they are used to in delivering a successful offering to market					

The findings relating to the significance of the driving and inhibiting factors across the NPD lifecycle present considerable implications for the design of co-creation experiences. The aim of this stage of analysis was to explore the notion that the co-creation factors vary in significance across the NPD lifecycle. The research findings clearly corroborate this and go beyond by delivering an in-depth knowledge of the set of relationships that exist between the co-creation factors and the NPD lifecycle. This is built on a deep explanation of how and why the co-creation factors assume significance at each stage of NPD.

The relationships between the co-creation factors and the NPD lifecycle highlight the stages of NPD that are populated by a greater number of co-creation factors, or at which the impact of the co-creation factors is greater. This is a particularly insightful contribution of the research, as it builds on the contextual knowledge of subject matter experts on the potential benefits and pitfalls of a complete co-creation approach. The differing nature of each co-creation factor and the degree to which it impacts each stage of NPD is likely to play a pivotal role in the ability or willingness of brands to co-create at each stage of NPD. In respect to driving a complete co-creation approach, knowledge of the factors that are most significant at a given stage of NPD is vital in guiding the design of effective co-creation experiences.

Co-creation experiences must be designed in line with the activities and goals that are associated with each stage of the NPD lifecycle. From the brand perspective, a knowledge of the most significant co-creation factors at each stage of NPD means that they can seek to promote or avoid through the co-creation experience design. Brands must seek to design co-creation experiences to deliver a positive impact (or positive trade-off of co-creation factors) in line with the knowledge of the requirements and goals of the NPD project in hand. A synergy must be achieved by aligning the specifics of an NPD project with the benefits that co-creation can deliver. A key contribution in achieving this is in understanding how to design effective co-creation experiences based on a knowledge of what the relevant co-creation factors are at each stage of NPD, and how and why they impact NPD and manifest in a NPD scenario.

The findings to this point explore the co-creation-NPD relationship in respect to the design of co-creation experiences. This is evident by a focus on the factors that both drive and inhibit brands from co-creating across the NPD lifecycle. The purpose of this was to deliver a greater fundamental knowledge of this aspect of the co-creation-

NPD relationship from the brand perspective. The design of effective co-creation experiences is necessary to promote a complete co-creation approach. This is considered an antecedent to a high-level impact of co-creation on NPD, which is explored later in this chapter. The next stage of analysis examines the role of social media in enabling co-creation. The discussion of social media in Chapters 2 and 3 outlined the potential of social media to positively impact the co-creation-NPD relationship. As co-creation experiences are built on the interaction and collaboration between the brand and consumer, it is vital to explore the ways in which this interaction can be enabled. The focus on social media as an enabler of co-creation is spurred by the review and discussion of the relevant literature (Chapters 2 and 3), which stresses the significance of the emergence of social media in shifting innovation management strategies towards a co-creation approach and in enabling co-creation. Accordingly, the next stage of analysis examines the research findings in respect to the positive impact of social media on the co-creation-NPD relationship.

5.3 Social Media

Social media is included as a key construct of the conceptual framework (Chapter 3) in respect to its impact in enabling co-creation. The growth and emergence of social media over the past decade assumes significance in respect to this research in a number of ways. Social media is regarded as a key factor in spurring the growth of the co-creation paradigm, impacting the brand-consumer relationship and empowering consumers with the voice, knowledge and desire to be involved in value creation. This signifies a high-level impact of social media on co-creation, driving the emergence of the co-creation paradigm by impacting the business environment and the roles that brands and consumers adopt within the marketplace. This aspect of the impact of social media was explored through the review of the literature (Chapter 2), providing the rationale for a focus on social media and driving the enquiry in the subsequent stages of research.

In addition, and of particular significance at this stage of the analysis, is the role of social media in enabling co-creation. Co-creation experiences are built on the interactions between brands and consumers; social media is a key enabler in connecting the brand and the consumer on an unprecedented scale. Chapters 2 and 3 explored the specific ways in which social media enable co-creation. The review of the relevant literature guided the collection of specific characteristics of digitally enabled social networks (DESNs) and virtual consumer communities (VCCs) and their role in positively impacting the co-creation-NPD relationship. Social media is

regarded as a platform on which brands can build and manage co-creation experiences. As the brand is considered responsible for designing co-creation experiences and stimulating consumer co-creation, this prompts a focus on the analysis of social media from the brand perspective.

The purpose of this stage of analysis is to examine the social media characteristics (Chapter 3) in respect to their impact on the co-creation-NPD relationship. This provides a deeper insight into the use and impact of social media in the design of co-creation experiences. The outcome of this is a fundamental understanding of the ways in which social media can positively impact the co-creation-NPD relationship. This is valuable in guiding the design of co-creation experiences to leverage social media as the primary engagement channel between brand and consumer.

5.3.1 Social Media Characteristics

The discussion of social media in Chapter 3 collated a number of key characteristics. These are regarded as having the potential to positively impact the co-creation-NPD relationship and enable high-degree co-creation. The taxonomy of social media characteristics was derived from the understanding gained by the review of the literature and the thematic literature review (Chapters 2 and 3). The supporting literature is effective in providing an understanding of each of these characteristics. However, when considering these factors in context, i.e. their relevance and impact on co-creation in NPD, a greater understanding must be achieved. This is achieved firstly by validating the impact of each social media characteristic on the co-creation-NPD relationship and, secondly, building a deeper understanding of how and why each social media characteristic can deliver a positive impact on the co-creation-NPD relationship. A key notion emerging from the transcribed interviews was that the design of the co-creation experience is vital in promoting a complete co-creation approach and maximising the high-level impact of co-creation. Poorly designed co-creation experiences may incur costs or be ineffective, whilst effectively designed co-creation experiences can deliver a myriad of benefits. This is supported by the analysis of the co-creation-NPD relationship to this point.

This stage of the analysis contributes a greater understanding of how social media can be used in the design of co-creation experiences in the pursuit of a high-level impact of co-creation on NPD. The first step was to identify the relevance of each social media characteristic with regard to the impact on co-creation in NPD. This was

done by examining the responses of each participant individually to identify the characteristics mentioned.

5.3.1.1 *Social media characteristics: thematic coding and analysis template (PARTICIPANT A)*

The twenty characteristics outlined in Chapter 3 provide the parameters on which to base this analysis. The initial focus was identifying references to social media characteristics from the perspective of each interview participant. The interviews were specifically focused on the impact of social media on co-creation in NPD; as a result, any discussion of social media was done so in the forum of co-creation in NPD. A coding framework was used in the structured content analysis derived from the twenty characteristics outlined in Chapter 3, e.g. *SM 1: Range, SM 2: Diversity of information, SM 3: Density,* etc.

Tables 5.27 and 5.28 (overleaf) demonstrate the template used in the analysis of the perspective of each interview participant in respect to the impact of social media on the co-creation-NPD relationship. Tables summarise the key findings in respect to the impact of the social media characteristics on co-creation from the responses of *PARTICIPANT A.* This includes the identification of the relevant social media characteristics and an explanation of how each characteristic is relevant in the context of a positive impact on the co-creation-NPD relationship.

Table 5.27: Social media characteristics: interview reaction, PARTICIPANT A

Social Media Characteristic	Factor Mentioned in Data
SM 1: Range	• Social media allows you to reach people across borders (but in your target audience) • It's much richer you can get to more people faster
SM 2: Diversity of information	• Social media provide access to lots of consumers although it is skewed to a certain profile of consumers ('skewed to the right type')
SM 4: Roles	• Social media is skewed to the right type of consumers, the extroverts and the influencers • Social media provides access to an audience who are more willing to express themselves
SM 5: Ease of ties	• Social media provides a platform to be able to get out there and ask everyone, without having to say do phone calls • Once ideas are out there, you can get broader groups of consumers even though they're not exactly in your core audience to discuss the ideas
SM 6: Strength of weak ties	• Social media provides a platform to be able to get out there and ask everyone, without having to say do phone calls • The benefit of social media is that you get more people involved, they can discuss it in a broader form
SM 7: Overcoming geographical and temporal boundaries	• Social media allows you to reach people across borders (but in your target audience)
SM 8: Knowledge sharing and creation	• Social media in a sense of your own brands format or your own lab is absolutely critical, you can't go out and get the same results from traditional market research methods • It is good to have a creative force (consumers) who are basically an extension of your marketing team, who are consumers, who are influencers • It's much richer you can get to more people faster • Social media provides access to an audience who are more willing to express themselves • The benefit of social media is that you get more people involved, they can discuss it in a broader form
SM 9: Ease of knowledge conversion (capture)	• The digital revolution has enabled co-creation, if it hadn't have been for the digital revolution, we wouldn't be talking about co-creation probably • Social media is the enabler for co-creation, digital is the enabler • It's much better than traditional research you know all the ideas come from within the company • Social media allows you to get quantitative representative samples from the consumer to see whether to go this way or that way, in terms of how you launch a product and which final product to go for
SM 10: Community effects (consumer motivation)	• The mind-set in terms of wanting to express yourself has changed, social media users are skewed towards the right type of people in terms of co-creation • Social media provides access to an audience who are more willing to express themselves

Table 5.28: Social media characteristics: interview reaction, PARTICIPANT A

Social Media Characteristic	Factor Mentioned in Data
SM 11: Unlocking social relations	• Consumers have got massive control and power to absolutely kill brands or make them, I think they are aware of that power • Social media provides a platform for consumers to actually take part and do the co-creation, it's in enabling conduit • It's an access point for the consumers to have the dialogue and actual platform itself (with the brand) and the actual co-creation itself
SM 12: Pervasiveness of social media	• There's really no one who is not on social media • I mean it is a key touch point, it has revolutionised the marketing strategy • The benefit of social media is that you get more people involved, they can discuss it in a broader form • We had an online platform, we had a huge website with a 45,000 unique visitors per month • It's much richer you can get to more people faster
SM 13: Low degrees of separation	• The benefit of social media is that you get more people involved, they can discuss it in a broader form • Social media allows you to reach people across borders (but in your target audience)
SM 14: Ease of search	• Social media helps recruit the right people, you can get your target consumer if you get the questions right (even if it's a really complex definition)
SM 15: Empowerment of consumers	• Consumers have got massive control and power to absolutely kill brands or make them, and I think they are aware of that power • Consumers feel empowered; they see that anything is possible, so it has disrupted the whole former method of marketing. I think they see it is their right to get involved if they want to
SM 16: Intensity of interactions	• Co-creation requires discussions between the brand and consumer, these interactive sessions can occur online • You have to involve consumers in a way that they can really express themselves, so just sending an email wouldn't work • Social media allows you to get quantitative representative samples from the consumer to see whether to go this way or that way, in terms of how you launch a product and which final product to go for
SM 17: E-WOM	• Co-creating through social media allows consumers to be passionate about what they're doing and advocate it even more • They can be involved in bringing the product to life (through social media) and then you can make a massive story out of that • Consumer co-creators produce short films and they distribute those on social media themselves
SM 18: Visibility of preferences/interactions	• Social media helps recruit the right people, you can get your target consumer if you get the questions right (even if it's a really complex definition) • Consumers see examples of co-creation which they wouldn't see if they weren't on a social network

The identification and discussion of the impact of each social media characteristic in Tables 5.27 and 5.28 provide an insight into how social media enables and impacts co-creation from the experience of *PARTICIPANT A.* This is the first step in exploring the impact of social media in enabling co-creation experiences. This approach was replicated across the data set; a summary of the key findings follows.

5.3.2 Social Media Characteristics: Cross-Comparison (PARTICIPANTs A- N)

To summarise the findings relating to the impact of social media characteristics on the co-creation-NPD relationship, this section provides a frequency count of the number of interview participants identifying each social media characteristic. The extent of the interview participants' experience is built across a wide number of co-creation projects over multiple brands. A key source of value taken from this is the expertise gained pertaining to the use of social media in the design of co-creation experiences. Figure 5.5 (below) outlines a frequency count of the number of interview participants that identified each of the social media characteristics.

Figure 5.5: Frequency count of the identification of social media characteristics (PARTICIPANTS A-N)
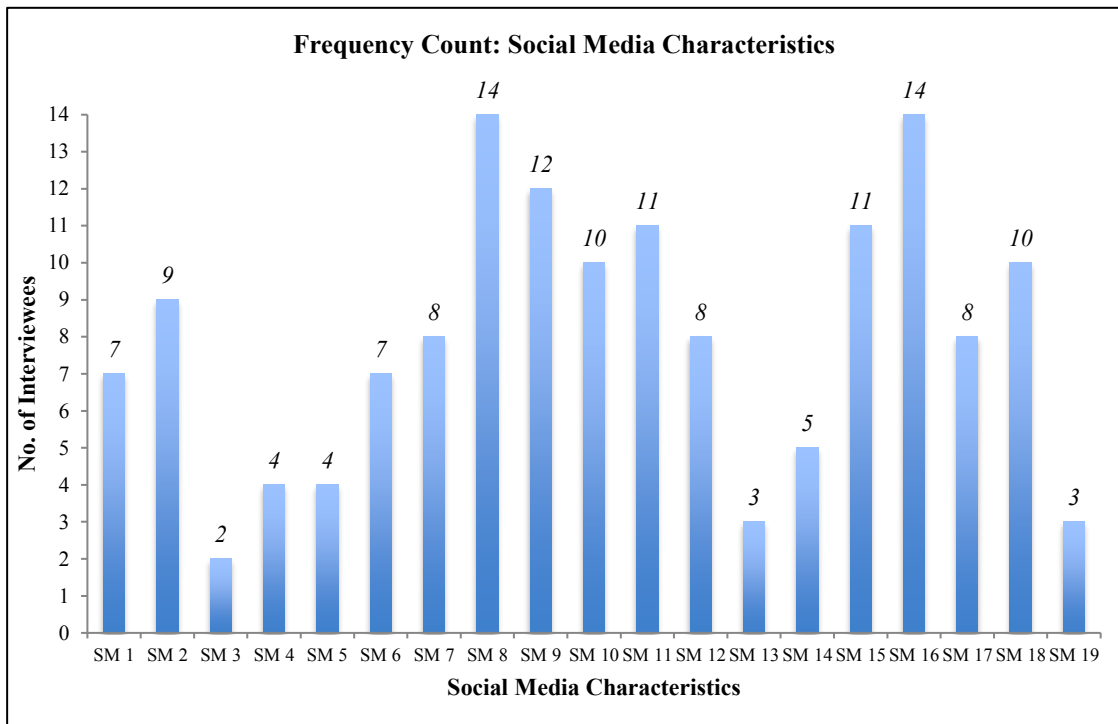
All of the factors detailed in Chapter 3, apart from *SM20: Cohesion,* were identified with regard to their positive impact on co-creation in NPD. The researcher attempted to substantiate the reasons as to why *SM 20: Cohesion* was not identified as

impacting the co-creation-NPD relationship. The discussion of the supporting literature in Chapter 3 presents a strong argument outlining a number of features of cohesion that were considered to be relevant in the co-creation-NPD relationship. Cohesion is signified by easing knowledge transfer and presents an abstract concept that is likely difficult to stipulate in the research context. Whilst the interviewees mentioned consumers being more open to sharing information online, and the ease of interaction, cohesion was not explicitly identified through the interviews. A key consideration was that the interviewees are subject matter experts in co-creation, not social media. Whilst they have used social media to co-create with consumers, their knowledge is unlikely to be centred on the technical aspects of the structure of social networks. Likewise, the terminology used to refer to the impact of social media is unlikely to be built of 'technical terms' in respect to the structure and characteristics of social media. This is also evident by the low number of mentions of *SM3: Density*, *SM13: Low degrees of separation* and *SM 19: Centrality/connectivity*. These characteristics link directly to social network theory and the structure of social networks. Whilst the researcher cannot categorically use this as an explanation, it presents a realistic possibility as to the omission of *SM 20: Cohesion* and the low number of mentions of *SM 3: Density, SM 13: Low degrees of separation* and *SM 19: Centrality/connectivity*. As a result, SM 20: Cohesion is not considered impactful on the co-creation-NPD relationship in the research context.

The validation of 19 of the 20 social media characteristics outlined in Chapter 3 provides a comprehensive list of the characteristics of social media that can be leveraged in the design of co-creation experiences. To an extent, this confirms the impact of social media on co-creation, identifying a number of characteristics that are responsible for a positive impact on the co-creation-NPD relationship. In respect to the design of co-creation experiences, this details specific characteristics that brands can look to use to promote the effectiveness of the co-creation experience.

A vital step in expanding the knowledge of the impact of social media on the co-creation-NPD relationship is to understand the specific ways in which each of the social media characteristics can deliver a positive impact on co-creation in NPD. This was achieved by examining the key learning points across the data set in respect to each social media characteristic, based on the explanations of how and why social media delivers an impact on co-creation. The discussion of the impact of social media not only identified the characteristics (Figure 5.5), but also provided detailed explanations as to how and why each social media characteristic is relevant. This

aspect of the analysis is vital in creating the link between social media and the co-creation-NPD relationship. In order to develop a greater understanding of the impact of social media, attention must be placed on the explanation of each factor from the interviewees.

5.3.3 Taxonomy of Social Media Characteristics

The collective expertise of the interviewees is highly valuable in understanding the interconnected relationships between the research elements. The purpose of this stage of analysis was to explore and summarise the responses of the interviewees in regards to the impact of each social media characteristic. The taxonomy of social media characteristics (Chapter 3) outlined a collection of characteristics based on the relevant literature and their potential impact on the co-creation-NPD relationship. The initial analysis of the impact of social media on co-creation validated 19 of these characteristics based on the experiences of subject matter experts. The aim is now to build a deeper explanation of how and why each social media characteristic can deliver an impact on the co-creation-NPD relationship by combining the key findings across the data set.

The aim of focusing the analysis on the impact of social media on co-creation is to explore the significance and appropriateness of the use of social media platforms (DESNs and VCCs) in the design and management of co-creation experiences. As co-creation is built on ongoing and intense interaction between brands and consumers, the findings here seek to contribute to knowledge of the design of effective co-creation experiences. A deeper understanding of the design of effective co-creation experiences was achieved through analysis of the co-creation factors across the NPD lifecycle. At this stage, the analysis seeks to explore the role of social media in enabling co-creation both as a platform to drive interaction and collaboration, and in tandem with the knowledge of the co-creation factors across the NPD lifecycle.

The key findings relating to the impact of the social media characteristics on the co-creation-NPD relationship are outlined in Tables 5.29 to 5.32 (overleaf). Tables 5.29 to 5.32 are built from the validated social media characteristics coupled with a rich explanation of how and why each social media characteristic delivers a positive impact on the co-creation-NPD relationship. The data is derived from the key learning points in reference to the collective responses of the interview participants.

Table 5.29 Social media characteristics, SM: 1-7

Social Media Characteristics	Explanation of Characteristic
SM 1: Range	• Social media gives access to reach people across borders and into regions where brands normally can't (through traditional market research) • Brands have access to more consumers (social media delivers a far better reach) • Social media platforms provide reachability and talkability of co-creation projects • Social media is a great way to advertise, gather awareness and recruit co-creators
SM 2: Diversity of information	• Social media provide access to a lot of consumers, larger numbers of co-creators and more diverse perspectives boosts creative participation (everybody has different specialised skills) • Social media provides access to fresh creativity from the crowd on a global scale, there is a huge difference in terms of consumer behaviour, attitudes, usages and tastes all across the world
SM 3: Density	• WOM has gone from your closest 30 relatives and friends to your 3,000 person network
SM 4: Roles	• Social media is skewed to the 'right' type of consumers, the extroverts and the influencers • Social media provides access to an audience who are more willing to express themselves • Social media influencers (with millions of followers) have a huge impact • There's a whole new realm of influencers from a Gen Z and millennial perspective • Social media allows brands to see their leads and connect with their leads. This extends the brand's reach
SM 5: Ease of ties	• Social media provides a platform to get out there and ask everyone (more effective than traditional communication) • Broader groups of consumers (not exactly in the brand's core audience) can discuss ideas • Brands now have the ability to create online communities very rapidly, and to be able to get feedback from those communities
SM 6: Strength of weak ties	• Social media allows brands to get more people involved, they can discuss NPD in a broader form • Brands are no longer seen as an intrusive force trying to extract something artificial, but almost a curious friend • Brands can connect with the millennial generation which is often a 'soft objective' • WOM has gone from your closest 30 relatives and friends to your 3,000 person network • Social media platforms are used to share experiences and influence decisions. Consumer verdicts can have immense consequences • Brands behave as other efficient media generations within the social network to lure consumers to participate • Interacting through social media is familiar to consumers, brands can approach consumers because it is what they are used to
SM 7: Overcoming geographical and temporal boundaries	• Social media allows a brand's reach to extend to people across borders • Social media provides a far better reach than ever before, for geography and age • Brands can co-create on a global scale, the world is digital and connected • Social media overcomes language constraints

Table 5.30 Social media characteristics, SM: 8-10

Social Media Characteristics	Explanation of Characteristic
SM 8: Knowledge sharing and creation	• The data collected through social media is much richer than traditional methods • Social media provides access to an audience who are more willing to express themselves • Brands get a deeper connection with consumers and understand more. Social media is crucial to be able to both understand, and put some language to some of the behavioural trends, and also for consumers to provide feedback when some of the early bundles are being created • Social media opens up the transportability of ideas and the transportability of the consumer voice to the brand • Put to them (consumers) some stimulus, even as a crude as a basic prototype or a crude idea and ask them to respond to that • Brands who engage with consumers can stimulate conversation and start a 'wildfire' • Feedback is instantaneous, brands post a question, a challenge, a statement on a platform and within moments have engagement • Never before was the access to knowledge, networks, and resources to develop new ideas as open and non-discriminatory as it is today • Online co-creation is easier as both consumers and brands are used to certain formats and ways of sending and sharing content • Social media platforms allow users to create and display content, hence this period of a creative generation and expression • Social media provides a free-chat situation. By asking a consumer to talk about an issue, they can either inadvertently or deliberately share things that are revealing or interesting • People don't feel that they're coming out of their natural habitat, they are more likely to give an honest answer • Social media reduces the traditional barriers of people having to fill out forms, answer telephone calls etc.
SM 9: Ease of knowledge conversion (capture)	• The digital revolution has enabled co-creation. Functionality wise, social media is geared towards innovation and product development • Social media allows brands access to quantitative representative samples from the consumer to guide their NPD direction • Social media platforms allow brands to cluster and prioritise consumer ideas • Social media can be used to track people's adoption and challenges in respect to using the product (longitudinal studies) • Social media tools e.g. quizzes, queries and tables are useful to gain quantitative data to see how relevant the concept is (converting an idea to a prototype) • Social media platforms allows masses of input, sorting and voting, and really rapid production of lists (of requirements) • Online platforms provide format to easily internalise knowledge and input it for qualitative research, concept screening and ideation • Online platforms facilitate the diffusion of ideas and implementation within the organisation
SM 10: Community effects (consumer motivation)	• The mind-set in terms of wanting to express yourself has changed over time, people are more open to sharing online • Social media provides access to an audience who are more willing to express themselves • The ethos that goes with social media promotes knowledge sharing (Zuckerberg's law of information sharing: "I would expect that next year, people will share twice as much information as they share this year, and next year, they will be sharing twice as much as they did the year before") • Social media core to drive engagement in co-creation, the mind-set that goes with social media is part and parcel of what co-creation is all about • Communicating through social media promotes engagement and openness in interactions • Invite conversations, debate, interactive comments amongst the community members. This gives richer collaboration, ideas and concepts • People in a community who share the same interests are more open to being creative and sharing information. They share, interact and come up with new and disruptive ideas

Table 5.31 Social media characteristics, SM: 11-15

Social Media Characteristics	Explanation of Characteristic
SM 11: Unlocking social relations	• Social media provides a platform for consumers to actually take part and do the co-creation (enabling conduit) • Social media is an access point for consumers to have dialogue with the brand • Social media provides accessibility, anonymity for many, and also creates healthy debates amongst the community • Social media has opened up the transportability of ideas, and the transportability of the consumer voice to the brand • Social media is a tool that opens and changes the innovation paradigm • Consumers are now able to go around the traditional distribution channels, their verdicts can have immense consequences • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions • Consumers are very efficient in managing social technologies • Interacting through social media is familiar to consumers, brands approach consumers through social media, it is what they are used to • Engagement via social media is less intrusive, consumers are much more comfortable in that medium • Brands are no longer seen as an intrusive force trying to extract something artificial, but almost a curious friend • When consumers are part of something they can influence (i.e. an online community) they are more eager
SM 12: Pervasiveness of social media	• There's really no one who is not on social media • The benefit of social media is that brands can get more people involved, they can discuss it in a broader form • Online co-creation platforms provide access to masses of people. Brands can tap into these people to co-create
SM 13: Low degrees of separation	• Social media allows brands to get more people involved, and discuss NPD in a broader form • Social media provides access to people across borders
SM 14: Ease of search	• Social media helps recruit the 'right' people, target co-creators through questions • Target millennials and Gen Zs they are going to shape attitudes and the way the product segment evolves
SM 15: Empowerment of consumers	• Consumers have massive control and power to kill brands or make them, they are aware of that power • Social media has disrupted the whole former method of marketing. Consumers see it is their right to get involved if they want to • The whole model is shifting instead of looking at efficiency from the inside out • Concerned consumers delve deep into the wondrous world of production behind their everyday products and services • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions • Consumers now have unlimited access to the information and resources needed to co-create their own world • Social media fuel social pressure, brands have found themselves forced to change their production processes for the better • Consumer verdicts can have immense consequences, they have inexhaustible creative power • Consumers now cultivate the roots of co-creation • Brands can't control when the fire starts (with social media), influencers who say negative things can cause a downward spiral • The consumer will tell you what is wrong – 'fix it or I don't buy it'

Table 5.32 Social media characteristics, SM: 16-18

Social Media Characteristics	Explanation of Characteristic
SM 16: Intensity of interactions	• Co-creation requires discussions between the brand and consumer, these interactive sessions can occur online • Brands have to involve consumers in a way that they can really express themselves, just sending an email won't work • Brands have access to more real-time feedback • Brands host conversations, channel and probe • Social media allows for multiple forms of expression. Brands can easily capture, store and comprehend through information • Video is powerful in helping people to understand functionality, how the product performs, where the product performs best in situ • Online gives more ways of expression to the consumer, not only in a verbal form; people can upload photos and videos. • Web platforms, 3-D technology and augmented reality are useful in helping imagine new products • Social media platforms allow the community to articulate their idea, visualise their idea and produce something that is tangible • Feedback for product changes and tweaks are gained through social media
SM 17: E-WOM	• Co-creating through social media allows consumers to be passionate about what they are doing and advocate it • Consumers can be involved in bringing the product to life through social media (powerful PR and advertising) • Consumer co-creators produce short films and they distribute those on social media themselves • Co-creators are the ones who write blogs about how great products are, they are the ones who become huge advocates for the product • WOM has gone from your closest 30 relatives and friends to your 3,000 person network
SM 18: Visibility of preferences/interactions	• Social media helps target the 'right' people • Consumers see examples of co-creation which they wouldn't see if they weren't on a social network • Sometimes people just talk online, they can either inadvertently or deliberately share something that is revealing or interesting • If you leave people alone, and let people do what they want, upload when they feel, you get far more insight • Social media profiles provide you with databanks which are very useful • Social media can be used to track people's adoption and challenges in respect to using the product (longitudinal studies) • Brands can understand the emotional issues consumers face • Consumers give unadulterated feedback, they're just complaining online, they're enthusiastic online, they're being brand ambassadors • Social media is a great tool to research online forums and bloggers where communities of the target audience gather online usually • The openness and reachability of social media and the ability to share ideas is an opportunity for fame • Social media allows insight into consumer's lives, and it allows real-time insight and real-time feedback
SM 19: Centrality/connectivity	• Social media has fundamentally changed NPD, you can sit at your desk, talk to people, run groups or a portal • WOM has gone from your closest 30 relatives and friends to your 3,000 person network, • Social media influencers (with millions of followers) have a huge impact • There's a whole new realm of influencers from a Gen Z and millennial perspective • Social media allows brands to see their leads, connect with their leads, extend the brand's reach

Tables 5.29 to 5.32 present an expanded taxonomy of social media characteristics in line with the aim of exploring the role of social media in enabling co-creation. This taxonomy outlines a comprehensive list of social media characteristics that are considered to positively impact the co-creation-NPD relationship through the experience of subject matter experts. The nature and significance of each characteristic is clear in respect to both how and why they impact the co-creation-NPD relationship. This is of particular value in providing a deeper insight into the ways in which social media enable co-creation, and how social media can be used in the design of effective co-creation experiences.

In addition to the findings outlined in Tables 5.29 to 5.32, a number of themes emerged in respect to the impact of social media on co-creation in NPD. As the data were collected from subject matter experts who have used social media in the design of co-creation experiences, the research findings provide a deeper insight into the deliverable impact of the use of social media on the co-creation-NPD relationship. Exploring this avenue is valuable in resolving the interconnected relationships between co-creation, NPD and social media further, and delivering a greater fundamental understanding of the research topic. The themes emerging from the analysis are outlined in the following section.

5.3.4 Social Media Impact Themes

A number of themes centred on the impact of social media emerged from the data; these are discussed in regards to their potential to positively impact the co-creation-NPD relationship. This provides a deeper insight into the specific impact of social media in enabling co-creation, building on the findings outlined in Tables 5.29 to 5.32. The themes are defined as information, behavioural, promotions, targeting and recruiting co-creators and communication impacts. The discussion in this section outlines the key findings and learning points in respect to these themes, providing supporting quotes where appropriate to add emphasis.

Information (access to an operant resource): Information and knowledge are regarded as vital resources in NPD. The notion that consumers possess valuable knowledge in regards to NPD is a constant theme throughout this research. This is reflected in the discussion of the co-creation factors, whereby the knowledge of consumers in regards to their needs and their ability to contribute to the design of solutions was unanimously stressed. Building on this, a key theme emerging from the social media analysis is the role of social media in providing access to a volume of

consumers, diverse perspectives and consumer skillsets. This theme focuses on the resource-based impact of access to information.

Co-creating with a large number of consumers was considered a benefit particularly in the early stages of NPD. Characteristics such as the *SM 12: Pervasiveness of social media*, *SM 1: Range, SM 18: Visibility of preferences/interactions* and *SM 5: strength of weak ties* underline this theme. Social media was regarded as providing access to a volume of consumers from which brands can both directly and indirectly solicit information. Access to a volume of consumers allows brands to co-create on a much wider scale. This was particularly emphasised in regard to upfront homework and ideation. Volume was considered beneficial in identifying problem states, developing key insights and a volume of co-created ideas from which the brand can refine, iterate and select. This is corroborated by the reaction of *PARTICIPANT A:*

> *"The benefit of social media is that you get more people involved, they can discuss it in a broader form."* (PARTICIPANT A)

Additionally, it was widely identified that brands have the ability to 'sit in' on consumer communities to both watch and listen to consumer-to-consumer interactions. This uncovers the tacit knowledge that consumers possess, and pertains to the way consumer-to-consumer interactions promote knowledge sharing and conversion into explicit knowledge. Moreover, the possibility of consumers sharing problem states or new product ideas that may be 'off strategy' or not previously considered was widely identified. This was regarded as a key benefit as brands are not able to rely solely on their internal resources and capabilities. The 'out-of-the-box' thinking that consumers can deliver was regarded as a benefit, enlarging the knowledge base of the brand. This is signified by the reaction of *PARTICIPANT E:*

> *"Your customers will tell you what they need, if you both watch them and listen to them."* (PARTICIPANT E)

With volume comes diversity. Diversity of consumer perspectives was regarded as providing a more 'accurate' picture of the consumer landscape, as the co-creation efforts are less likely to be centred on a specific demographic, geography or consumer profile. For example, *PARTICIPANT C* discussed the ability to use social media to carry out early stage research in different regions.

> *"It allows you to really get deep into regions of the country where you can't normally."* (PARTICIPANT C)

There was also widespread recognition of the skillsets consumers can bring to the table. For instance, co-creating promotions solutions (launch) or early stage prototypes (development). Co-creating with a volume of consumers gives the brand access to a wider range of skilled consumers. *PARTICIPANT L* identified this:

> *"Social media provides access to fresh creativity from the crowd at a global scale."* (PARTICIPANT L)

The information impact of social media was discussed in respect to each stage of the NPD lifecycle; this is reflected by the above discussion, which outlines a number of features of this impact on the various stages of NPD. The analysis and findings in respect to the driving factors of co-creation promotes the value of co-creation in providing brands' access to valuable and relevant information. Social media was regarded to enhance the role of co-creation in providing access to information by connecting brands and consumers on a wider scale and enabling higher levels of information sharing and exchange.

Information (process-based impact): In addition to access to information, the role of social media in providing tools to sort, understand and filter data from co-creators was also highlighted. This denotes an impact on the process of capturing and making sense of information, by providing an efficient platform and method to internalise consumer knowledge. This leans heavily on *SM 9: Ease of knowledge conversion*, and was summarised by *PARTICIPANT M.*

> *"Web platforms, 3-D technology and augmented reality are useful in helping imagine new products."* (PARTICIPANT M)

This is particularly significant in respect to a brand's ability to filter and process the masses of data resulting from co-creation. A previously stressed notion in this chapter is that brands must have a structure and process in place to internalise the information resulting from co-creation. If not, this can increase the complexity of the NPD process, potentially result in information overload or result in a negative impact on the resources employed. This aspect of the information impact of social media highlights

the tools associated with social media platforms that can aid the process of making sense and internalising information, thereby reducing the risks outlined above.

The information impact of social media presents a significant bearing on co-creation in NPD. NPD is a highly knowledge intensive process and a key way in which co-creation is considered to impact NPD is through information exchange between brands and consumers. Accordingly, the role of social media in enabling higher levels of information exchange directly correlates with the benefits of the co-creation approach. This presents a significant impact of using social media in the design of co-creation experiences and addresses a key impact of social media on the co-creation-NPD relationship.

Behavioural impact (brand-consumer relationship): The emergence of social media has impacted the brand-consumer relationship. This is a notion both evident by the review of the literature (Chapter 2) and the research findings. Social media was described as the 'enabling conduit', connecting the brand and the consumer. This theme was discussed in regards to both the changing behaviours of consumers, and brands through social media. This theme is characterised mainly by *SM 11: Unlocking of social relations*; *SM 15: Empowerment of consumers* and *SM 10: Community effects.*

A key aspect of this theme is the changing behaviour of brands, and how this affects the perception of the consumer. Social media was discussed as impacting the brand-consumer relationship by changing the way consumers view brands. Co-creation through social media was regarded to be less 'intrusive' as people are more open to sharing information online; of particular relevance was the mention of Zuckerberg's law of information sharing (*PARTICIPANT B*).

> *'I would expect that next year, people will share twice as much information as they share this year, and next year, they will be sharing twice as much as they did the year before'* (Hansell, 2008).

This outlines the nature of social media and the reduction of barriers to knowledge sharing. This was considered relevant when discussing the ability of brands to engage with consumers and appear less intrusive. The notion was expressed that brands can now be perceived as a 'curious friend'. The following statement by *PARTICIPANT G* supports this:

> *'Brands behave as other efficient media generations within the social network, and that's the way to lure the consumers to participate.'*

This implies that social media reduces barriers to knowledge sharing and exchange, as the traditional distinction between brand and consumer is less apparent online. This echoes the sentiments expressed in the literature review in respect to the changing nature of the brand-consumer relationship.

Moreover, the changing behaviours of consumers was a key talking point, specifically the empowerment of consumers and the community effects of social media. This involves the notion that consumers are now more open to sharing knowledge. This signifies the growing level of skilled and knowledgeable consumers, and a greater demand from the consumer to collaborate in NPD. Consumer empowerment results from the greater access to information consumers now have. The role of consumers in proposing technical solutions was stressed in the discussion of the driving factors. Social media was regarded as key in providing consumers access to information with which they derive valuable knowledge. Social media was identified as giving consumers unlimited access to information, providing them with the tools to significantly collaborate in NPD. This theme leans on *SM 2: Diversity of information, SM 8: Knowledge sharing and creation*, and *SM 15: Empowerment of consumers.* Essentially, greater access to information equips consumers with the skills to co-create in NPD.

In addition, consumers are more aware of the co-creation approach through social media. The diffusion of information through social media was highlighted as making consumers more aware of co-creation, and in turn, they actively seek to co-create with brands. This provides brands with motivated co-creators to collaborate with, and also the opportunity to deliver value to consumers through experience and interaction. *PARTICIPANT A* succinctly explained this:

> *"Consumers feel empowered; they see that anything is possible, so it has disrupted the whole former method of marketing. I think they see it is their right to get involved if they want to."* (PARTICIPANT A)

And:

> *"Consumers see examples of co-creation which they wouldn't see if they weren't on a social network."* (PARTICIPANT A)

Social media not only equips consumers with the knowledge to contribute value in NPD, but also is also responsible for the diffusion of the co-creation approach, as more consumers see examples of brands collaborating with consumers. As more and more consumers become aware of the co-creation approach, the likelihood is that brands will have access to greater numbers of motivated consumers, potentially delivering a greater impact in respect to their co-creation efforts.

Another aspect of empowerment is the growing voice and influence of consumers in shaping attitudes towards brands and products. This reflects *SM 4: Roles* and *SM 15: Empowerment of consumers*. Social media was described as opening up the 'transportability of the consumer voice' by giving them (consumers) a platform where they can openly share and express their views. This theme highlights the power of influencers with 'millions' of followers and how they can affect the views and purchase decisions of other consumers. A key notion expressed was the 'people-powered' information channels that impact the decisions of consumers. This ties in to the discussion of word-of-mouth advertising and consumer advocacy as driving factors. Brands have to be aware of the power of consumers in shaping attitudes towards new products. Co-creation not only ensures that the product and experience meet the expectations and perceptions of consumers, but co-creating with influencers can significantly impact the success of a new product launch. This was reflected by *PARTICIPANT I*:

> *"That's one thing about social media, you can't control when the fire starts, if you get a number of influencers who say negative things, you can't prevent the downward spiral."* (PARTICIPANT J)

This embodies the notion that consumers are assuming greater power in the marketplace and there has been a downstream shift in power from brand to consumer. Social media is considered to be a key factor driving this shift as consumers are provided with a greater voice, reach and influence, transitioning them from a passive audience to a co-creator of value.

One factor key driving the co-creation paradigm is the changing nature of the brand-consumer relationship and the rise of the empowered consumer. This is discussed in

depth in Chapter 2. The discussion of the behavioural impact of social media explores the impact on the brand-consumer relationship and the empowerment of consumers. The characteristics of social media promote information exchange, interaction and continuously equip consumers with the knowledge to collaborate in NPD. In effect, social media is key in driving the emergence of the co-creation paradigm (impacting the brand-consumer relationship), but also delivers an impact on the design of co-creation experiences through the characteristics discussed.

Promotions: This theme highlights the role of the consumer in advocating and promoting new products through social media. Advocacy reach was regarded as crucial in the diffusion and success of a new product; this is stressed in the discussion of the co-creation factors. In regards to social media, this impact is relevant in a number of ways. Social media provides a platform that gives consumers a voice to share the views and opinions on a brand or product. Consumers can openly discuss and promote new products through social media platforms as advocates. The significance of advocacy reach is apparent in the discussion of the co-creation factors and social media is regarded to proliferate this reach. This is embodied by *SM 4: Roles*, *SM 12: Pervasiveness of social media* and *SM 17: E-WOM* and summarised by *PARTCIPANT E*:

> *"WOM has gone from your closest 30 relatives and friends to your 3,000 person network." (PARTICIPANT E)*

The above statement outlines the impact of advocacy through social media in respect to word-of-mouth advertising. People tend to maintain connections with larger numbers of people online than in their offline network. This is significant in respect to advocacy reach as, essentially, this gives consumers a greater audience to which to promote a brand or product.

Another aspect of this theme, linking to the discussion of the co-creation factors, is the role of consumers in co-creating marketing and promotions solutions. Consumers were described as efficient in 'managing social technologies'. This suggests that the knowledge consumers possess in respect to social media is valuable in co-creating digital advertising and promotions campaigns. Consumers are able to utilise their knowledge of how people interact and behave on social media platforms, and use this to inform their co-created solution. This also ties into the WOM aspect of this

theme, as consumers can distribute their own co-created promotions solutions throughout their online network. *PARTICIPANT A* mentioned this:

> *"Consumer co-creators produce short films and they distribute those on social media themselves."* (PARTICIPANT A)

The promotions impact of social media centres on a number of features. The overarching implication on NPD is that social media provides consumers with a voice, a greater reach and the knowledge to co-create promotions solutions. Consumers can drive the diffusion and awareness of new products through advocacy to a greater degree, as they can easily connect with people and openly share their opinions and attitudes towards a product and brand. Moreover, their knowledge of social media (a key touch point in digital marketing) provides them with the tools to co-create promotions solutions, further enhancing the promotions impact of social media.

Targeting and recruiting co-creators: Targeting co-creators was a recurrent inhibiting factor discussed by the interviewees, particularly the heterogeneity of consumers and the implications that a poor consumer sample can have. In regards to the impact of social media, the visibility of preferences and the presence of consumer communities centred on a brand or product category were regarded as central in the recruitment and targeting of co-creators. This theme ties in to *SM 4: Roles* and *SM 18: Visibility of preferences/interactions*. A virtual consumer community centred on a specific brand or product category represents a group of consumers with a shared interest. From the brand perspective, this groups consumers with relevant knowledge and experiences in regards to their product offerings. In addition, a key notion expressed was that the visibility of information such as demographics, interests and activities on social media is useful in creating a greater understanding of potential co-creators. Amongst the interviewees discussing this factor, *PARTICIPANT I* succinctly elucidated this:

> *"Social media is a great tool to research online forums and bloggers where communities of the target audience gather online usually, and then we can see what their concerns are and their feedback."* (PARTICIPANT I)

Social media is considered to aid brands in targeting consumer co-creators through the visibility of their preferences, activities and interests. Online groups in DESNs and

VCCs reduce the search costs incurred by brands as consumers gather through shared interests, thereby providing easier access to knowledgeable consumers in a brand or product category. This overcomes a number of beliefs discussed in respect to the inhibiting factors of co-creation and is a key impact that can be realised through the integration of social media in the design of co-creation experiences.

Communication: The final theme draws from the co-creation factors and the co-creation literature. Co-creation requires ongoing and intense dialogue between the brand and consumers (i.e. Dart framework; Prahalad and Ramaswamy, 2004). Whilst it is widely recognised that consumers possess valuable knowledge, their ability to articulate this knowledge is often questioned. Relevant social media characteristics include; *SM 8: Knowledge sharing* and *SM 16: Intensity of interactions.*

Intense interactions between the brand and consumer rely on ongoing and instantaneous communication to ensure the consumer is able express their knowledge both fully and accurately. A number of features of social media characteristics were regarded as beneficial in respect to this impact. Social media was regarded as providing a platform on which interactive sessions can take place. This allows rich two-way conversations to occur, brands are able to probe and stimulate interaction to ensure the consumer is able to fully articulate their knowledge. In addition, social media platforms were championed over the more 'traditional' methods, such as email, phone conversations and letters. Social media provides a platform where both brands and consumers can congregate and have open, two-way conversations. *PARTICIPANT C* deliberated on this:

> *"Social media has fundamentally changed NPD; you can sit at your desk talk to people, run groups or a portal."*

Furthermore, the 'interactivity' of sessions was understood to not only allow two-way, rich and meaningful conversations, but also the speed of interaction was widely discussed. The following statement embodies this:

> *"Feedback is instantaneous, you can post a question, a challenge, a statement on a platform and within moments have engagement."*
> (PARTICIPANT G)

This stresses the ubiquitous connectivity facilitated by social media and was considered key in stimulating both the speed and level of engagement in co-creation. Speed of interaction provides benefits to the rate at which brands are able to move through the NPD lifecycle, as knowledge is continuously and quickly exchanged and integrated to ensure the brand can move forward with the NPD project.

Another significant aspect discussed was the multiple forms of expression that social media provides. These include verbal, written, videos and images, and are seen as significant in promoting information sharing and the articulation of consumer knowledge. The myriad of ways consumers can express themselves was viewed as highly beneficial in allowing consumers to articulate both their tacit and explicit knowledge. *PARTICIPANT C* explained this:

> *"Social media tells the visual and audio and video offers rich insight, it's less wordy, so if you think a picture is worth a thousand words, you know there's so much you can capture and store and understand, and comprehend*" (PARTICIPANT C)

This once again signifies the impact of social media in enabling consumers to articulate their knowledge through means of expression they use in their daily lives. The communication impact of social media provides a significant bearing on co-creation in NPD. Speed is continuously stressed from the brand perspective in respect to the desire to move quickly through the NPD lifecycle. By coupling the access to information with the speed at which brands can engage, solicit feedback and stay close with consumers, this presents a significant benefit to co-creation. Moreover, through multiple forms of expression, brands have access to deeper and richer information and can overcome the traditional criticisms of consumers not being able to articulate their needs.

The impact themes provide a deeper insight into the interconnected relationships between co-creation-NPD and social media. The findings of the analysis in respect to the social media characteristics and social media impact themes contribute profound knowledge about the role of social media in enabling co-creation and ultimately impacting NPD. These findings can be used in tandem with those of the co-creation-NPD relationship (co-creation factors across the NPD lifecycle) to design effective co-creation experiences enabled by social media.

The analysis to this point focuses on the relationships between co-creation, NPD and social media, guided by the conceptual framework and the parameters of the co-creation factors, stages of the NPD lifecycle and social media characteristics. This approach to the analysis is driven by a focus on the design of co-creation experiences. This is apparent through a deep understanding of the co-creation factors across the NPD lifecycle (factors the design of the co-creation experience should seek to promote or avoid) and the role of social media in enabling co-creation and impacting the co-creation-NPD relationship. A focus on the design of co-creation experiences is driven by the notion of complete co-creation. The findings to this point seek to provide guidance in the implementation of a complete co-creation approach.

Complete co-creation is considered to maximise the high-level impact of co-creation in NPD. Effectively a complete co-creation approach (derived from the effective design of co-creation experiences) is as an antecedent of a high-level impact of co-creation on NPD. This has guided the analysis to this point to examine the relevant aspects of the conceptual framework in the steps leading up to a high-level impact of co-creation on NPD. The final focus of this chapter considers the research findings from the brand perspective in respect to the high-level impact of co-creation on NPD competences.

5.4 Co-creation-NPD Relationship (High-level Impact of Co-creation)

The final discussion in this chapter brings the analysis full circle, examining the research findings in respect to the high-level impact of co-creation on NPD. This is directly in line with the research aim, examining the findings in respect to the role of co-creation in enhancing NPD competences. The co-creation paradigm states the role of both the brand and consumer as vital collaborators in the co-creation of value. This is underlined by the brand integrating consumers into the organisation's architecture and empowering them with opportunity to co-create through the NPD lifecycle. In respect to NPD competences, assuming consumers possess valuable skills or knowledge in respect to an NPD project, adopting co-creation is likely to extend the competences of the brand by integrating these consumer skills and knowledge. The final aim of this analysis is to examine how this manifests in respect to NPD, or what the impact of co-creation (i.e. collaborating in the creation of value) is on the NPD lifecycle.

A deeper understanding of the high-level impact is particularly valuable in resolving the relationship between co-creation and NPD, and in exploring the ways in which co-

creation can deliver a competitive impact. In effect, this is as a result of effectively designed co-creation experiences and the implementation of a complete co-creation approach. This illustrates how the approach in the analysis of the brand perspective contributes to the overall research aim.

The discussion to this point has examined the data in respect to the design of effective co-creation experiences. A focus on the driving factors of co-creation and impact of social media delivers an initial knowledge of the potential impact co-creation can deliver in NPD. The driving factors loosely typify a range of positive impacts co-creation can deliver across the NPD lifecycle. Essentially brands are driven by the potential benefits (driving factors) that can result from co-creation. A perfect example of this is *BD 6: Faster speed-to-market*. Being able to move fast in NPD represents both a driving factor, and a brand's capability (competence) in respect to the stages of the NPD lifecycle. Moreover, the analysis of social media explores the role of DESNs and VCCs in enabling co-creation, boosting the impact of co-creation, i.e. the social media impact themes. The aim of this analysis is to identify and explore the themes in respect to the high-level impact of co-creation on NPD, building on the research findings to this point. This is achieved by leveraging the insight gained from the interview participants to deliver a greater fundamental understanding of the high-level relationship between co-creation and NPD.

In respect to the research aim, it is important to explore the ways in which co-creation can enhance NPD competences, this is done by examining the high-level impact of co-creation on NPD. The discussion in Chapters 2 and 3 outlined the relevant literature in respect to impact of co-creation in NPD. Whilst co-creation is widely regarded as a competence enhancing approach to NPD, the specific ways in which co-creation delivers an impact throughout the NPD lifecycle remains unclear. The aim of this analysis is to underline this impact by examining the specific ways in which co-creation impacts the NPD lifecycle. New product development in the context of this research is a wide-ranging term referring to a series of activities in understanding the needs of consumers, designing solutions to meet these needs and launching and promoting these solutions. A number of themes emerged through the data analysis in respect to the high-level impact of co-creation in NPD. The themes identified through the data analysis are in line with the overall NPD process in the context of this research.

The research findings have been built through the responses of subject matter experts who have directly experienced the impact of co-creation in real-life NPD scenarios. This is significant as a greater knowledge of the impact of co-creation in NPD is likely to boost the implementation of a co-creation approach (as it is clearer how co-creation can positively impact a brand's value creation processes). The aim of this is to identify and define specific deliverable impacts of co-creation throughout the NPD lifecycle, to build a greater understanding of the high-level relationship between co-creation and NPD. It emerged across the data set that the impact of the driving factors centred on five areas; *knowledge and insight, process, product performance, marketing* and *experience development.* The key findings are outlined below through a summary of the key talking points for each impact theme.

Knowledge and insight impact: New product development is widely regarded as a knowledge intensive process. This is in respect to both the technical knowledge required to develop product solutions, and a deep understanding of consumers' wants and needs. The role of co-creation in providing brands with access to an abundance of traditionally 'consumer held' knowledge was discussed throughout Chapters 2 and 3. This was reiterated through the reaction of the interview participants, as the impact of access to consumer knowledge, both from the outset and throughout the NPD lifecycle, was widely stressed.

Great emphasis was placed on the power of co-creation in understanding and developing key insights as the first stage in developing a product. Developing insights (traditionally in the upfront homework stage of NPD) is vital in uncovering need states, creating a problem definition and ensuring from the onset, that the NPD project is well informed and an effective product solution is developed. Significant value is placed on the impact of co-creation on insight development. The interview participants reiterated the concepts discussed in the literature, with *PARTICIPANT B* highlighting the notion that valuable knowledge and information resides with consumers, and co-creation provides access to this knowledge (by reducing barriers to knowledge sharing). A clear understanding of need states and problem definition are fundamental to an efficient product lifecycle and effective product solution. This was particularly emphasised by *PARTICIPANT J,* who outlined the benefits of maintaining a close collaborative relationship with consumers in the early stages of NPD, enriching the brand's resource base and 'drawing' a landscape of needs. The early stage knowledge and insight impact of co-creation presents a vital foundation for an NPD project.

An additional consideration in respect to the knowledge and insight impact of co-creation was the volume and creativity of ideas and information brands have access to through co-creation. Volume comes as a result of co-creation with large numbers of consumers. Each consumer has a unique viewpoint and perspective on what a product should deliver. The term creativity refers chiefly to the fact that consumers approach NPD projects in different ways and are not restricted by the organisation's hierarchy or an institutional way of thinking. This was considered particularly valuable as the early stages of NPD are considered the 'wide-end' of the funnel, and a brand should solicit information and ideas from all sources. This notion was particularly stressed by *PARTICIPANT L*, who considers the creativity, volume and quality of the consumer impact to be a substantial source of value gained through co-creation. This impact of co-creation allows the brand to leverage their internal expertise against 'fresh' thinking from consumers.

The emergence of this impact supports the role of knowledge as a vital operant resource in NPD and co-creation in providing access to this. This impact signifies the result of co-creation in delivering a volume of knowledge, 'out-of-the-box' thinking, a deep understanding of the target consumer, and their needs and expectations in respect to a new product.

The knowledge and insight gained from co-creation is utilised across the whole NPD lifecycle, and its impact stems further than just understanding the needs and requirements of consumers. Consumers view NPD problems in a different light, they are not restricted by the brand's hierarchy and their knowledge is built directly on their experience in the product category. Co-creation provides the means to capture real-time knowledge in contrast to traditional market research methods, and ultimately puts the consumers directly at the heart of the NPD process.
By interacting with consumers throughout the NPD lifecycle, brands can continually add to their knowledge base, sense-check concept ideas, prototypes and promotions. Moreover, equipping the internal team with greater knowledge is considered to reduce resource wastage and boost internal empowerment as everyone is working towards the same-shared goal.

Process impact: Analysis of the driving factors highlights the role of co-creation in boosting the efficiency of the NPD lifecycle through speed, cost reduction and the need for fewer resources. Collecting these efficiency-boosting factors together, the

process impact of co-creation was widely discussed across the data set. The key characteristics of this impact relate primarily to the role of co-creation in allowing brands to produce effective product solutions in an efficient and timely manner. This is built on a deep understanding of consumers' needs, constant feedback and iteration, substituting internal input with consumers, and the ability to move fast and be agile in NPD.

There was a clear focus on the impact of co-creation on the efficiency of internal processes, specifically the positive impact on the cost, time and resources employed. *PARTICIPANT E* for instance emphasised the role of co-creation in reducing the time of the product lifecycle (from ideation to launch). *PARTICIPANT F* stressed the impact of co-creation through the NPD lifecycle in reducing the need for pivots in NPD and the resources employed. Additionally, *PARTICIPANT G* highlighted the impact of co-creation in reducing or merging traditional NPD stages. For instance, providing the ability to move quickly with self-validated (consumer led) product propositions with a volume of consumers. These sentiments illustrate the role of co-creation in allowing brands to move fast and be agile throughout NPD.

A particularly relevant perspective in respect to this research was that of *PARTICIPANT F* who discussed the effects of a complete co-creation as 'the most efficient approach to NPD'. A key consideration taken from this is that in order to maximise the impact of co-creation (in this case performance impact) a complete co-creation approach is necessary. This outlines not only that a complete co-creation approach is both achievable and desirable in a real-life NPD scenario, but also should be recognised as the optimal approach to NPD. This corroborates both what is proposed in the literature, and also the core foundations of this research project.

The emergence of this impact theme is of particular relevance as brands continuously strive to boost the efficiency of their internal processes. The outcome is an understanding of the impact of co-creation in boosting the efficiency of internal processes, specifically the positive impact on the cost, time and resources employed. Complete co-creation is understood to reduce the need for pivots in NPD, reducing time to market and the resources employed. In this regard, co-creation not only impacts the outcomes of NPD (i.e. product), but also can influence the efficiency and effectiveness of a brand's processes.

Product performance impact: The discussion in Chapters 2 and 3 outlines the need for co-creation in developing valuable and competitive product solutions. This is

supported by the research findings as the results of co-creation (i.e. a product solution) and the impact on product performance were continuously discussed. A key talking point was the role of co-creation in delivering highly relevant, need-reducing and competitive solutions. This was supported by *PARTICIPANT A,* who promoted the impact of co-creation in boosting product performance through building consumer affinity towards the brand. Emphasis was placed on the effect on brand KPIs following the introduction of a co-created product. For example, *PARTICIPANT A* discussed key metrics, detailing a massive turnaround in a failing product by co-creating and repositioning to appeal to different consumer groups. A key characteristic of the impact of product performance is the strengthening of the bond between brand and consumer and the resultant outcomes of this.

Moreover, the effect of maintaining a close collaborative relationship with consumers throughout the product lifecycle was deemed to impact product performance. *PARTCIPANT M* outlined the role of co-creation in ensuring that new products meet consumers' explicit and implicit needs. Similarly, *PARTICIPANT F* outlined the effect of co-creation on the adoption of new products, particularly the relevance and attractiveness of co-created solutions. Co-created products are built on the collective knowledge of the brand and consumers; the results are high-quality, need-reducing products that fit the needs of the market. Consumer knowledge was regarded to go beyond their needs and expectations, and potentially be of value in respect to the technical aspects of NPD. The value consumers can deliver in terms of high quality and relevant solutions was stressed across the data set. *PARTICIPANT H* discussed instances of brands being able to 3D print high-quality consumer-created concepts, and identified the increased likelihood of co-created concepts to test well and reach launch stage.

Brands must be equipped with the knowledge to ensure that co-created products are effective in meeting the needs of the market. The collaboration between brand and consumer results in highly relevant and need-reducing solutions; the outcome of this is an impact on product performance. This is derived from a deep understanding and integration of consumer knowledge and the strengthening of the relationship between the brand and consumer.

Marketing impact: The marketing impact of co-creation was widely acknowledged; particularly in regards to advocacy reach and the roles that consumers can play in creating marketing solutions for new products. *PARTICIPANT K* outlined the value of

co-creating marketing and promotions campaigns when launching new products. The ability of consumers to deliver high quality, out-of-the-box and relevant material in response to a marketing brief was a key talking point. This involves integrating the skills and knowledge of consumers in respect to marketing new products as an extension of a brand's approach to marketing. This reiterates the value of consumer knowledge across all stages of the NPD lifecycle and was deemed to significantly impact the launch of new products.

In addition to the direct collaboration on marketing and promotions solutions, co-creation was discussed in respect to the impact on consumer loyalty and affinity towards the brand. *PARTICIPANT* C discussed the benefit of co-creators becoming product advocates, and using social media to promote new products. This advocacy reach was considered to significantly impact the effectiveness of marketing new products and was unobtainable through traditional marketing approaches. *PARTICIPANT B* suggested that co-creating with a volume of consumers gives a brand a target market that are already aware of the value proposition. Similarly, *PARTICIPANT F* outlined the relevance and positive attitudes towards co-created products. In particular, the role of co-creation in reducing the need for aggressive sales techniques and the 'boost' brands experience when launching a co-created product.

Co-creation is regarded to impact the marketing of new products through empowering consumers to co-create their own marketing solutions, and in promoting WOM and consumer advocacy. In turn, this impact stresses the role of co-creation in increasing the effectiveness of marketing and promotions solutions, and in providing alternative routes in respect to marketing new products. This signifies a high-level impact on a key process underpinning the successful launch of a product. The outcomes of this impact materialise in the latter stages of the NPD lifecycle (i.e. launch), however this is built on the ongoing collaboration and interaction between the brand and consumer to boost loyalty and promote advocacy.

New experience development impact: A core principle of the co-creation paradigm is that value creation has shifted from a traditional value-chain approach to one where value is co-created through experience environments. This is signified by a shift in how value is created and perceived. The discussion in Chapters 2 and 3, in respect to the co-creation and S-D logic literature, stresses the significance of this in the context of this research project. Of particular relevance is the notion that value is no

longer embedded in tangible products (goods are no longer the delivery mechanism of value), but in the experience delivered alongside the product and the product in use (experience is the locus of value creation). In effect, the ability to deliver value through experience in itself is a core competence that brands must possess in the current marketplace. This presents a significant philosophical underpinning of this research project, and it was fundamental for the data collection to explore this.

As the research is bound to the consumer goods industry (one in which there is a focus on tangible products), it was interesting to explore whether brands placed a focus on experience as the source of value, and if in fact their co-creation efforts were driven by a focus on delivering valuable experiences. The emergence of 'new experience development' as an impact theme signifies a recognition from the brand perspective that organisations must focus on delivering valuable experiences alongside tangible products. The discussion of this theme in 'impacting' NPD also stresses the outcomes of adopting this approach across the NPD lifecycle. This provides evidence that the mind-set of those within brands has shifted/is shifting in respect to value-creation, and this was regarded as both a key driver and impact of co-creation.

The need to deliver customisable and valuable experiences alongside products emerged as perhaps the most significant trend in shifting innovation management approaches to co-creation. This corroborates the literature (S-D logic and co-creation) demonstrating that brands (in real-life co-creation-NPD scenarios) recognise the shifting nature of value. This is particularly meaningful as valuable experiences are directly as a result of co-creation, implying that the need to adopt a co-creation approach is ever growing. *PARTICIPANT D* described the development of valuable experiences as 'a must in today's environment'. In addition, the need to reengineer consumer experiences was described as an 'outside-in reengineering', necessitating the need to involve consumers heavily. *PARTICIPANT I* stressed the importance of delivering unique experiences to educate consumers and invite them into being part of the brand. This was achieved through the use of augmented reality packaging, experience-based events and apps alongside the tangible products.

This impact of co-creation on NPD is based on the understanding that value must be delivered through experiences. The co-creation approach is considered the mechanism that provides brands with the competences to co-create value through experience. The research findings stress two key ways in which co-creation facilitates

this. Firstly, the ongoing interaction and collaboration between the brand and consumers is a source of experiential value. Aside from the outcomes of co-creation (i.e. a new product) interaction and involvement is considered a source of value. In this regard, production and consumption are inseparable components of value creation, and consumers derive value not only through the product, but also through the experience of being involved in the development of a product.

Additionally, the ongoing collaboration between brands and consumers is considered to equip brands with a greater knowledge of the expectations and requirements of consumers in respect to the experience delivered alongside the end product. This includes how consumers use the product, what it means to them, and the ways in which brands can deliver valuable experiences. This once again places the focus on knowledge as an operant resource. However, in this respect, it provides brands with a profound understanding of how consumers attribute value to the experiences delivered alongside products.

The identification of high-level impact themes outlines the role of co-creation in extending the competences of brands in respect to NPD projects. This is based on the insight gained from subject matter experts who discussed these themes in respect to real-life co-creation-NPD scenarios. This provides a deeper knowledge of the high-level relationship between co-creation and NPD. The themes and supporting discussion outline how and why co-creation can deliver an impact in NPD. This includes specific impacts throughout the NPD lifecycle and the need to co-create valuable experiences. This contributes to the understanding of the co-creation-NPD relationship, by exploring the high-level impact in the research context. The notion of enhancing brands' competences in respect to NPD implies that co-creation is likely to deliver a competitive impact. This forms a key aspect of the discussion in Chapter 7, exploring the implications of the research findings (the interaction of co-creation, NPD and social media) in respect to the factors that underpin NPD success.

5.5 Chapter summary

This chapter analysed the research findings from the brand perspective. In line with the research aim, the discussion focuses on the factors impacting a complete co-creation approach, social media as an interactive platform enabling co-creation, and the high level impact of co-creation on NPD competences. The key contributions are outlined overleaf:

Brand co-creation factors: The discussion presents expanded taxonomies of brand co-creation factors, validated through the empirical investigation. The brand co-creation factors detail the specific factors that both drive and inhibit brands from co-creating in NPD. The in-depth analysis provides a deep insight into how and why each co-creation factors is relevant in the research context. This is a key contribution to the existing literature and is the first step in guiding a complete co-creation approach.

The brand co-creation factors are explored in greater detail by examining the set of relationships between the co-creation factors and the stages of the NPD lifecycle. This provides several potential co-creation-NPD scenarios, outlining the most significant driving and inhibiting factors at each stage of NPD. This is of value in driving a complete co-creation approach, ensuring brands are equipped with tools to guide the design of an effective co-creation experience.

Social Media characteristics: The discussion contributes an expanded taxonomy of social media characteristics, validated through the empirical investigation. The social media characteristics detail the specific structure of DESNs and VCCs and the behaviours of social media users that enable co-creation. This provides a deep insight into the specific ways how and why social media enables co-creation, categorising the specific characteristics that brands should seek to leverage in the design of the co-creation experience.

Social media impact: To explore the impact of social media on the co-creation-NPD relationship further, the social media impact themes detail the specific ways in which social media delivers a positive impact on co-creation. In effect, the social media impact themes arise from an effectively designed social media enabled co-creation experience. This is valuable in resolving the relationship between social media and co-creation, detailing the value of social media as an interactive platform fostering interaction and involvement.

Co-creation impact: The co-creation impact themes relate directly to the research aim and provide a deep insight into the competence enhancing nature of co-creation in NPD. The co-creation impact themes create a formal link between co-creation and the activities and processes associated with NPD. The co-creation impact themes result from a complete co-creation approach, achieved through effective co-creation experience design, and the use of interactive platforms (social media) to enable

cocreation. The following chapter analyses the data in respect to the consumer perspective.

Chapter 6: Consumer Perspective Analysis

6.1 Introduction

This chapter covers the analysis of the data collected through the various interviews in regards to the consumer perspective. A number of philosophical assumptions shape the approach to the analysis of the consumer perspective. In the co-creation paradigm, consumers are viewed as necessary collaborators in value creation. However, the brand maintains control over the design and management of the co-creation experience, and the degree to which they co-create. In regards to this research, this guides the analysis to explore the consumer perspective with the aim of informing brands on how best to design and manage effective co-creation experiences. Accordingly, the primary focus of this chapter is analysis of the collected data in respect to the consumer co-creation factors. The consumer co-creation factors represent the fundamental drivers and inhibitors of consumer participation in a co-creation project. A deeper knowledge of these can guide the design of co-creation experiences to boost consumer motivation and stimulate their participation in a co-creation project.

In analysing the consumer perspective, social media is viewed as a contextual condition. The data collected are from consumer co-creators whose experience of co-creation is built through interaction with brands through social media platforms (Chapter 4 outlined the protocol for targeting consumer co-creators). Essentially, the data collected are from consumers whose collaboration and interaction with a brand is enabled by social media. Consequently, the impact of social media on co-creation has been explored through the brand perspective (Chapter 5). This chapter focuses primarily on the co-creation factors from the consumer perspective, and any design implications that emerge from the data. Accordingly, the focus remains on the factors that drive and inhibit consumer participation in co-creation. A greater knowledge of these factors equips brands with the knowledge to design effective co-creation experiences.

6.1.1 Chapter Structure

The discussion begins by outlining the data set. Chapter 4 outlined the protocol used to identify and target consumer co-creators. A key requirement is that participants have significant experience in co-creating with brands, and are ranked amongst the top co-creators in their respective community. This is a necessary inclusion criterion

– to uncover relevant knowledge, the interview participants must have experience of the research topic. To demonstrate this, the initial discussion outlines noteworthy achievements of each participant in regards to their co-creation efforts with brands.

The focus then shifts to exploring and expanding the relevant aspects of the conceptual framework. This involves validating and expanding the co-creation factors from the consumer perspective. This is done through thematic coding and analysis, examining the reactions of the participants and focusing on the explanation of each factor from the perspective of the interviewees. The data set is built from a number of consumer co-creators who have strong experience in co-creating with brands. A key benefit identified by the researcher is that not all of the participants discuss their experience of co-creating with a brand/brands in a positive light. A number of negative attitudes are expressed towards co-creation experiences with brands. This is of significant value, as the findings aim to inform the brand perspective on how to design effective (and motivating) co-creation experiences. The contrasting views add greater understanding of both the positive and negative implications of the co-creation experience design.

In addition to exploring the relevance of the consumer co-creation factors in the research context, the researcher identified an opportunity to explore the varying significance of each co-creation factor from the perspective of the interview participants. This is done by examining the degree of emphasis placed on each co-creation factor by the interview participants. The literature stresses that co-creation experiences should be designed to promote a range of driving factors to stimulate consumer co-creation. This portion of the analysis seeks to explore this notion in greater depth, presenting a greater insight into the design of effective co-creation experiences.

The purpose of the analysis of the consumer perspective is to deliver a greater knowledge of the factors that both drive and inhibit co-creation, and outline a number of considerations of how to design effective co-creation experiences. By maintaining the view that brands are responsible for the design and management of co-creation experiences, the findings in this chapter should contribute valuable knowledge to inform the brand perspective.

6.1.2 Background of Interview Participants

Collecting data from experienced consumer co-creators was vital. This was to ensure that interview participants were firstly aware of the co-creation approach to NPD, and possessed the capability to deliberate on the co-creation factors and the design of co-creation experiences.

The interviewees were 14 consumer co-creators who have co-created through social media (three co-creation-based virtual consumer communities). The data set is built of 'top' co-creators who are amongst the top 1% of their respective communities. The population of the VCCs ranges from the smallest, circa 190,000 users, to the largest, circa 780,000 users. To reach their position as one of the top co-creators in these VCCs, the consumer co-creators have been actively involved in co-creation over a number of projects and have achieved some relative success. This includes participants who have had ideas and designs for products produced and sold by a brand, individuals with tens of thousands of votes of support from their peers (for a product idea/design), and co-creators who have won numerous co-creation contests with global consumer goods brands. The interview participants are similar in the sense that they are all ranked as top co-creators and actively seek to co-create over a number of projects. A noteworthy observation made by the researcher is that whilst the interviewees are all ranked as top co-creators, their success in co-creation is varied. This provides value as the data collected address a range of viewpoints, from those who have successfully had co-created ideas produced and sold, those who have won a number of co-creation contests, and those who have been very active in co-creating brands, however have achieved little or no success.

Table 6.1 (overleaf) outlines the achievements of the consumer co-creators, and their value to this research. The interviewees' experiences are not limited to one co-creation project, and in a number of cases span multiple brands. This signals the value of their knowledge in regards to this research, and meets the criteria outlined in the protocol in Chapter 4.

Table 6.1: Consumer co-creators

	Co-creation Achievements
Participant A	2 product designs submitted; 14,000+ support votes; 1 idea reviewed by the brand; Commissioned to design product prototypes by the brand
Participant B	15 product designs submitted; 14,000+ support votes; 1 idea reviewed by a brand
Participant C	Entered 310+ co-creation contests; Won 9 prizes (brands include Comfort, Lipton & Escade)
Participant D	40+ co-created products for sale
Participant E	Entered 130+ co-creation contests; Won 9 prizes (brands include Pepsi, Tampax, Vicks, Cornetto and Procter & Gamble)
Participant F	8 product designs submitted; 18,000 + support votes; 1 idea in review with the brand
Participant G	Entered 42+ co-creation contests; Won 11 prizes (brands include Canada Dry, Oral-B, Febreze)
Participant H	4 product designs submitted; 29,00+ support votes; 1 design in review; 1 design launched and sold out
Participant I	Entered 123 co-creation contests; Won 10 prizes (brands include Ariel, Always & Procter & Gamble)
Participant J	3 product designs submitted; 10,000+ support votes
Participant K	10 product designs submitted; 15,000+ support votes
Participant L	10 product designs submitted; 7,000+ support votes
Participant M	Entered 6 co-creation contests; Won 1 prize
Participant N	Entered 12 co-creation contests

6.1.3 Construction of Tables and Presentation of Data

In a similar fashion to the previous chapter, this discussion outlines the presentation of tables and analysis approach in this chapter. The primary focus of this chapter is exploring and expanding the taxonomies of consumer co-creation factors. As with Chapter 5, the analysis focuses firstly on the individual perspective of each interview participant, and then seeks to build explanation and derive analytic generalisations by comparison across the data set.

The analysis of the consumer co-creation factors begins with the thematic analysis of each participant's interview reactions. This is evident in sections 6.2.1 and 6.2.2, which provide examples of how the data are analysed and presented for each individual participant. The remainder of the individual participant analysis tables are included as appendices (Appendix V & VI). Following an in depth thematic analysis, section 6.2.4 outlines expanded taxonomies of consumer co-creation factors, built by leveraging the collective results of the individual analysis. Once again, this is done so with the aim to build explanation and derive analytic generalisations across the data set.

6.2 Consumer Co-creation Factors

The first stage of analysis examines the consumer co-creation factors, with the aim of validating and expanding the taxonomy of driving factors (Chapter 3) to accurately

represent the scenarios facing consumer co-creators. A key notion recognised by the researcher is that the individual profile, circumstances and views of each potential consumer co-creator are likely to impact the significance of certain driving factors. In addition, the total population of the three VCCs from which data was collected was in excess of one million users. It was not a feasible strategy to try to produce statistical generalisations across this population. The diversity in terms of personal profiles, demographics, and individual circumstances signified that statistical generalisation would be a difficult and inefficient approach. Rather than seeking to enumerate the frequencies of factors that either drive or inhibit consumer co-creators, the focus was on identifying and understanding a general taxonomy of co-creation factors that consumers may experience when co-creating.

The transcribed interviews were initially analysed separately to ascertain the relevance of the co-creation factors and explore the expertise of each interviewee. The purpose of this was to validate the inclusion of each factor as a significant driver or inhibitor on co-creation in NPD. The following sections present examples of how the responses of each participant were analysed in respect to the driving factors, and then the inhibiting factors.

6.2.1 Driving Factors: Thematic Coding and Analysis Template (PARTICIPANT G)

This section provides an example of how the responses from each participant were analysed in respect to the consumer driving factors. To validate the taxonomy of driving factors, emphasis was placed on identifying driving factors mentioned by each interviewee. Following this, the focus was on summarising the qualitative explanation of the relevance and impact of each driving factor based on the interview participant's experience in real-life NPD scenarios.

The discussion and identification of the co-creation factors in Chapter 3 outlined four driving factors that group a number of related characteristics together. A key aim of this chapter is to validate and expand this taxonomy of factors. This is done by examining the responses of each participant, and building a deeper understanding of each relevant factor.

Four driving factors were examined in this area; the initial analysis of the driving factors is aimed at validating the co-creation factors outlined in Chapter 3. The responses of the interview participants were examined to identify mentions of the

driving factors. The coding framework used in the transcription and analysis was derived from the four driving factors outlined in Chapter 3, e.g. *CD 1: Financial, CD 2: Social, CD 3: Technological* and *CD 4: Psychological*. Any factor mentioned by an interviewee in regards to their experience is considered relevant. Additional codes were assigned to any emerging factors.

Table 6.2 (overleaf) provides an example display of the way the data sets are summarised for each interviewee. Table 6.2 reflects a summary of the transcribed responses from *PARTICIPANT G* in regards to the driving factors of co-creation in NPD. Emphasis was placed on firstly identifying the co-creation factors from the interviewee's responses, and then summarising the explanation of the nature and characteristics of each factor in a co-creation-NPD scenario.

Table 6.2: Consumer driving factors: interview reaction, PARTICIPANT G

Driving Factors	Supporting Data
CD 1: Financial	• My main motive is financial, work started to die down, I had more time • It's such a huge pay-out for the time that went into it • I've had some of the most lucrative couple of months of my life
CD 2: Social	• The quality of the brands is amazing • Peer recognition is good for the ego (not super important) but it is good to get feedback from around the world • Winning contests boosts self-esteem, it's cool that you get the credit, I'm building my own portfolio of successful projects with huge brands • Your work is not localised, it's out there and global
CD 3: Technological	• The brand will get inside my head so much that I will learn a lot about them. You start noticing things in everyday life that you relate to brands • I learnt a lot of quotes, now I'm the quote guy
CD 4: Psychological	• It's good to stay engaged between work projects, 'to stop myself going crazy' and keep the mind going • I used my relevant experience and skills and applied it to co-creation • I enjoy coming up with ideas, names, copywriting • I'm interested in the idea of going freelance, this is more or less me trying freelance in a serious way • I enter a mixed bag of contests altogether; I like a range of different challenges • Coming up with ideas is really good for the mind, if I'm working with certain ideas, my mind is thinking in a completely different way than I would usually (in personal life) • You become faster and sharper (mind) • There is nobody limiting your creativity, there are no bosses/restrictions - this attracts me to the brand • For each client you can flex a different skillset • The diversity of work is interesting • You see a lot of bad stuff out there (products and marketing). There is so much scope for improvement, you wonder how certain things make it • You are not restricted as a co-creator, you can send crazy ideas

PARTICIPANT G discussed a range of driving factors in depth. A rich explanation of each factor is evident through the summarised content alongside each factor in Table 6.2. This provides an insight into the range of factors that stimulate consumer co-creation and is a significant contribution to the underlying knowledge of each factor in regards to the research context. Greater detail is shed on how and why each driving factor stimulates co-creation, through the real-life experience of *PARTICIPANT G.*

This approach was replicated across the data set, and the responses of each interview participant were summarised in this manner. This vital in sorting the relevant data at the first stage of validating the taxonomy of driving factors outlined in Chapter 3.

6.2.2 Inhibiting Factors: Thematic Coding and Analysis Template (PARTICIPANT C)

This section provides an example of how the responses of each interview participant were analysed in respect to the consumer inhibiting factors. This replicates the approach adopted in respect to the driving factors. The aim was to identify mentions of inhibiting factors and focus on the explanation provided by each interview participant.

Eight factors were examined in this area, a separate coding framework was used to identify the inhibiting factors based on the factors outlined in Chapter 3, e.g., *CI 1: Risk of failure despite invested effort, CI 2: Lock-In, CI 3: Loss of freedom of choice* etc. Once again, additional codes were assigned to any emerging inhibiting factors.

Table 6.3 (overleaf) reflects a summary of the transcribed content of *PARTICIPANT C* in regards to the eight inhibiting factors. It provides an example of how the data were summarised for each interviewee.

Table 6.3: Consumer inhibiting factors: interview reaction, PARTICIPANT C

Inhibiting Factors	Supporting Data
CI 1: Risk of failure despite invested effort	• At the beginning it was disappointing because I wanted to win • I feel frustrated with the results, I put so much effort in and get no reward - I try to do unique things and my efforts are not recognised
CI 5: Resources	• Right now I can't invest a lot of time, I'm doing a full-time masters • The brand asked me to buy the rights for the image, I incurred costs because my idea was selected. Multi-billion dollar companies should be paying for the rights
CI 6: Time	• Right now I can't invest a lot of time, I'm doing a full time masters
CI 7: Effort	• I was putting a lot of effort in and getting no reward, I was taking it as a personal challenge
CI 8: Forgone opportunities	• Sometimes I have a lot of projects so I can't commit to submissions • When you put time in and don't get results, you are sacrificing other things in your life

PARTICIPANT C did not discuss all of the inhibiting factors outlined in Chapter 3; accordingly, Table 6.3 only includes factors that were identified and discussed by *PARTICIPANT C.*

Whilst not all of the factors were mentioned, factors that were considered relevant are explained in rich detail. Once again, emphasis was placed on firstly identifying the inhibiting factors from the interview participant's responses, and then understanding the nature and characteristics of each factor in a co-creation-NPD scenario.

Tables 6.2 and 6.3 illustrate the templates used in the first step of the analysis of the driving and inhibiting factors of co-creation from the consumer perspective. The aim was to identify a total set of valid driving and inhibiting factors built from the responses of the consumer co-creators. The relevant explanation and key learning points in respect to each factor were summarised through these tables.

As the aim of the analysis is to deliver a holistic knowledge of the co-creation factors, the following sections provide a synthesis of the key findings across the data set. This is done through cross comparison, combining the reactions of the interview participants as a collective. This includes frequency counts of the total number of interview participants mentioning each factor, identification of additional factors emerging from the analysis and a deeper focus on the qualitative explanation of each factor.

6.2.3 Co-creation Factors: Cross-Comparison (PARTICIPANTS A- N)

Following the individual analysis approach outlined in the previous sections, this section provides a summary of the mentions of the co-creation factors (driving and inhibiting factors).

Figures 6.1 and 6.2 (overleaf), outline frequency counts of the total number of interview participants identifying each driving and inhibiting factor. The identification of a co-creation factor by an individual participant is considered one mention (regardless of how many times the individual participant discussed it). As the data set is built of 14 consumer co-creators, the maximum number of mentions for a factor is 14 (i.e. all of the consumer co-creators identified the factor as a relevant driver or inhibitor of co-creation in NPD). This illustrates a summary of the responses and is vital in validating the taxonomies of co-creation factors (Chapter 3) based on the experience of the interview participants.

Figure 6.1: Frequency count of the identification of consumer driving factors
(PARTICIPANTS A-N)

Frequency Count: Driving Factors
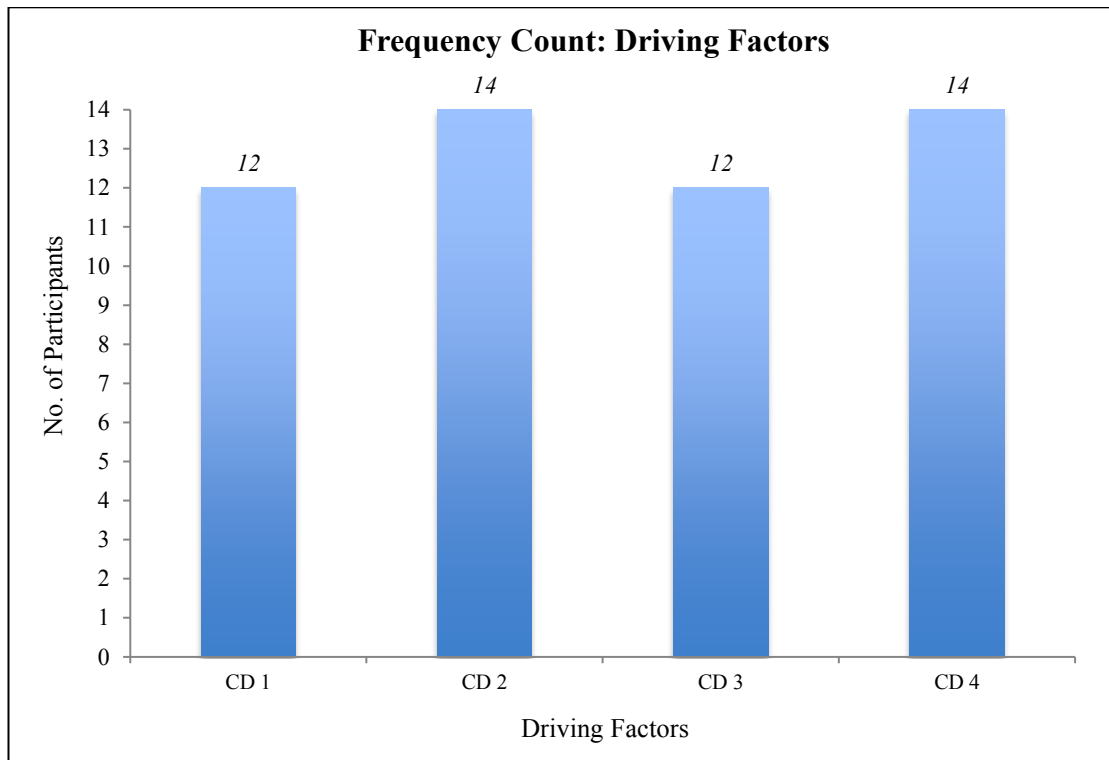
The reactions regarding the driving factors were relatively consistent, with the majority of interviewees identifying each driving factor as relevant to a degree. Not only does this validate the driving factors collected from the literature, but also a key notion to be taken from this is that the motivation of consumer co-creators is not restricted to one specific factor. As the majority of interviewees identified all four of the driving factors in regards to their participation in co-creation, the design of the co-creation experience must consider each of these driving factors to promote consumer participation.

In so far as the responses of the interviewees, all but two of the inhibiting factors collected from the literature were mentioned. *CI 2: Lock-in* and *CI 3: Loss of freedom of choice* were not identified as relevant by any of the interviewees. Figure 6.2 (overleaf) provides a frequency count of the total number of interview participants identifying each inhibiting factor. The responses of the interview participants were more varied in respect to the inhibiting factors. However, any factor mentioned with enough supporting evidence was deemed a relevant inhibiting factor in the research context.

Figure 6.2: Frequency count of the identification of consumer inhibiting factors (PARTICIPANTS A-N)
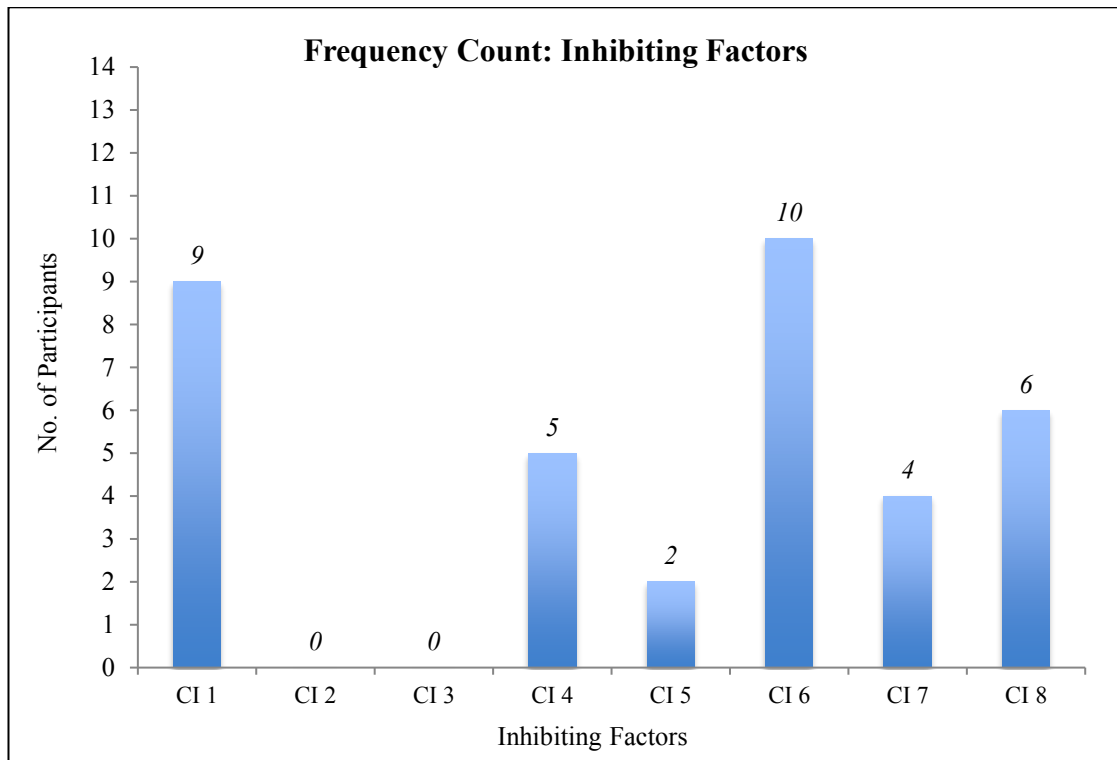
Figure 6.2 shows a significantly varied response in respect to the inhibiting factors noted by the interview participants. This demonstrates the unique attitudes and perspectives of each consumer co-creator, consequently the significance of the inhibiting factors varied from participant to participant. In respect to *CI 2: Lock-in*, this factor is characterised by a feeling of being locked-in to a brand or co-creation project, i.e. losing the ability to switch brands or feeling a duty to purchase the co-created product offering. A key notion emerging from the interviews was that the consumer co-creators did express of a feeling of being locked-in to the co-creation process, i.e. once they start a co-creation project, feeling a duty to finish their contribution to the best of their abilities. However, this was discussed as more of an intrinsic motivation, rather than feeling pressured by the brand. This was deliberated on regarding their interest in the co-creation process, adding value to the brand and satisfying their creative desire, and was not considered a result of pressure by a brand.

CI 3: Loss of freedom of choice was not considered a significant inhibiting factor as consumers are able to easily enter and leave co-creation projects at their own will, and are under no obligation to purchase a brand's offerings. As the interactions between the brand and consumer are enabled by social media, the lack of face-to-

face contact and resources employed were considered to significantly reduce this factor.

The results of this step of the analysis validate the taxonomies of co-creation factors (driving factors and inhibiting factors outlined in Chapter 3). Figures 6.1 and 6.2 illustrate the interview responses in respect to identifying the driving and inhibiting factors of co-creation in NPD. Responses derived from their experience of co-creation in a real-life NPD scenario. This is particularly valuable in confirming the co-creation factors collected from the literature, and validating their existence and impact in the research context.

A list of empirically validated consumer co-creation factors details the factors that are responsible for driving or inhibiting consumer participation in a co-creation project. This is particularly valuable in providing brands with the knowledge to design co-creation experiences to stimulate consumer involvement. By summarising the research findings across the data set, this provides a comprehensive list of factors identified by geographically dispersed individuals form various walks of life. This provides a depth of perspectives in respect to the co-creation factors and is the first step in building a holistic understanding of the consumer perspective.

In addition to validating the taxonomies of driving and inhibiting factors (Chapter 3), a number of additional factors emerged across the data set. A key aim of the data collection and analysis was to expand the conceptual framework. Accordingly, this includes the taxonomies of driving and inhibiting factors as key constructs of the conceptual framework. Through the thematic analysis, a number of additional driving and inhibiting factors emerged across the data set.

As these represent factors that were not identified through the literature, the discussion not only identifies the additional co-creation factors, but a greater emphasis was placed on defining each factor through the insight gained from the data collection. The following sections provide a summary of the key talking points of each additional co-creation factor, and a deeper analysis of each factor and its implications in respect to this research project.

6.2.3.1 Additional driving factors
One additional driving factor emerged from the data set; this is termed '*CD 5: Consumer-brand relationship*'. Eight interview participants identified a strong bond

with the brand as a significant factor in driving them to co-create. A number of the interviewees outlined their primary motivation as a 'love' or 'strong affinity' towards a specific brand. This driving factor is characterised by a strong bond between the consumer and the brand, driving the consumer to actively seek out and collaborate.

A number of interviewees expressed the view that this was perhaps the most important factor in driving them to co-create. Co-creating with a brand that consumers have a strong bond with provides value through a number of intangible ways. The interviewees highlighted the appeal of the involvement and interaction with the brands, describing this as a 'gratifying experience'. Further to this, the possibility to add value to a brand, or have an input into a future product bearing the brand's name was widely discussed. This notion highlights the role of consumers in taking ownership of the NPD process, and to an extent the results of this.

This driving factor signifies the intrinsic motivation of consumers to co-create with specific brands. Accordingly, less of an emphasis is placed on financial gain or a profit-seeking motive. Consumers value being formally recognised by a brand or having a brand they admire reach out to collaborate with them. Table 6.4 (below) summarises a number of relevant quotes supporting this driving factor:

Table 6.4: Consumer-brand relationship

CD5: Consumer-brand relationship	
Participant	**Supporting Quote**
A	*'I am a hard-core consumer; I have a love for the brand. The involvement and interaction with the brand is most important in motivating me.'*
B	*'I had a personal motivation to be a collaborator with the brand; it was a dream from my childhood.'*
F	*'I love the brand, it was a big part of my childhood, I am honoured to represent them.'*
H	*'I have a strong affinity towards the brand, I would be creating designs regardless of the co-creation network.'*

This factor is underpinned by the value of involvement, interaction and affinity towards the brand. This signifies that consumers derive value from experience, and supports the arguments outlined in the relevant literature (S-D logic and co-creation). It appears for at least some of the participants, interaction with a brand was the locus of value.

The emergence of this factor signals the need for brands to develop strong bonds with consumers through personalised interactions and ongoing communication. As this factor pertains the intangible value ascribed to interaction and involvement, this

provides an avenue through which brands can differentiate their product offerings through delivering valuable experiences. The statements in Table 6.4 imply that consumers not only attribute this intangible value to a specific product offering, but to the brand as a whole. Over time, this is likely to present significant implications on the success of a brand's product launches, as value is attributed to a brand through experience. The impact of co-creation on the consumer-brand relationship represents an emerging factor that is likely to bear significant implications on the ways in which brands create and deliver value.

A number of interviewees outlined this as the most motivating factor in driving them to co-create. Moreover, the strength of this bond was regarded as significant in overcoming a number of the inhibiting factors. Interviewees who placed significance on this factor identified fewer inhibiting factors as relevant. The bond towards the brand and the value placed on co-creation was deemed to overcome the inhibiting factors they may experience. In this respect, the interviewees valued *CD 5: Consumer-brand relationship* so much that it negated the inhibiting factors. This signifies the value that consumers place on the experience of interaction and involvement with a brand they have a strong affinity towards.

6.2.3.2   *Additional inhibiting factors*

Aside from the eight original inhibiting factors, three additional inhibiting factors emerged from the data; *CI9 Intellectual Property*, *CI 10: Co-creation experience design* and *CI 11: Inauthentic Co-creation*. The following discussion summarises the key discussion points regarding each additional factor, and provides a frequency count of the number of interview participants that identified each of the additional inhibiting factors. In order to support the discussion of each of the additional inhibiting factors, relevant quotations are used to substantiate the findings.

CI 9: Co-creation Experience Design: This factor denotes poor design/management of the co-creation experience by the brand and its impact on consumer motivation. This results in feelings of frustration or the consumer becoming demotivated. A number of interviewees expressed frustration with the lack of transparency, dialogue and access to information from the brand. These are fundamental components of the design of an effective co-creation experience (Prahalad and Ramaswamy, 2004). The seminal co-creation literature, i.e. the DART dimension (Prahalad and Ramaswamy, 2004) stresses these characteristics as the foundations of the design of a co-creation

experience. Table 6.5 (below) outlines a number of supporting quotes describing the nature of this factor.

Table 6.5: CI 9: Poorly designed co-creation experience

CI9: Poorly designed co-creation experience	
Participant	Supporting Quote
G	*'You have no idea who's on the other end of the contests and what they have seen before. I have won some projects that I didn't have a lot of faith in my entry, and lost some where I thought my contribution was really good – peer ideas were so bad, yet I didn't win.'*
A	*'It is frustrating to reach a milestone and be rejected without an explanation (…) I understand many factors would be outside of my control, but even so it would have been nice to hear from their side why it didn't work (…) I would feel more included.'*
F	*'It's hard to understand why some people's ideas get selected over mine, a lot of winning ideas are very cliché, this makes me disappointed in the brand.'*
C	*'Feedback would really help, this just seems like one manifestation of brands' desire to exploit the crowd sourced brain.'* *To get people to adhere to the brand, they need to be more transparent, and don't stop the co-creation after harvesting the ideas.'*

The poor design of co-creation experiences was a significant source of frustration for a number of interview participants. This not only impacted their motivation to participate in a co-creation project, but also altered their perception of the brand in general. As consumers derive value from experience and interaction, the impact of a poorly designed co-creation experience extends further than one specific NPD project. In this regard, it is vital for brands to understand the requirements and expectations of consumers in respect to a co-creation experience, to not only stimulate their involvement in a co-creation project, but to build a stronger bond with the brand.

This evidences the need for brands to have a deep understanding of how to co-create valuable experiences with consumers. Interaction and involvement must be structured in line with expectations and perceptions of consumers. This understanding is in part contributed through the findings of this research. In addition, brands should seek to communicate with consumers both in respect to product solutions and to understand how to design effective co-creation experiences. Brands must recognise the need to design value-creating experiences to avoid the risk of this inhibiting factor. This is most likely achieved through feedback in respect to the co-creation experience to truly understand the expectations and preferences of consumers.

CI 10: IP Concerns: The issue of IP to this point has mostly been discussed from the brand perspective. However, in some cases, the interviewees expected to retain their IP or were unhappy to sign over their IP to the brand. This factor is denoted by the dissatisfaction of consumer co-creators arising from the IP agreements that brands often necessitate. A number of interviewees regarded themselves as creators, and as a result, felt they should be able to take ownership of their creations to an extent. A common talking point was the one-sided IP terms that brands offer. This related to not only owning the product idea or design etc., but also the frustration of not being able to showcase their successful products/designs/promotions in their personal portfolios. This is evident in Table 6.6 (below):

Table 6.6: CI 10: IP concerns

CI 10: IP concerns	
Participant	Supporting Quote
I	*'I was unable to show my work in my portfolio because the brand owned the IP.'*
M	*'Sometimes I am not happy to sign over the IP.'*
H	*'Even if the project is not selected, the brand retains the rights for a period of three years.'*

Co-creation is the joint creation of value, in this sense, consumers take ownership over the outcomes of a co-creation project. The emergence of this factor proposes that in some cases, consumers seek to extract economic value from their co-creation efforts. This factor outlines the potential that consumers desire a share of profits or IP rights from a co-created product. Aside from this, a number of interview participants expressed frustration that they were not credited for their ideas or contributions, with the brand taking full ownership of the IP and product outcomes. Co-creation experiences must be designed with an understanding of this risk. A key point emerging from the data was that transparency in respect to IP agreements from the start of the co-creation project would be effective in overcoming this issue, as it is clear prior to any collaborative effort where the IP will ultimately reside.

CI 11: Inauthentic co-creation: This factor is characterised by the consumer co-creators questioning the motives of the brands. Co-creation is a collaborative approach to NPD, whereby both the consumer and brand take ownership of the NPD process to a degree. The brand and consumer should collaborate in the creation of value and compete in the extraction of value. A number of interviewees voiced concern that brands look to exploit the masses by harvesting consumer ideas and not following a true co-creation motive. This signifies less of a focus on collaboration. This

was discussed as a significant inhibiting factor as consumers are unwilling to co-create with brands who adopt a purely profit seeking motive.

An inauthentic co-creation approach is signified by a one-sided relationship whereby only the brand is realising greater value. Rather than the brand promoting a two-way collaborative approach where both stakeholders realise greater value, it was identified that in a number of cases brands seek to profit from exploiting the crowd and offer little back in return. Table 6.7 summarises the key sentiments in respect to this factor:

Table 6.7: CI 11: Inauthentic co-creation

CI 11: Inauthentic Co-creation	
Participant	Supporting Quote
C	*'I suspect that co-creation platforms are a way to harvest a mass of ideas and only pay for a few.'* *"This just seems like one manifestation of brands' desire to exploit the crowd sourced brain.'*
L	*'I feel like the community is being 'used' by the brand for their own purposes.'*

This factor signifies that co-creation projects are often designed with an 'inauthentic' purpose. Rather than seeking to enable the shared creation of value, the co-creation experience is designed to maximise the economic value a brand can extract from consumers. This represents an approach to co-creation that is not guided by the core principles of the co-creation paradigm. Accordingly, this is likely to deliver sub-optimal value to the consumer, and result in feelings of frustration and resentment towards a brand. This signifies the need for brands to embrace the core principles of the co-creation paradigm, as ultimately the joint creation of value benefits both the brand and consumer.

Figure 6.3 (overleaf) displays the number of mentions of the additional inhibiting factors across the data set.

Figure 6.3: Additional consumer inhibiting factors: interview reactions, PARTICIPANTS A-N
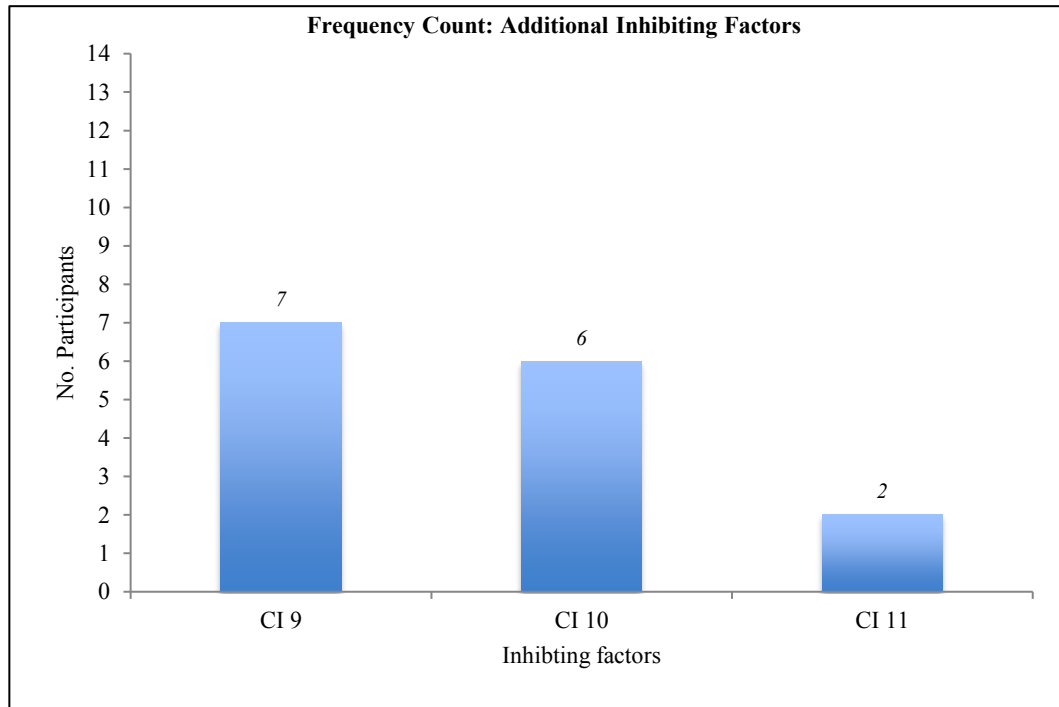
Figure 6.3 illustrates the number of interview participants that identified each of the additional inhibiting factors. The narrative prior to Figure 6.3 details the explanation of each additional inhibiting factor in respect to co-creation-NPD scenarios. The emergence of these factors provides a real-world insight derived from consumers who have co-created in NPD.

The discussion of the relevance of inhibiting factors was of course linked to the experience of each interviewee. However, the researcher noted a tendency of interviewees to use the significance of a driving factor to negate inhibiting factors. In other words, the impact of certain driving factors was so great; this made specific inhibiting factors less significant or irrelevant. This was particularly apparent with interviewees who placed a high level of emphasis on *CD 5: Consumer-brand relationship*. Consumers who expressed a strong motive to co-create due to an affinity towards a brand were less concerned by the inhibiting factors. This strong bond with the brand was deemed to far outweigh inhibiting factors.

The validation of the taxonomies of driving and inhibiting factors and the identification and discussion of additional factors is a vital contribution to a key construct of the conceptual framework (co-creation factors). This elucidates the consumer

perspective on what the potential driving and inhibiting factors are, in the first step of guiding brands in the design of co-creation experiences. In order to further expand this knowledge, it is important to pay attention to the qualitative explanation of how and why each co-creation factor is relevant and impactful in NPD.

6.2.4 Taxonomy of Co-creation Factors

The analysis to this point has been concerned with identifying 'what' the co-creation factors are from the consumer perspective. The results of this are used to build expanded taxonomies of consumer driving and inhibiting factors. The aim of this is to build a greater understanding of how the co-creation factors impact consumers' motivation or willingness to collaborate with brands. In order to build this explanation, the narrative presents expanded taxonomies of driving and inhibiting factors, summarising the key content and learning points from the analysis.

The co-creation factors categorise the most significant factors that stimulate or impede consumer activity in a co-creation project. Brands should seek to stimulate consumer involvement through designing co-creation experiences that deliver a range of benefits (driving factors), and minimise the costs/risks that the consumer experiences (inhibiting factors). Consequently, when considering the design of an effective co-creation experience, it is important to not only understand what the co-creation factors are (achieved through the analysis to this point), but also how and why they are relevant and manifest in real-life NPD scenarios. An understanding of how and why the co-creation factors are relevant and manifest in NPD provides a greater basis on which to design effective co-creation experiences.

The taxonomies of consumer co-creation factors summarise the research findings and key learning points from the analysis to this point. The taxonomies of consumer co-creation factors are built of factors that are considered to deliver a tangible impact e.g. *CD 1: Financial* (driving factor) or *CI 5: Resources* (inhibiting factor). Additionally, a number of the consumer co-creation factors are considered intrinsic and their impact is less observable e.g. *CD 4: Psychological* (driving factor) or *CI 9: Poorly designed co-creation experience* (inhibiting factor). A key learning point emerging from the data collection and analysis was that the impact and significance of the co-creation factors varied from participant to participant. This is particularly relevant to the 'intrinsic' factors where the degree to which they impact consumers is less observable. In this regard, there is a lack of consensus of the most significant driving and inhibiting factors from the consumer perspective. In order to build a deeper

understanding of how and why the co-creation factors vary in significance the following taxonomies of driving and inhibiting factors also summarise contrasting data, which explains why a driving or inhibiting factor may impact consumers to a lesser degree. This builds a holistic knowledge of the varying impact of the co-creation factors from consumer to consumer, and contributes greater insight into how a co-creation experience can be designed to promote consumer involvement.

6.2.4.1 *Taxonomy of driving factors*

The final analysis of the consumer driving factors presents an updated taxonomy, based on the validation of existing factors, those emerging from the data, and the insight gained regarding the characteristics of each factor. This is done by summarising the key sentiments expressed regarding the driving factors across the data set. The responses of the interviewees shed greater light on the nature of each factor, and provide a vital insight when building a deeper understanding of the driving factors.

Each driving factor is supported by the knowledge gained from the data. In addition, any contrasting data that infers a lesser impact of the factor is also apparent. This is in order to provide a greater understanding of how the co-creation factors manifest and impact consumers to a varying degree. This is particularly relevant when considering the design of the co-creation experience. The contrasting data is built on the experience of consumer co-creators, and illustrates the differing nature of each factor and how this affects individuals.

Tables 6.8 and 6.9 (overleaf) summarise the relevant content from the interviewees regarding the driving factors. This provides a general understanding of the key sentiments expressed across the data set, and the reasons as to why the driving factors impact consumer co-creation participation.

Table 6.8: Consumer driving factors CD 1-3

Driving Factor	Explanation of factor	Contrasting Data
CD 1: Financial (monetary prizes, profit sharing, intellectual property, increased visibility from participating in co-creation competitions)	• A financial reward is very important, consumers invest a lot of time in co-creation • Most co-creators have a day job, they submit designs as a bonus to their income rather than a livelihood • Monetary rewards or compensation ensures consumers feel their contributions are valued • The payout can be huge in comparison to the time invested • A lack of prize money may result in lower quality input from consumers	• For brands that consumers have a strong affinity/love towards, the financial reward is not as important as the involvement/interaction • Some consumers design for fun, regardless of whether this is on a co-creation platform or not • Interesting contests which consumers believe they can contribute valuable ideas can be motivating even without a reward • Coming up with a winning idea can be like winning the lottery, realising a financial reward can be almost impossible
CD 2: Social (social esteem, good citizenship, strengthening ties with relevant others, formal recognition)	• The prestige and the honour of having a co-created a product is a sizeable reward in itself • Consumer co-creators create designs both for their own perspective and from the perspective of the greater community (good citizenship) • Formal recognition is important, it is seen as a badge of honour • Peer support is essential in the sense that it gets an idea in front of the brand, it empowers the idea • The feeling of helping a multinational company is hugely empowering • Online co-creation can increase an individual's network; co-creators discuss wider things than just co-creating with brands. There is a huge diversity of co-creators on online platforms • Co-creation empowers consumers to the point where they feel they can impact the world on a wider scale. Certain co-creation projects go beyond just selling a product, they address social issues • Successful co-creation gives a massive ego/self-esteem boost • Consumers inspire each other, review and provide feedback • Creative consumers/leads in a product category are driven to co-create as they have a number of fans/followers in the social sphere	• Some co-creation platforms do not promote sharing and interaction between users • Community feedback can sometimes be negative and inhibit future participation • Confidentiality agreements can stop co-creators sharing their work • Some co-creators seek to interact with only the brand, the community is of no interest to them
CD 3: Technological (gain of knowledge, cognitive benefits of information acquisition and learning)	• Gaining knowledge about a brand and their products is motivating • The more consumers understand the brand and products, the better their co-creation efforts will be • The knowledge gained from co-creation can be used in other aspects of life • Co-creators can leverage and build on their existing skills by selecting suitable co-creation projects	• Certain co-creation networks do not promote the consumer learning about the brand/product • Hardcore consumers already know the brand very well, there is little in the way of drive from this factor

Table 6.9: Consumer driving factors CD 4-5

Driving Factor	Explanation of Factor	Contrasting Data
CD 4: Psychological (Creative pursuits enhance intrinsic motivation, self-expression and pride, enjoyment of contributing, sense of altruism, psychic utility from participation, high involvement or dissatisfaction with existing products)	• Consumers are driven by exploring and creating their own projects • Consumers are aware of gaps in the market/missing products, this drives them to co-create • Co-creation gives consumers the opportunity to have their ideas realised or produced, they don't have the means to do it themselves • Enhancing/improving a product is exciting • Creativity is fun and fulfilling • Consumers take pride in their co-creation efforts, they only submit them once they are happy • The whole process fuels the feeling of empowerment • Consumers see problems in different ways, if they didn't share their ideas or suggestions, they would go to waste • Creative people need an outlet, the challenge their brain to be creative in any situation; consumers will create their own designs regardless of the co-creation platform • Co-creation does not restrict your creativity, there is no one managing or changing your ideas • Consumers seek to address problems and design products that impact the wider community (altruism)	*NA*
CD 5: Consumer-brand relationship (interaction and involvement with the brand, affinity towards a brand, taking ownership of the NPD process)	• Consumers who have a love for a brand are rewarded through involvement and interaction • Consumers dream to work with the brand they admire • Positive interaction with a brand drives consumers to co-create over and over • Consumers recognise when brands extend themselves and ask for input, this makes consumers feel heard and appreciated • Consumer are honoured to work with and represent brands they love	*NA*

Tables 6.8 and 6.9 outline the updated taxonomy of driving factors as a result of the findings from the analysis. An explanation of each factor is built through summarising the key talking points across the data set. This approach provides a profound knowledge of the relevance, nature and characteristics of each driving factor in the research context. In addition, the inclusion of contrasting data is particularly valuable in illustrating the unique nature of each consumer co-creator, and in turn, the varying degree of the impact of the driving factors. This is vital in contributing an in-depth understanding of the consumer co-creation factors. The comprehensive list of factors create an outline of how and why the driving factors vary in relevance and impact from the perspectives of consumer co-creators.

The expanded taxonomy of driving factors provides an in-depth knowledge of the factors brands should seek to promote through the design of the co-creation experience. This is vital in stimulating consumer contributions. Tables 6.8 and 6.9 are valuable in describing the impact of each driving factor, how the co-creation experience can be designed to promote each factor, and the underlying reasons as to how and why each driving factor is relevant in the research context. This is a key contribution to resolving the co-creation-NPD relationship and provides a vital underpinning of the design of effective co-creation experiences.

6.2.4.2   Taxonomy of inhibiting factors

The final analysis of the consumer inhibiting factors presents an updated taxonomy, based on the validation of existing factors, those emerging from the data, and the insight gained regarding the characteristics of each factor. This is done by summarising the key sentiments expressed regarding the driving factors across the data set. The responses of the interviewees shed greater light on the nature of each factor, and provide a vital insight when building a deeper understanding of the driving factors.

Tables 6.10 and 6.11 outline the expanded taxonomy of consumer inhibiting factors, resulting from the research findings. These represent the fundamental factors that inhibit consumers from collaborating with brands on a co-creation project. Each inhibiting factor is supported by the knowledge gained from the data, additionally any contrasting data that infers a lesser impact of the factor is also apparent. This provides a greater understanding of how the co-creation factors manifest and impact consumers to a varying degree. This provides a deeper insight into the factors that the design of an effective co-creation should seek to minimise to promote consumer

contribution. In order to guide this, a rich explanation of how and why each factor is relevant in an NPD context is apparent. The details outline the potential impact of a poorly designed co-creation experience or the risks/costs consumers can incur through co-creating with a brand. This is built by collectively summarising the relevant information in the data set, and presenting the key findings in respect to the consumer inhibiting factors.

Table 6.10: Consumer inhibiting factors CI 1-6

Inhibiting Factor	Explanation of Factor	Contrasting Data
CI 1: Risk of failure despite invested effort	• The requirements to get the idea in front of the brand (e.g. peer votes) can be a huge task • Failure can be devastating • If co-creation contests have a high number of entries (more competitive) this can inhibit participation • A significant co-creation effort that fails i.e. no success or rewards, is highly frustrating • Consumers that perceive a low chance of winning/success are less likely to enter	• Consumers sometimes limit the time spent on a project, to minimise the impact of failure • People create regardless of co-creation platforms, failure is not relevant • If a consumer is passionate about the product, brand or idea, they may be willing to risk failure
CI 2: Lock in		• Consumers experience an internal lock-in, they are motivated to complete submission due to their own personal motivation • Very few co-creation networks enforce participation • It is easy for consumer to leave contests, not finish submissions, and switch between brands
CI 3: Loss of freedom of choice	• In some ways, co-creation with brands can restrict the consumer's imagination	*NA*
CI 4: Psychological efforts to learn	• A lack of knowledge regarding certain aspects of the NPD process is a key inhibitor • Sometimes consumers may have valuable input but not have the skills to deliver it	• Knowledgeable consumers do not face significant psychological efforts to learn
CI 5: Resources	• Certain co-creation projects (e.g. creating promotional videos) require equipment, people, or other resources • Brands sometimes expect consumers to pay for image rights etc. (promotions)	*NA*
CI 6: Time	• Consumers who co-create in their free time are often conscious of time Although consumers may desire to co-create, sometimes they just don't have the time • The time-invested/payoff trade-off is important • Most people have day jobs or are in education • If significant time is invested, i.e. in background research, etc. the brand should reward this regardless of the contribution	• To some consumers time is unimportant - the process is where they derive most of their joy, so time is not a factor

Table 6.11: Consumer inhibiting factors CI 7-11

Inhibiting Factor	Explanation of Factor	Contrasting Data
CI 7: Effort	• If significant effort is invested and no success achieved, this is demotivating • If effort is not recognised/rewarded, consumers may be less likely to submit in future	• People driven by the enjoyment of creating/contributing are not concerned by the effort required • Ideas can come from anywhere, sometimes not a lot of effort is required
CI 8: Forgone opportunities	• The time spent on co-creation projects could sometimes be spent better elsewhere	• Co-creation platforms make it easy to co-create as and when you feel (to fit your schedule)
CI 9: Intellectual property concerns	• If consumers sign over their IP rights, they are unable to show their work in a portfolio • Consumers can be unsure of the IP framework, for instance regarding violating patent law • Consumers experience a trade-off between seeing their idea produced, and a lack of recognition of their input as the product bears the brand's name	• Hardcore consumers are happy enough just seeing they have added value to the brand
CI 10: Poorly designed co-creation experience	• A poorly designed co-creation brief (i.e. too vague or open) makes it difficult for consumers to understand how to approach the brief • A vague brief can give the impression that the brand doesn't know what it wants • Consumers are frustrated by a lack of dialogue and transparency, they like to know why their effort failed or succeeded • From the outside in, sometimes it is hard to understand why the brand selects an idea (lack of transparency), this can result in negative attitudes towards the brand • Co-creation platforms may appear one sided, designed to benefit the brand but not the consumer • A poorly designed co-creation experience can result in consumers feeling less empowered. Brands need to care about the people, not just their knowledge • Some co-creation platforms don't promote sharing, discussion or community	*NA*
CI 11: Inauthentic co-creation	• To some consumers, it appears that brands are exploiting them by collecting vast amounts of information and only rewarding a select few • Brands may use co-creation platforms to mass-harvest ideas • Consumers may feel 'used' by the brand • Brands sometimes encourage consumers to 'throw' ideas to see if they stick. This is not collaboration	*NA*

Tables 6.10 and 6.11 update the taxonomy of inhibiting factors as a result of the the analysis findings. An explanation of each factor is built through summarising the key talking points across the data set. This approach provides a profound knowledge of the relevance, nature and characteristics of each inhibiting factor in the research context. In addition, the inclusion of contrasting data is particularly valuable in illustrating the unique nature of each consumer co-creator, and in turn, the varying degree of the impact of the inhibiting factors. This is vital in contributing an in-depth understanding of the consumer co-creation factors. Tables 6.10 and 6.11 define a comprehensive list of factors, and outline how and why the inhibiting factors vary in relevance and impact from the perspectives of consumer co-creators.

The expanded taxonomy of inhibiting factors provides an in-depth knowledge of the factors brands should seek to minimise through the design of the co-creation experience. This is vital in ensuing consumers are motivated to co-create. Tables 6.10 and 6.11 are valuable in describing the impact of each inhibiting factor, how the co-creation experience can be designed to reduce each factor, and the underlying reasons as to how and why each inhibiting factor is relevant in the research context. This is a key contribution to resolving the co-creation-NPD relationship and provides a vital underpinning for the design of effective co-creation experiences.

A key learning point emerging from the analysis of the consumer perspective is the varying significance of the driving and inhibiting factors from the perspective of each consumer co-creator. It appears no single driving or inhibiting factor is responsible for a consumer's decision to co-create or not co-create. When designing effective co-creation experiences to stimulate consumer participation, brands should consider the consumer co-creation factors as a collective, seeking to maximise a range of driving factors, and minimise the complete list of inhibiting factors. This echoes the sentiments discussed in the literature review, stating that brands should design multi-pronged co-creation experiences to stimulate consumer participation. Using the results of the data collection, the researcher identified an opportunity to analyse the varying degree of emphasis placed on each consumer co-creation factor. This is valuable in corroborating the need for brands to design a multi-pronged co-creation experience, and explore how and why the impact of the co-creation factors varies from consumer to consumer.

6.3 Co-creation Factors: Degree of Emphasis

Through the data collection and analysis, it became clear that the emphasis placed on each driving or inhibiting factor varied significantly between participants. This is a particularly telling insight, as even with a small sample of consumer co-creators (PARTICIPANTS A-N) there was a wide range of attitudes and opinions towards the co-creation factors. When considering the design of co-creation experiences for the wider consumer population, brands must recognise the unique perspective of each consumer. The literature suggests that co-creation experiences should be 'multi-pronged', stimulating a range of driving factors. To illustrate and explore this notion, the final analysis examines the degree of emphasis placed on each co-creation factor by the interview participants. A varying degree of emphasis stresses the need for brands to design co-creation experiences to promote a range of driving factors, and minimise the total set of inhibiting factors to stimulate consumer involvement.

An attempt has been made to assess, through the provided information and transcribed interviews, the degree of emphasis that each interviewee placed on the consumer co-creation factors. A focus is placed on the degree of emphasis to examine varying attitudes of the interviewees regarding the significance of the co-creation factors. Rather than looking to create a consensus amongst which factors were regarded as most significant, this approach seeks to describe the varying reactions of interviewees and in turn, consider how this impacts the design of the co-creation experience.

In conducting the interviews, the researcher noted that whilst the reactions in terms of identifying the co-creation factors were relatively constant, the emphasis placed on each factor regarding the decision to co-create varied significantly. This highlights the unique view of each potential consumer co-creator, and in turn should be given consideration when designing co-creation experiences. Four levels of emphasis are used as the parameters of this analysis; *1: Little or no mention, 2: Slight mention, 3: Slight importance* and *4: Significant importance*. This analysis firstly summarises the emphasis placed on the co-creation factors by each interview participant. Following this, to illustrate the varying degree of emphasis across the data set, each co-creation factor is examined with respect to the varying attitudes of the data set as a whole.

6.3.1 Degree of Emphasis: Driving Factors

The initial analysis of the degree of emphasis focuses on the consumer driving factors. In so far as the driving factors are concerned, the five factors examined seem to demonstrate varying levels of emphasis. The attitudes of each interviewee regarding the impact of the driving factors varied from participant to participant. Figures 6.4 and 6.5 display the degree of emphasis placed on each driving factor by each interview participants. The driving factors are referred to in shorthand using the coding framework (see Table 6.12*),* the degree of emphasis placed on each factor is measured on four levels (*1: Little or no mention, 2: Slight mention, 3: Slight importance* and *4: Significant importance).* Figures 6.4 and 6.5 succinctly illustrate the varying attitudes of each interview participant. Whilst this does not outline any one factor that is vital in driving consumers to co-create, it does highlight the notion that consumers are driven by a combination of factors. Consequently, this corroborates the view that brands should design co-creation experiences to promote multiple driving factors through a multi-pronged approach to deliver value and encourage participation. In order to explore this notion, the following discussion not only seeks to build an explanation of how and why each factor is relevant, but also the significance placed on each factor by the interviewees.

Table 6.12 Driving factors (codes)

Code	Driving Factor
CD 1	*Financial* (monetary prizes, profit sharing, intellectual property, increased visibility from participating in co-creation competitions)
CD 2	*Social* (social esteem, good citizenship, strengthening ties with relevant others, formal recognition)
CD 3	*Technological* (gain of knowledge, cognitive benefits of information acquisition and learning)
CD 4	*Psychological* (creative pursuits enhance intrinsic motivation, self-expression and pride, enjoyment of contributing, sense of altruism, psychic utility from participation, high involvement or dissatisfaction with existing products)
CD 5	*Consumer-brand relationship* (interaction and involvement with the brand, affinity towards a brand, taking ownership of the NPD process)

Figure 6.4: Degree of emphasis, driving factors (PARTICIPANTS A-H)
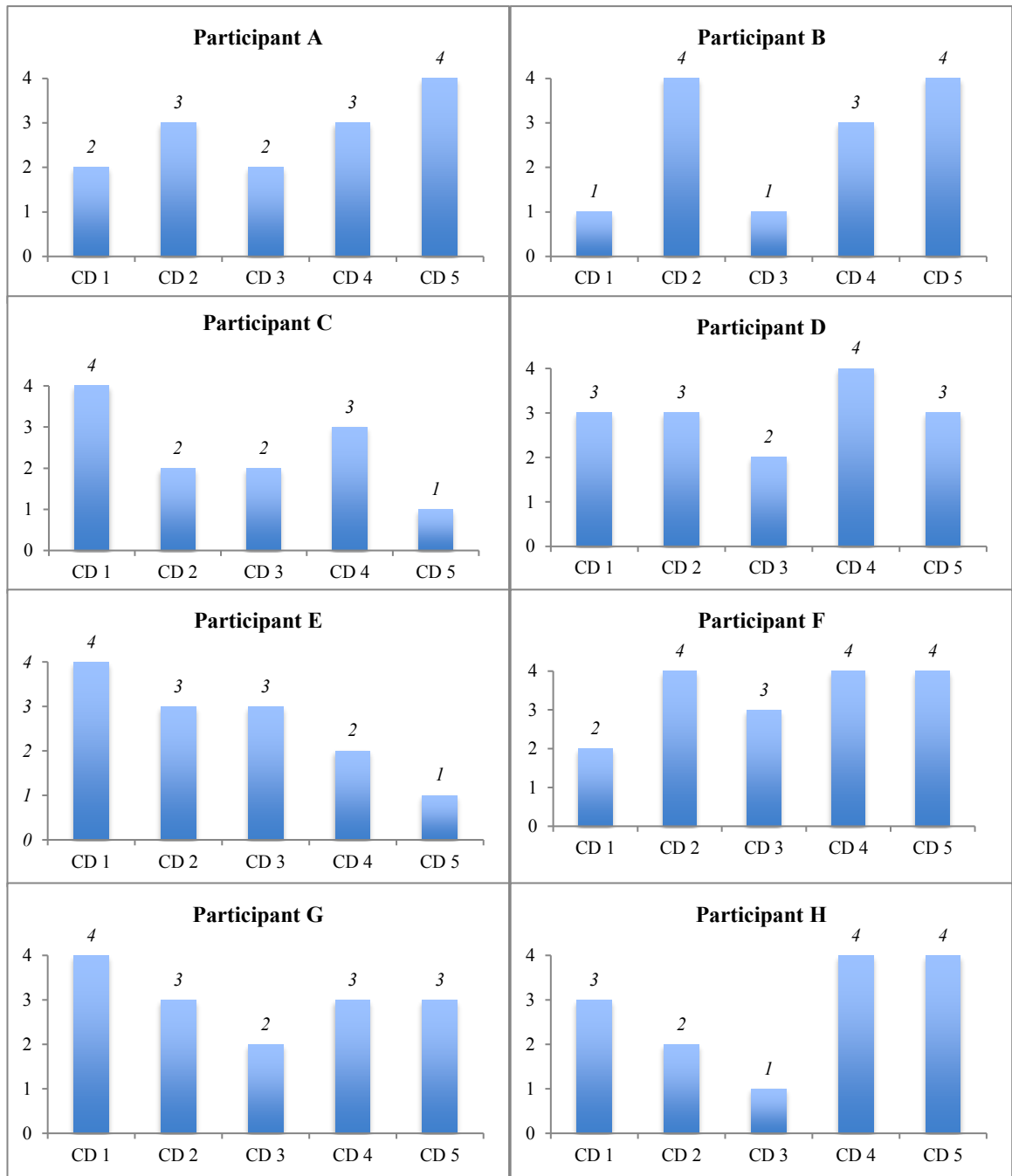
Figure 6.5 Degree of emphasis, driving factors (PARTICIPANTS I-N)
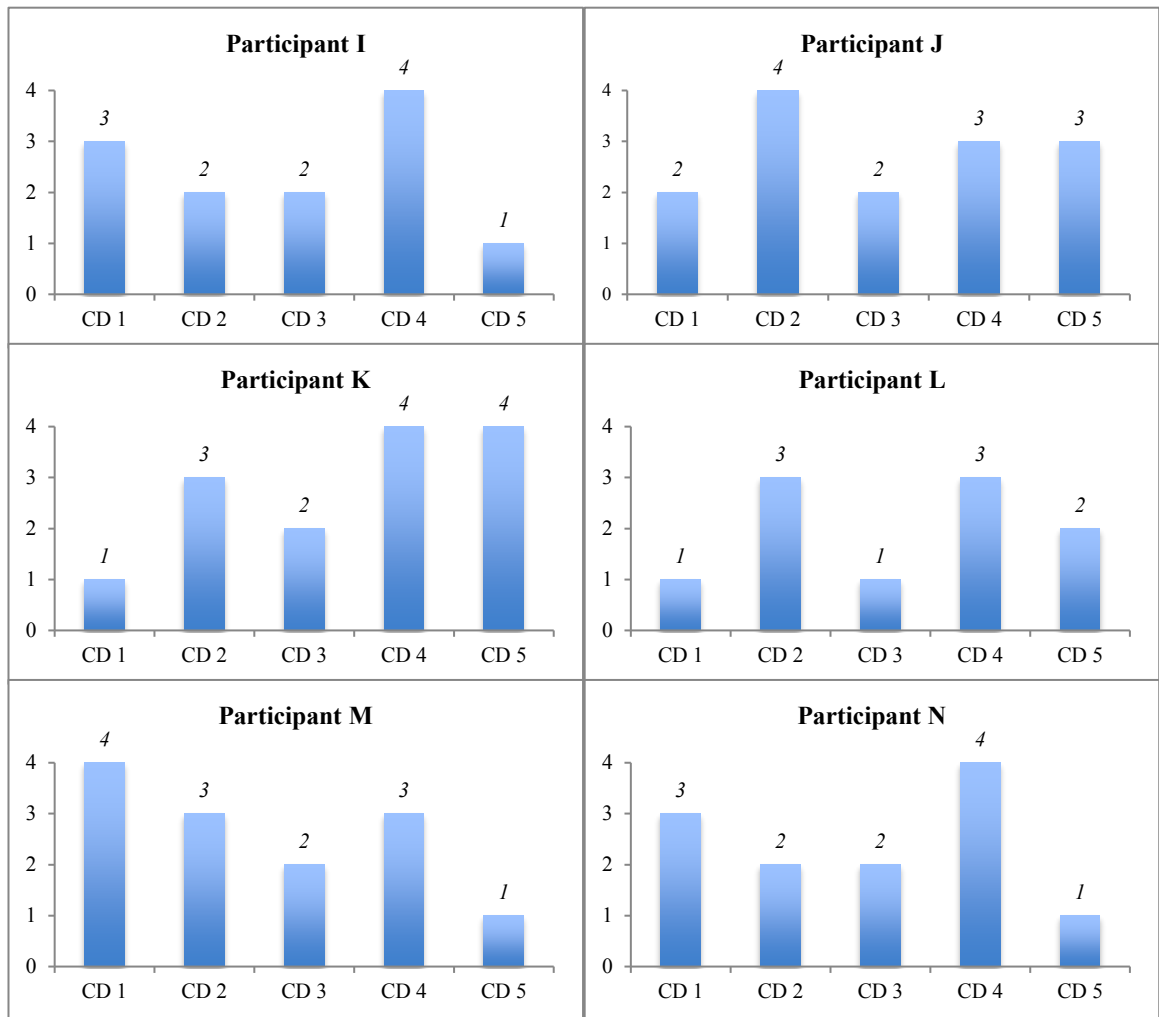
Figures 6.4 and 6.5 illustrate the degree of emphasis placed on the driving factors by each interview participant. There is a clear lack of consensus as to the most significant driving factor from the consumer perspective. From a small sample of consumer co-creators, it is clear the attitudes of consumers vary considerably. This corroborates the need for brands to design multi-pronged co-creation experiences stimulating a range of drivers. To understand how and why the significance of the driving factors differs, the following discussion summarises the degree of emphasis placed on each driving factor across the data set. This is done by summarising the percentage of the data set to discuss each driving factor in respect to the four levels of emphasis. To support this analysis, relevant quotations are used to demonstrate the varying levels of emphasis.

Consumer Driving Factor 1: Financial: The attitudes towards financial incentives varied significantly across the data set. Table 6.13 outlines the percentage of the data set discussing this factor at each level of emphasis, and provides supporting quotes illustrating the varying significance of this factor. A number of interviewees expressed a financial reward as the most significant factor in driving them to co-create. This is evident with over half of the participants describing this factor as having either a slight or a significant importance.

For those that placed less weight on this factor, whilst a financial reward was welcomed, this was not their primary motive. Other driving factors assumed greater significance in their decision to co-create, and their drive was not primarily financial. Finally, a number of interviewees expressed no interest in a financial reward. It was stated they would reach out to collaborate with brands and have done regardless of a financial incentive.

Table 6.13: Degree of emphasis, CD 1: Financial

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	29%	*PARTICIPANT G*	*'My motivation is mainly financial'*
3. Slight Importance	29%	*PARTICIPANT D*	*'It is certainly a bonus to receive monthly royalty payments'*
2. Mention	21%	*PARTICIPANT B*	*'Some financial reward is welcome, but not much for motivating'*
1. Little or no mention	21%	*PARTICIPANT J*	*'The financial reward was not even thought of, the design was for myself'*

The attitudes in respect to a financial reward as a significant driving factor clearly range across the data set. This evidences that whilst a financial reward is highly motivating for some consumers, others place less weight on a financial reward. Table 6.13 contrasts the value consumers derive from a co-creation experience from those seeking economic value, to those who value the experience of involvement and interaction. When considering co-creation experiences, brands should consider the ranging attitudes and weight placed on a financial reward. A financial reward should be considered a necessary but not sufficient driving factor in the design of a co-creation experience.

Consumer Driving Factor 2: Social: All interviewees outlined the social characteristics of the co-creation platforms as a relevant driving factor. A greater consensus is apparent with half of the data set outlining that the social driving factor was of slight importance. A notable notion to emerge from the interviews was that the design of the co-creation platform played a role in the significance of this factor. In particular, the degree to which it promoted interaction and the community aspects of this driving factor. Interviewees who placed less significance on this factor highlighted the lack of interactivity and communication on the co-creation platform. Participants who emphasised this factor highlighted the prestige and honour of formal recognition by the brand, and also the heightened feeling of empowerment that comes alongside this.

Table 6.14 evidences the ranging attitudes in respect to *CD 2: Social.* As this factor was identified and discussed by all interview participants and stressed to a degree, emphasis level 1 (Little or no mention) does not have a supporting quote (N/A).

Table 6.14: Degree of emphasis, CD 2: Social

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*21%*	*PARTICIPANT J*	*'I definitely feel like I provided value to the community, I feel like I inspired other people'*
3. Slight Importance	*50%*	*PARTICIPANT L*	*'I enjoy sharing my work, and enjoy nice comments when the public makes them'*
2. Mention	*29%*	*PARTICIPANT C*	*'It feels good to have peer recognition, it doesn't guarantee that you are going to make a difference in a product'*
1. Little or no mention	*0%*	N/A	N/A

As a factor identified and discussed by all participants, brands must consider the need to promote the social benefits consumers derive from co-creation. This includes the need to select or design platforms that enable both B2C and C2C communication. *CD 2: Social* is a significant source of experiential value as the benefits consumers derive from this arise as a direct result of interaction and communication. For brands who are seeking to deliver valuable experiences alongside tangible products, co-creation experiences must be designed to promote this driving factor.

Consumer Driving Factor 3: Technological: Of the five driving factors examined, this factor appeared to be the least significant across the data set. Whilst it was acknowledged that participants of co-creation benefit from the information acquired from the process, it was not outlined as significantly important by any of the interviewees. The majority of interviewees mentioned this factor to a degree, and the general sentiment was that acquiring new information is a benefit of co-creating with a brand, but not their primary motive. The gain of knowledge and cognitive benefits of information were mostly seen as a positive by-product of co-creation, rather than a purpose to co-create. Table 6.15 outlines the varying attitudes of the interview participants in response to *CD 3: Technological.*

Table 6.15: Degree of emphasis, CD 3: Technological

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	0%	N/A	N/A
3. Slight Importance	14%	*PARTICIPANT E*	*'I'm learning a lot and winning in my own way, I wasn't aware of certain brands, I link the knowledge I have gained to things I see in everyday life'*
2. Mention	64%	*PARTICIPANT M*	*'This gives me experience which I could not have gained otherwise, it's important for me to understand and gain knowledge'*
1. Little or no mention	21%	*PARTICIPANT L*	*'The co-creation platform is not a great place to learn about the brand, products, building techniques or anything else'*

It is clear that consumers can derive value from the gain of knowledge and cognitive benefits associated with *CD 3: Technological.* Aside from a driving factor promoting consumer contribution, the gain of technical knowledge is likely to enhance a consumer's competences in respect to NPD projects. Not only is *CD 3: Technological* a key driving factor from the consumer perspective, but it is likely to be of value to brands, as over time consumers become increasingly knowledgeable and able to add value to a product solution. This is particularly relevant to both developing an effective tangible product, but also a valuable experience alongside. Consequently, co-creation experiences must be designed to promote this driving factor.

Consumer Driving Factor 4: Psychological: Psychological emerged as the most significant factor in driving consumer co-creation participation. All of the interviewees mentioned this factor, generally linking it to the process of being creative, engaging with brands and the fact that co-creating is 'fun' or 'enjoyable'. The vast majority of interviewees mentioned this factor as either slightly or significantly important. Moreover, a number of consumers outlined the fact that regardless of a co-creation platform, they would still seek to design and produce their own products, as this is something they are particularly passionate about. Table 6.16 provides evidence of the varying attitudes in respect to *CD 4: Psychological.*

Table 6.16: Degree of emphasis, CD 4: Psychological

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*43%*	*PARTICIPANT N*	*I'm interested in working my brain to be creative in any situation, especially the challenge of being creative, and finding different solutions*
3. Slight Importance	*50%*	*PARTICIPANT C*	*I seem to have ideas about doing things and improving things in a different way- most of my ideas would go to waste if they didn't go out to companies that could use them*
2. Mention	*7%*	*PARTICIPANT E*	*My background gives me an advantage over others in the community, the creative desire is not as important*
1. Little or no mention	*0%*	N/A	N/A

This factor is characterised by the intangible value attributed to co-creation experiences. This is underpinned by the enjoyment of involvement in the value creation process. The notion that value is co-created through experience should underpin the design of the co-creation experience. This is supported through both the research findings and relevant literature. Whilst consumers may vary in the weight they place on this factor, the identification of this factor by all interview participants supports this as a necessary driver in co-creation. Consequently, co-creation experiences should be designed to promote this driving factor alongside others.

Consumer Driving Factor 5: Consumer-brand relationship: The significance of this factor varied between the interviewees as some participants focused their co-creation efforts solely on one brand, whereas others were more interested in the creative co-

creation process and applied this across a number of brands. Those focusing their co-creation efforts on one brand were perhaps more driven by the prospect of involvement with the brand, and happy to fulfil the co-creation tasks set out in front of them. In contrast, those more interested in co-creation discussed a variety of tasks they had undertaken across a number of brands, from the outside in, it appears they are more interested in being creative and the creative process of co-creation.

For those that stressed this factor with a greater emphasis, the affinity or desire to engage with the brand was amongst the most significant driving factors, and the experience was considered a considerable source of value. This is evident by the supporting quotes in Table 6.17. For some interviewees, the potential of collaborating and having a brand produce their product idea was described as a 'dream' and highly motivating.

Table 6.17: Degree of emphasis, CD 5: Brand-consumer relationship

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*36%*	*PARTICIPANT F*	*'I love the brand, it was a big part of my childhood, I am honoured to represent them'*
3. Slight Importance	*21%*	*PARTICIPANT D*	*'The fact that the brand have been positive to my designs have kept me submitting time and time again'*
2. Mention	*7%*	*PARTICIPANT G*	*'The quality of brands I am working with is amazing, this is certainly a plus'*
1. Little or no mention	*36%*	*PARTICIPANT L*	*'The co-creation projects are not a great place to learn more about the brand, products, building techniques, or anything else'*

This factor stresses the benefits of building consumer loyalty and affinity to promote interaction and collaboration on an ongoing basis. A strong affinity or involvement with a brand is vital in both motivating consumers to co-create, but can also impact the success of a brand's product offerings. Whilst brands cannot directly influence the affinity of consumers, steps can be taken to strengthen the brand-consumer relationship. A key component of this is the design of effective co-creation experiences to motivate consumers to collaborate with the brand on an ongoing basis. In this sense, *CD 5: Brand-consumer relationship* can be seen as a driving factor, but

also a result from co-creation over time. Whilst Table 6.17 illustrates that some consumers are driven by this factor more than others, brands should seek to build a strong relationship with consumers through offering unique and customisable co-creation experiences.

Examining the degree of emphasis placed on each factor builds a greater understanding of how the drivers vary from consumer to consumer, and the reasons why this occurs. The aim of this analysis was to illustrate the varying degree of emphasis across the data set. As the potential consumer population is considerable (the total population of the three VCCs from which data was collected is in excess of 1 million users), less prominence was placed on understanding why the degree of emphasis varies. However, the analysis contributes a valuable insight in guiding brands to design co-creation experiences that stimulate a range of driving factors. This is vital in ensuring that consumers are motivated to contribute to NPD projects. The varying levels of emphasis and the supporting quotes outline how the driving factors impact consumers from diverse backgrounds. This provides an early understanding of the impact of the driving factors on consumers, and also illustrates the need to design multi-pronged co-creation experiences, promoting a range of driving factors. A key learning point from this is that it is not openly observable how or why consumers are driven to participate in co-creation projects. The research findings provide an understanding of a range of factors that are key in driving consumers, however, it is impossible to prescribe the most significant factor across a huge population. Accordingly, the driving factors must all be considered necessary components in the design of a co-creation experience. Brands must seek to stimulate all of the driving factors to motivate consumers, and deliver the greatest value through the design of the co-creation experience. This corroborates the need for a multi-pronged co-creation approach and is discussed further in Chapter 7.

6.3.2 Degree of Emphasis: Inhibiting Factors

The analysis approach in the prior sections was replicated in respect to the consumer inhibiting factors. This once again explores the notion that brands should recognise the total set of inhibiting factors, and seek to reduce them as a collective to promote consumer contribution.

In so far as the inhibiting factors are concerned, the 11 factors examined seem to demonstrate varying levels of emphasis. The attitudes of each interviewee regarding the impact of the driving inhibiting factors varied from participant to participant; this is evident through the graphical analysis of the degree of emphasis in Figures 6.6 and 6.7 (overleaf). Four levels of emphasis are used as the parameters of this analysis; *1: Little or no mention, 2: Slight mention, 3: Slight importance* and *4: Significant importance*. The inhibiting factors are referred to in shorthand using the coding framework (see Table 6.18 below).

Table 6.18: Inhibiting factors (codes)

Code	Inhibiting Factor
CI 1	Risk of failure despite invested effort
CI 2	Lock in
CI 3	Loss of freedom of choice
CI 4	Psychological efforts to learn
CI 5	Resources
CI 6	Time
CI 7	Effort
CI 8	Forgone opportunities
CI 9	Intellectual property concerns
CI 10	Poorly designed co-creation experience
CI 11	Inauthentic co-creation

Figure 6.6: Degree of emphasis, inhibiting factors (PARTICIPANTS A-H)
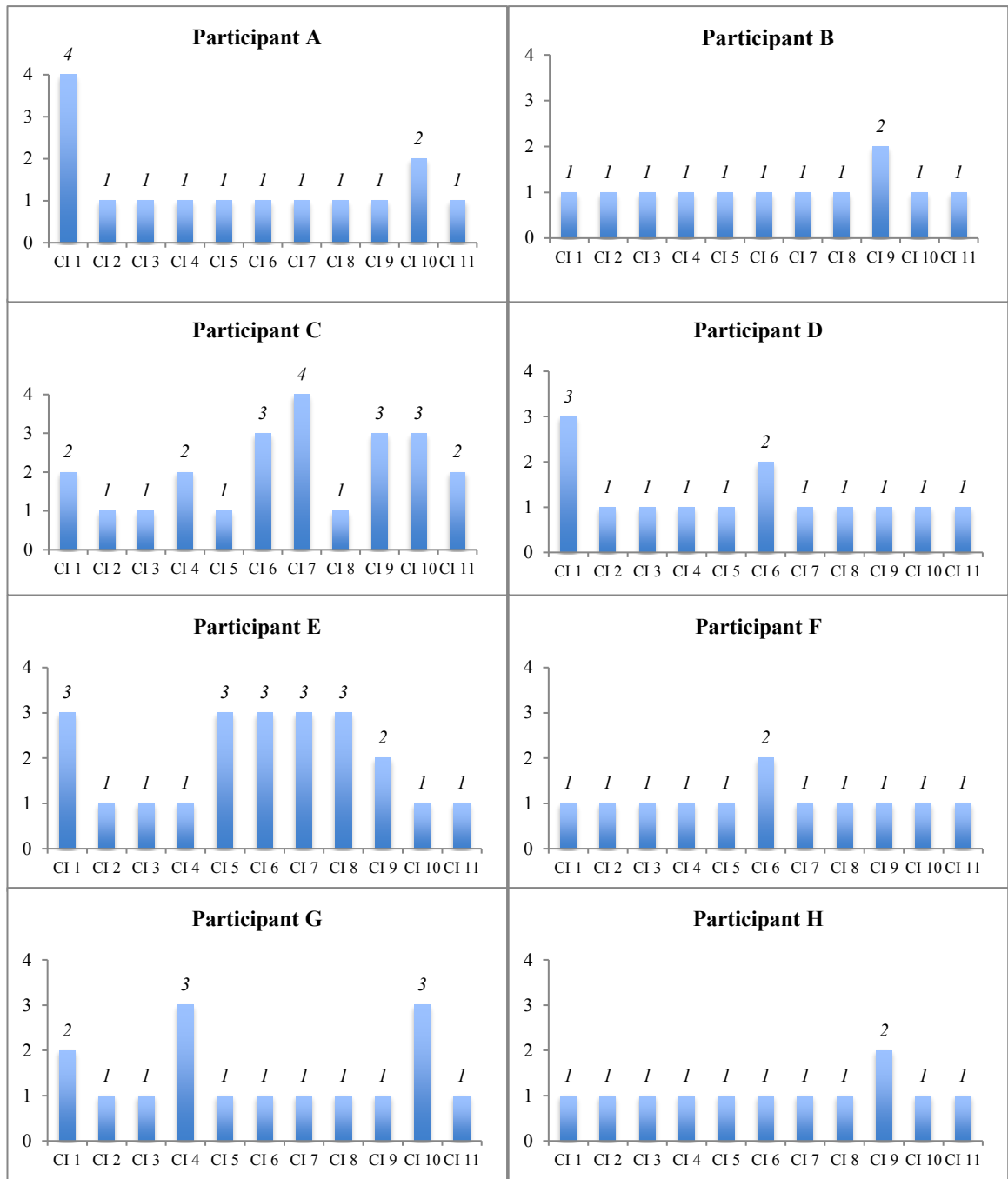
Figure 6.7: Degree of emphasis, inhibiting factors (PARTICIPANTS I-N)
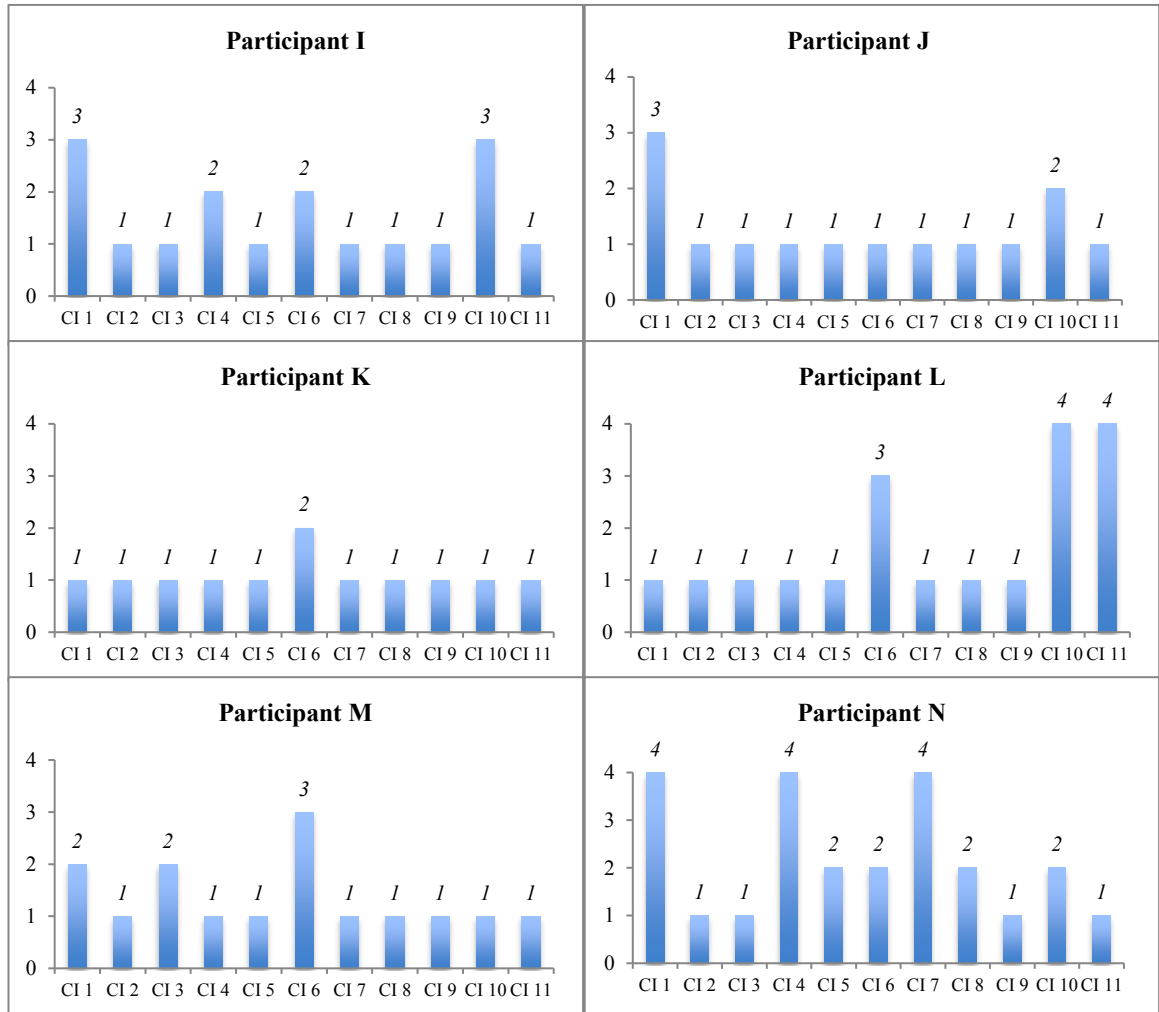
Figures 6.6 and 6.7 display the degree of emphasis placed on the inhibiting factors by each interview participant. The reactions of the interviewees varied considerably. In regards to the design of the co-creation experience, this variation in consumer attitudes suggests that the co-creation experience should be designed to reduce or mitigate all of the inhibiting factors, to ensure consumer co-creators are motivated.

To further illustrate this, the following discussion summarises the degree of emphasis placed on each inhibiting factor across the data set. This is done by summarising the percentage of the data set that discussed each inhibiting factor in respect to the four levels of emphasis. To support this analysis, relevant quotations are used to demonstrate the varying levels of emphasis. The aim of this is to clearly convey the

wide-ranging attitudes of consumers in order to guide the design of effective co-creation experiences.

CI 1: Risk of failure despite invested effort: The significance of this factor varied greatly across the data set, as shown by Table 6.19. Co-creators who were primarily motivated by success or financial gain placed a strong emphasis on this inhibiting factor. A number of interviewees highlighted the effort that went into a co-creation project and stressed the issue of receiving no pay off or success (i.e. failing) as one of the most important inhibiting factors. Moreover, in respect to co-creation projects, a number of participants highlighted that they were less likely to enter a contest if there were already a large amount of entries. A higher number of entries was linked to greater levels of competition and a lesser likelihood of success.

In contrast, participants who placed less significance on this factor highlighted the enjoyment of creating as their primary motivation. In turn, they were not particularly concerned with the outcomes of their co-creation efforts. Moreover, for those driven by their creative desire, co-creation projects were seen as a means to showcase their designs and not the underlying motive for their creative efforts. Once again, they were not inhibited by the risk of failure.

Table 6.19: Degree of significance, CI 1: Risk of failure despite invested effort

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*14%*	*PARTICIPANT A*	*'Failure is the most significant factor stopping me from posting ideas'*
3. Slight Importance	*29%*	*PARTICIPANT D*	*'If the failure was ongoing than yes, I would stop submitting'*
2. Mention	*21%*	*PARTICIPANT C*	*'Seeing a lot of people having participated in a contest affects my decision to enter'*
1. Little or no mention	*36%*	*PARTICIPANT F*	*'I put 4-5 projects on the ideas site but they did not succeed. But it did not intimidate me. I tried it again. You will try as much as you can. It's not for me to give up now'*

The significance of this factor varied from those who seek to derive economic value (financial reward) to those who value interaction and involvement in co-creation experiences. Consumers who value interaction and involvement (experience) more appear less focused on the outcomes, and in turn are less likely to consider the risk of failure as a significant inhibitor. This being said, for a number of interview

participants this factor was a significant inhibitor. Therefore, this should be a key consideration in the design of a co-creation experience, as brands must seek to minimise all inhibiting factors.

CI 2: Lock-in: As previously mentioned, this factor was not identified as relevant by any of the interviewees. The consumer co-creators were comfortable in the thought that even after participating, they were free to leave contests or purchase any products that they desired, i.e. they were not locked into a co-creation project or a brand.

CI 3: Loss of freedom of choice: Only one interviewee mentioned this factor and little significance was placed on this as an inhibitor. The possibility of the co-creation project or the brand to limit the consumer's imagination was outlined, but was not a substantial factor impacting the decision to co-create. This factor was discussed in respect to the co-creation briefs that brands provide consumers with, giving them guidelines and requirements of the product. By having to adhere to set of guidelines, there is a likelihood that consumers won't be able to fully exercise their creative potential.

Table 6.20: Degree of emphasis, CI 3: Loss of freedom of choice

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	0%	N/A	N/A
3. Slight Importance	0%	N/A	N/A
2. Mention	7%	*PARTICIPANT M*	*'In some way the brand can restrict your imagination'*
1. Little or no mention	0%	N/A	N/A

The lack of mentions and significance of this factor suggests that this was not a very common inhibiting factor manifesting in the research context. However, this should still form a key consideration in the design of a co-creation experience, as any potential inhibitor should be minimised to promote consumer involvement.

CI 4: Psychological efforts to learn: For the majority of interview participants, this factor assumed little or no significance. The analysis of the driving factors highlighted the notion that learning can actually drive consumers (*CD 3: Technological*). In respect to this inhibiting factor, those that placed little emphasis on this factor stressed

the enjoyment and benefit of learning and expanding their knowledge, in turn leading to little importance placed on this inhibitor.

For those that placed a significant importance on this factor, this was widely in regards to co-creation projects far outside of their capabilities or skillsets. In order to contribute to these co-creation projects, the consumers would have to invest considerable time and effort to learn and develop the competences required. In this case, consumers tended to avoid contests that did not align with their capabilities. Table 6.21 outlines evidence of the varying attitudes to this inhibiting factor.

Whilst brands must seek to minimise the inhibiting factors from the consumer perspective, in some cases brands will seek knowledgeable or skilled consumers in respect to an NPD project. In this case, the knowledge or skills of a consumer is a prerequisite to their ability to contribute value through co-creation. This supports the notion that brands must seek to educate consumers to enhance their competences in respect to NPD projects, and empower them with skills and knowledge. In this regard, this inhibiting factor can be overcome through the sharing of knowledge and interaction between brand and consumer.

Table 6.21: Degree of emphasis, CI 4: Psychological efforts to learn

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	7%	*PARTICIPANT M*	*'I am inhibited by a lack of knowledge of video, the technical part inhibits me - even if I have a good idea I don't have the skills to deliver it'*
3. Slight Importance	7%	*PARTICIPANT G*	*'Sometimes it's just not my field, if they're asking for ideas about things that I know very little about, I probably will leave the contest'*
2. Mention	14%	*PARTICIPANT I*	*'The information about the brand and to learn is a factor, I focus mainly on brands I know*
1. Little or no mention	71%	*PARTICIPANT E*	*'Learning would never stop me, it makes it more interesting, If I can learn something new, I can use that in different aspects of my life'*

CI 5: Resources: The majority of participants placed little or no emphasis on this factor. As the co-creation efforts were enabled by social media, it was widely expressed that little or no resources (apart from time) were invested in co-creation projects. The only exceptions were instances where the consumer co-creator used

an image to co-create an advertisement, once this was selected by the brand, the consumer was required to purchase the rights for the original image at their own expense. This was expressed with slight importance as it was deemed the brand should be responsible for purchasing any image rights. Similarly, in respect to co-creating promotional videos, it was highlighted that consumers may need to purchase equipment (e.g. cameras) hire users or apply for permits to film in a public place.

Table 6.22: Degree of emphasis, CI 5: Resources

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*0%*	*N/A*	N/A
3. Slight Importance	*7%*	*PARTICIPANT E*	*'The brand asked me to buy the rights for the image (…) I incurred costs because my idea was selected (…) multi-billion dollar companies should be paying for the rights'*
2. Mention	*7%*	*PARTICIPANT M*	*'Creating video requires a lot, equipment, people, permits etc.'*
1. Little or no mention	*86%*	*N/A*	N/A

The responses in respect to this factor highlight the role of social media in enabling easy and cheap interaction between brand and consumer. As involvement and interaction is the cornerstone of co-creation, social media as a platform efficiently fosters this communication, and ensures that the costs incurred or the resources employed by consumers are minimal. Going forward, brands must seek to use the most efficient platforms in the design of co-creation experiences to ensure that *CI 5: Resources* is not a significant inhibiting factor from the consumer perspective.

CI 6: Time: This factor was mentioned by the majority of interviewees, with varying levels of significance. A widely expressed notion was that the consumer co-creators had 'day jobs' and as a result this impacted the amount of time they could commit to co-creation projects. For those who were driven by the enjoyment of co-creation, time assumed less significance as a co-creation factor, as they were happy to commit their spare time to co-creation projects.

A number of interviewees highlighted the potential to contribute value without investing a significant amount of time. This was discussed in regards to co-creation projects where consumers were able to submit winnings ideas with very little thought or time invested. In some cases, the financial rewards of successful co-creation were

so great, the interviewee was able to solely pursue co-creation as their primary means of income. This was particularly stressed by *PARTICIPANT G* who stated *'It's such a huge pay-out for the time that went into it'* and *'I've had some of the most lucrative couple of months of my life'.* Table 6.23 illustrates the varying levels of significance of *CI 6: Time*.

Table 6.23: Degree of emphasis, CI 6: Time

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*0%*	*N/A*	N/A
3. Slight Importance	*29%*	*PARTICIPANT E*	*'Right now I can't invest a lot of time, I'm doing a full time masters'*
2. Mention	*36%*	*PARTICIPANT D*	*'I work a day job so everything I submit is done in my own spare time. Therefore time is always a factor and I need to be as efficient as possible'*
1. Little or no mention	*36%*	*PARTICIPANT A*	*'Time is unimportant, the process is where I derive most of my joy so time is not a factor'*

A key consideration in respect to this factor is that co-creation provides valuable experiences to consumers. In this respect, the design of the co-creation experience should seek to empower consumers with the ability to co-create their own unique and personalised experience. Rather than seeking to outsource tasks to consumers, the design of the co-creation experience should allow consumers to co-create their own experiences in their own time, and to the degree to which they see fit. To minimise the significance of this factor, brands should adopt this mind-set, focusing on experience networks, rather than outsourcing tasks and exploiting consumers.

CI 7: Effort: The responses in regards to this factor varied somewhat. Consumers who co-create out of enjoyment placed little importance on effort, whilst those who chased a financial reward tended to place greater emphasis on this factor. Table 6.24 (overleaf) demonstrates the significance of effort as an inhibiting factor. A number of interviewees highlighted the fact that the co-creation project must align with their skillset and competences; otherwise, it would require too great an effort to contribute value. This factor was linked to *CI 1: Risk of failure despite invested effort* by a number of interviewees. Successful co-creators place less of an emphasis on effort, whilst those who have had limited success give greater consideration to the effort required for future projects. In contrast, for creative consumers who co-create out of enjoyment or to fulfil their creative desire, effort assumed little or no significance as they relish

the process of creating and that in itself is a great enough reward. The deviation in the reactions to this factor is displayed in Table 6.24.

Table 6.24: Degree of emphasis, CI 7: Effort

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*14%*	*PARTICIPANT C*	*'Typically I wouldn't touch a competition that I felt required skills outside of my core competency'*
3. Slight Importance	*7%*	*PARTICIPANT E*	*'I was putting a lot of effort in and getting no reward, I was taking it as a personal challenge'*
2. Mention	*0%*	*N/A*	N/A
1. Little or no mention	*79%*	*PARTICIPANT J*	*'I was doing this for myself anyway so I enjoy it, if you're not enjoying it you shouldn't be using the platform'*

The data support this as a valid inhibiting factor from the consumer perspective. A key learning point taken from the interviews was that consumers who co-create for enjoyment or experience are less likely to place significance on the effort they have to invest. For those who stressed effort as a significant inhibitor, a lack of skills was often mentioned in respect to this factor. This implies that brands focus on extracting economic value from consumers by outsourcing specific NPD tasks. In this regard, brands must maintain a focus on empowering consumers to co-create their own experiences. If a co-creation project requires a lot of effort on the consumer's behalf, this implies the consumer must exert himself or herself without receiving sufficient reward (i.e. experience). As these consumers are co-creating their own valuable experiences, the effort they invest is likely to translate to the value they receive from the co-creation experience. It appears that brands face a challenge between maximising the economic value they extract from co-creation experiences, and enabling consumers to co-create valuable experiences.

Additionally, the literature review (Chapter 2) outlines the likelihood of consumers investing more effort in co-creation projects if they have a strong bond with the brand. This is vital in minimising the impact of this inhibiting factor. As the relationship between the brand and consumer strengthens, consumers are likely to become proportionally committed and invest more effort in a co-creation project.

CI 8: Forgone opportunities: For the majority of interviewees, this factor assumed little or no significance. As there is no risk of lock in *(CI 2: Lock In)* and consumers

are rewarded for their efforts (either financially or through enjoyment, technical or psychological driving factors). They are able to weigh up the pros and cons of co-creating, if another opportunity appears more attractive, they are free to cease their co-creation efforts with little or no consequence.

For those that placed a greater significance on this factor, this was once again linked to failure (*CI 1: Risk of failure despite invested effort)*, if co-creation efforts are unsuccessful on an ongoing basis, consumers are more likely to consider the opportunity cost of entering co-creation projects. Table 6.25 summarises the attitudes of the interviewees in respect to *CI 8: Forgone opportunities*.

Table 6.25: Degree of emphasis, CI 8: Forgone opportunities

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	0%	*N/A*	N/A
3. Slight Importance	7%	*PARTICIPANT E*	*'When you put time in and don't get results, you are sacrificing other things in your life'*
2. Mention	7%	*PARTICIPANT N*	*'Missing out on other things is somewhat of an issue'*
1. Little or no mention	86%	*PARTICIPANT I*	*'I really like spending my time thinking about ideas and brands so I enter multiple contests at the same time. It's easy to enter and complete contests as an when you feel'*

Co-creation experiences must be designed to deliver value to consumers. A properly designed co-creation experience will be value creating from both the brand and consumer perspective. In this sense, the value derived from the co-creation experience is likely to reduce this inhibiting factor as other opportunities become less appealing. Ultimately, consumers can and should be able to participate in co-creation projects at their own free will. If another opportunity becomes more attractive than participating in a co-creation experience, the consumer can switch and there will be no opportunity cost. Brands should not seek to 'tie in' or enforce a consumer's participation in a co-creation project, as this is likely to increase the likelihood of this inhibiting factor. From the responses of the interview participants, for the most part little significance was placed on this inhibiting factor. However, brands should still recognise the risk of this in the design of a co-creation experience.

CI 9: Co-creation experience: The design of the co-creation experience is a theme stressed throughout this research. A number of interview participants identified this

as an inhibiting factor, discussing the ways in which the co-creation experiences could be improved. Amongst the highest mentioned characteristics of this factor, the lack of feedback provided by brands was a key source of frustration. The interview participants expressed the view that it was not always clear why their idea failed and another won, leading to feelings of irritation and in some cases resentment towards the brand. *PARTICIPANT L* felt *'less empowered'* due to the lack of two-way interaction and feedback from the brand.

This links to the dimensions of Prahalad and Ramaswamy's (2004) DART framework, specifically the dimensions of dialogue and access. The interview participants highlighted the one-sided nature of interactions with the brands, and the lack of access to information regarding the results of the co-creation projects as highly exasperating. A lack of transparency was also highlighted as a key characteristic of this factor, with interviewees desiring a greater understanding of the overall NPD process. Particularly as the majority of co-creation projects undertaken by the interviewees were exclusive to one stage of the NPD lifecycle, and the results following their effort were not apparent. In a number of cases, they stated they would value transparency in the steps that followed their co-creation efforts to see how this eventually manifests into a tangible product.

In addition, a lack of clear guidelines or brief was mentioned by a number of participants. In some cases this led to the consumer not entering the co-creation project as it was unclear what the brand was looking for, or in fact it appeared the brand themselves did not know what they were looking for. Table 6.26 provides evidence of the varying significance placed on this factor.

Table 6.26: Degree of emphasis, CI 9: Co-creation experience

Degree of Emphasis		Interviewee	Supporting Quote
4. Significant Importance	*7%*	PARTICIPANT L	*'The brand's terms are one-sided. They have no incentive to encourage participation or to increase the enjoyment/rewards of the people participating. I feel less empowered after learning more about it. The brand couldn't care less about the ideas and the people'*
3. Slight Importance	*21%*	PARTICIPANT C	*'Feedback would really help, this just seems like one manifestation of brands' desire to exploit the crowd sourced brain'*
2. Mention	*21%*	PARTICIPANT A	*'I reached 10,000 votes, but got no feedback at all, I signed an NDA, the selection process happened behind the scenes and I didn't have a point of view'*
1. Little or no mention	*50%*	PARTICIPANT G	*'You have no idea who's on the other end of the contests and what they have seen before. I have won some projects that I didn't have a lot of faith in my entry, and lost some where I thought my contribution was really good - peer ideas were so bad, yet I didn't win'*

The need to design effective co-creation experiences is discussed throughout this research, with the research findings aiming to contribute knowledge to this area. This factor explicitly supports the design of the co-creation experience as vital to value resulting from co-creation. The ranging attitudes displayed in Table 6.26 provide clear examples of poorly designed co-creation experiences and the potential for this to manifest as a significant inhibitor of co-creation from the consumer perspective. The most common talking points were a lack of dialogue, transparency or access to information. This signifies the value of the existing literature in guiding the design of effective co-creation experiences. Brands must seek to develop a deep understanding of the foundations of the co-creation approach and the design of effective co-creation experiences to ensure consumers are motivated to co-create and derive value from their interactions with the brand.

CI 10: Intellectual property concerns: For the majority of interviewees, this factor was not regarded as significant. For those that afforded this factor a low level of significance, it was commonly mentioned that consumers are not able to produce and sell their ideas; in turn, they were happy to renounce their IP rights. In addition, it was widely acknowledged that the IP framework is most often made clear by the brand prior to entering the co-creation project, and as long as the consumer is available to add value, they are satisfied. The varying significance of this factor and supporting evidence are displayed below.

Table 6.27: Degree of emphasis, CI 10: IP concerns

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*0%*	*N/A*	N/A
3. Slight Importance	*7%*	*PARTICIPANT A*	*'Quite often I am not happy to sign over IP'*
2. Mention	*21%*	*PARTICIPANT B*	*'The dilemma is to let the world know about your creation, but on the other hand nobody will see your name on the box in the store'*
1. Little or no mention	*71%*	*PARTICIPANT H*	*'Even if the project is not selected, the brand retains the rights for a period of three years. This wasn't really a big deal for me in the end, as I had no plans to commercialise the designs myself, but it was something I considered'*

In cases where this factor was given greater emphasis, the interviewees highlighted the possibility of the brand taking ownership and credit for their ideas. When a co-created product is launched, the consumer co-creators are seldom given any credit by the brand, and the product bears only the brand's name. Moreover, select interview participants discussed the value they are contributing to the brand, and in turn, as a creator, they were not happy to sign over their IP. A key sentiment expressed was that the consumer co-creator should be able to take ownership of the final product to some extent (i.e. a share in revenue or royalty payments). However, upon realising they are not able to produce and commercialise their ideas, the majority of interviewees conceded they would have to sign over their IP.

CI 11: Inauthentic co-creation: For a small proportion of the interview participants, the view was proposed that in some cases, brands seek to exploit the crowd, trying to harvest a mass of ideas and only paying for a few. Rather than seeking to deliver value to consumers through improved products or unique experiences, the interview participants highlighted the one-sided nature of co-creation experiences, whereby only the brand gains any value.

The co-creation approach should seek to maximise value for both the brand and the consumer. Whilst this factor was not widely mentioned across the data set, a number of interviewees highlighted the profit-seeking nature of brands, and their inauthentic approach to co-creation. Of particular relevance, was the possibility of brands seeking to exploit the crowd, and receiving masses of ideas, feedback or information whilst

offering little or no remuneration or value to the consumer. The varying significance of this factor and supporting evidence are displayed below.

Table 6.28: Degree of emphasis, CI 11: Inauthentic co-creation

Degree of Emphasis	% of Mentions	Interviewee	Supporting Quote
4. Significant Importance	*0%*	*PARTICIPANT L*	*'I feel like the community is being 'used' by the brand for their own purposes*
3. Slight Importance	*7%*	*PARTICIPANT A*	*'I suspect that co-creation platforms are a way to harvest a mass of ideas and only pay out for a few'*
2. Mention	*7%*	*N/A*	N/A
1. Little or no mention	*86%*	*N/A*	N/A

PARTICIPANT L particularly stressed this, where the frustration from feeling exploited led to them ceasing all co-creation efforts with a brand, despite the success they had achieved. In the context of this research, this is not considered co-creation, as true co-creation is a collaborative approach to NPD whereby both the brand and the consumer seek to maximise value. This sentiment was highlighted in the previous chapter, with a number of brand perspective participants highlighting the possibility of brands adopting a 'co-creation approach' as an afterthought or for 'inauthentic' reasons.

Examining the degree of emphasis placed on the consumer co-creation factors provides a greater insight into the unique perspective of each consumer, and the differences in how the co-creation factors impact consumers on a case-by-case-basis. The results of this stage of the analysis do not seek to generalise the attitudes of the consumers in respect to the most significant driving or inhibiting factors. Rather, they seek to evidence the unique perspectives of each consumer, and the need for brands to design co-creation experiences to promote a range of driving factors and reduce the total set of inhibiting factors. This provides a deeper insight into the nature of the co-creation factors from the consumer perspective. In this sense, the results of this chapter go beyond identifying and explaining the co-creation factors; examining the degree of emphasis allows exploration of the impact of these factors in context across a range of consumer co-creators. This provides greater contextual knowledge on which to guide the design of effective co-creation experiences, to promote consumer involvement and contribution to value creation. This is vital in maximising

the value from co-creation, by ensuring consumers are continuously motivated to co-create throughout the NPD lifecycle.

6.4 Summary

This chapter analyses the data collected in respect to the consumer perspective. The main aim of the analysis is to contribute a knowledge of how to design effective co-creation experiences to motivate consumer co-creators. Accordingly, the key contributions are as follows:

Consumer co-creation factors: The analysis contributes expanded taxonomies of consumer co-creation factors, validated through the empirical investigation. The consumer co-creation factors categorise the fundamental drivers and inhibitors consumers face when co-creating with brands. This is of value to brands seeking to empower and motivate consumers to collaborate in NPD. The findings in this chapter enrich the existing literature and provide practical contributions with which brands can drive a complete co-creation approach

Degree of emphasis: Chapter 4 recognises the potential limitation of collecting data from geographically dispersed individuals. To overcome this and to explore the consumer perspective in context, a focus on the degree of emphasis is used to describe the heterogenous nature of consumers. This ensures that generalisations are not made across the consumer population, highlighting the unique nature of each consumer co-creator. Subsequently, this provides a deeper insight into the need to design multi-pronged co-creation experiences, promoting a range of driving factors and mitigating the total set of inhibiting factors.

Chapter 7: Discussion

7.1 Introduction

Research into the role of co-creation in enhancing NPD competences is very worthwhile. There is very little prior research pertaining to this topic, particularly with a focus on social media in enabling co-creation. The existing literature stresses the need for further exploration of this research area, particularly in developing frameworks to enable the operationalising of the co-creation approach (Vargo and Lusch, 2017). The emergence of the co-creation paradigm and the rapid growth of social media over the past decade are significantly impacting the ways in which brands manage and approach NPD. The previous research is effective in defining the core principles of the co-creation paradigm (Prahalad and Ramaswamy, 2004, 2006, 2013; Ramaswamy and Ozcan, 2018), and the potential impact of adopting a co-creation approach in NPD. Similarly, it is widely stressed that the growth of social media is a key factor in shifting innovation management strategies towards co-creation (Prahalad and Ramaswamy, 2004; Ramaswamy and Ozcan, 2018; Hoyer et. Al., 2010).

This current research adopts the stance that to maximise the high-level impact of co-creation on NPD, a deeper understanding of how to implement a complete co-creation approach is required. The research focuses on exploring the meta-theoretical principles of co-creation and social media in an NPD context to provide both theoretical and practical contributions to this area. This provides a greater understanding of how to apply the core principles of co-creation and the use of social media in context (i.e. a co-creation-NPD scenario). This has been explored through the design of effective co-creation experiences through the brand and consumer perspectives, and the role of social media in enabling co-creation.

Throughout this thesis, the researcher has stressed a disparity between theory and practice. This was typified by the literature specifying a complete co-creation approach, whilst examples of co-creation in practice displayed a limited degree of co-creation. This is also highlighted by a lack of focus on interactional creation by prior research (unifying a product and experience focus) (Ramaswamy and Ozcan, 2018; Ranjan and Read, 2014). This shaped the discussion and approach towards research to understand the reasons for this disparity, and to uncover new and relevant knowledge to provide solutions to reduce this disparity. The contributions of this thesis

aim to guide the design of effective co-creation experiences to promote a complete co-creation approach. This is built on a deep understanding of the driving and inhibiting factors that both brands and consumers face throughout the NPD lifecycle, and a knowledge of how social media can positively impact the design of co-creation experiences. A complete co-creation approach is considered an antecedent to a high-level impact of co-creation on NPD. This is driven by the overall research aim, and a focus is also placed on defining and understanding the ways in which co-creation can impact NPD at a high-level. Ultimately, this approach builds a deeper understanding of the interconnected relationships between co-creation, NPD and social media. The result of this is applicable knowledge derived from subject matter experts (brand perspective) and consumer co-creators, that going forward can be used to drive the co-creation paradigm.

This study is characterised by three research elements – co-creation, NPD and social media. New product development is widely recognised as a risky and inexact process, characterised by a high failure rate of new product concepts (Thomke and von Hippel, 2002). This is signified by an ongoing evolution of innovation management approaches towards NPD. The co-creation paradigm has emerged over the past decade, and in the context of this research is considered the value maximising approach to NPD. In the context of this research, co-creation is regarded as a collaborative approach to NPD, whereby brands and consumers work together in the design and delivery of value propositions (Ramaswamy and Ozcan, 2018). The rise of co-creation is as a result of the changing nature of markets, business environments, the brand-consumer relationship and the emergence of digital technologies and interactive platforms (DeLanda, 2016; Ramswamy and Ozcan, 2018; Prahalad and Ramaswamy, 2004). Co-creation shifts the locus of value from a product-based, value-chain approach, to one where value is co-created through experience networks.

In order to maximise the value from co-creation and indeed NPD, the previous research specifies the need for brands and consumers to collaborate intensely throughout the whole NPD lifecycle (Hoyer et. Al., 2010). This is termed a complete co-creation approach. Whilst the existing literature outlines the necessary foundations of a complete co-creation approach, i.e. the DART dimension (Prahalad and Ramaswamy, 2004; Schiavonne, Metallo and Agrifoglio, 2014) prior research does not adequately provide guidance on how to implement this approach in real-life NPD scenarios (Vargo and Lusch, 2016). The unique nature of each NPD project is

stressed in respect to the limitations of the existing literature throughout this thesis. This signifies the need for further research into the implementation of a complete co-creation approach, which is required to maximise the high-level impact of co-creation on NPD. To implement a complete co-creation approach, co-creation experiences must be designed to promote collaboration at each stage of the NPD lifecycle. This provides the rationale for a focus on the design of effective co-creation experiences, to ensure brands and consumers are willing and able to co-create throughout the NPD lifecycle.

In effect, the existing literature explains 'what' is required to maximise the impact of co-creation in NPD. This is evident through promoting a complete co-creation approach to maximise this high-level impact. What is lacking is a profound knowledge of how to achieve this high-level impact (i.e. the design of co-creation experiences) and a fundamental understanding of how co-creation can deliver a competitive impact in NPD. In this regard, complete co-creation represents more of an ideology rather than an actionable approach to NPD. This was corroborated by a review of examples of brands co-creating (Chapter 3) and indeed the data collected addressing the brand perspective (Chapter 5), both of which support the view for the most part – brands are unwilling or unable to implement a complete co-creation approach.

Accordingly, the research is driven to deliver a greater fundamental understanding of the interaction between co-creation, NPD and social media, by focusing on the design of effective co-creation experiences, a complete co-creation approach and the high-level impact on NPD. This is consistent with the view maintained throughout this thesis that effective co-creation experiences (positively impacted by social media) drive a complete co-creation approach. In turn, a complete co-creation approach is responsible for maximising the high-level impact of co-creation on NPD. Figure 7.1 (overleaf) displays how the research findings are considered 'steps' leading to a high-level impact of co-creation. A high-level impact of co-creation is built on a complete co-creation approach. A complete co-creation approach is in turn implemented through the design of effective co-creation experiences, promoting collaboration throughout the NPD lifecycle.

Figure 7.1: The steps leading to a high-level impact of co-creation on NPD
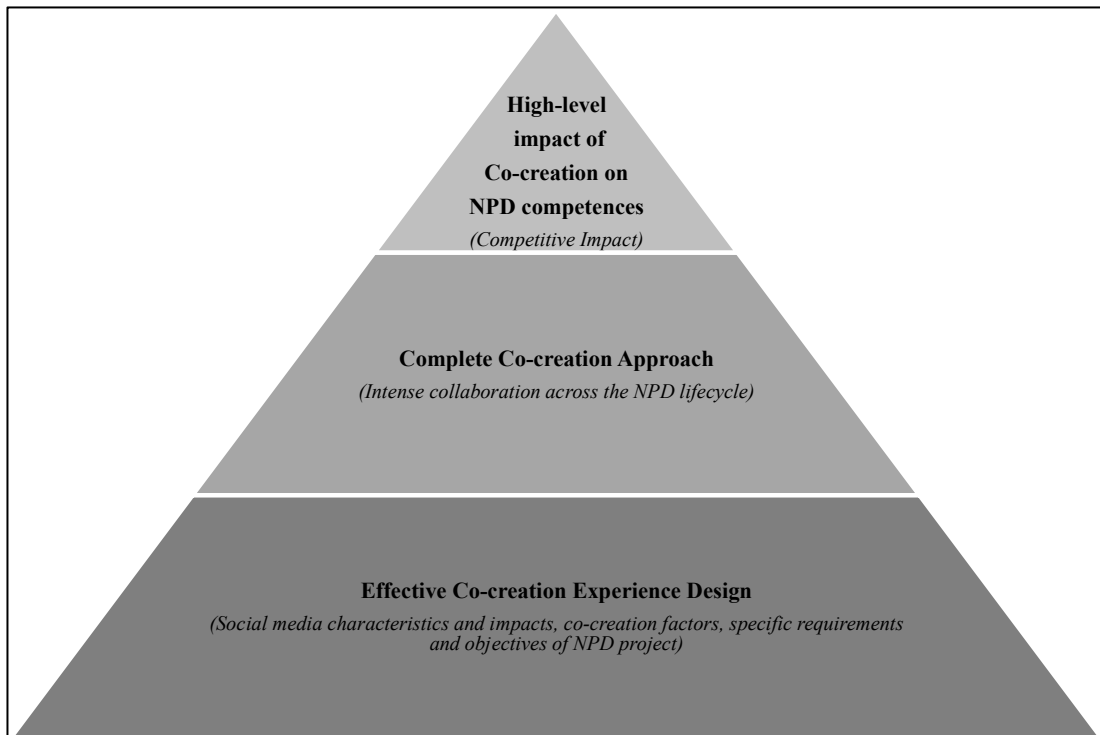
Figure 7.1 displays how the steps contribute to the overall research aim. This provides an understanding of the underlying philosophy shaping the research journey to this point, and supports the fact that the approach adopted is in line with the overall aim of the research. This chapter discusses the significance and implications of the research findings in respect to the overall research aim.

The initial focus is on the implications of the research findings in respect to the design of co-creation experiences. This includes the co-creation factors, social media characteristics and key learning points resulting from the research findings. Following this, greater consideration is given to the high-level impact of co-creation in NPD, particularly through a competitive impact on the commercial success of new products. Finally, in line with the research aims and objectives, a framework for social media enabled co-creation experiences is proposed.

7.2 Designing Effective Co-creation Experiences

The initial discussion focuses on the research findings in respect to the design of effective co-creation experiences. The discussion is grounded on the notion that the brand is responsible for designing, implementing and managing the co-creation experience. In effect, the brand controls the degree of co-creation and the points of the NPD lifecycle at which co-creation can occur. Both the brand and consumer are

considered value maximising individuals; with both stakeholders co-creating up to the point at which the perceived benefits (driving factors) outweigh the perceived costs (inhibiting factors). As the goal is to promote a complete co-creation approach, brands and consumers should collaborate across all six stages of NPD to maximise value.

In respect to the research findings, two avenues of exploration assume significance. Firstly is a focus on the co-creation-NPD relationship. The co-creation-NPD relationship is characterised by the co-creation factors that both brands and consumers face in respect to co-creation in NPD. These are the factors considered to either drive or inhibit co-creation in NPD and are vital to the design of effective co-creation experiences. The narrative of the co-creation-NPD relationship discusses the implications of the research findings from both the brand and consumer perspective, in line with the aim to contribute knowledge to guide the design of co-creation experiences.

The second avenue of exploration focuses on the impact and role of social media on the co-creation-NPD relationship. This explores the implications of the research findings in respect to the specific characteristics of DESNs and VCCs in promoting and enabling co-creation. This contributes a greater knowledge of the use of social media in the design of effective co-creation experiences, and the potential impact of social media enabled co-creation.

7.2.1 *Co-creation-NPD Relationship (Co-creation Factors)*

The co-creation-NPD relationship embodies two research elements: co-creation and NPD. The contextual view of co-creation (Chapter 3, Figure 3.1) outlines a co-creation landscape whereby brands adopt a co-creation approach at only select stages of the NPD lifecycle. This characterises a gap between theory and practice (i.e. a complete co-creation approach vs. a limited degree of co-creation). In order to explore the underlying reasons behind this, it was necessary for the researcher to explore the factors that both drive and inhibit co-creation from the brand and consumer perspective. The co-creation factors are defined as factors that either drive or inhibit co-creation in NPD. The data collection aimed to validate and expand the knowledge of these factors. This was vital in developing a deeper understanding of the co-creation-NPD relationship, and understanding the challenges of adopting a complete co-creation approach. In order to achieve a complete co-creation approach, the co-creation experience must be designed to maximise the driving factors and minimise the inhibiting factors for both stakeholder perspectives.

The research findings present expanded taxonomies of co-creation factors (driving and inhibiting factors) from both the brand and consumer perspective. The taxonomies of co-creation factors detail the factors that the design of the co-creation experience should seek to promote (driving factors) and reduce (inhibiting factors). A key contribution of the data collection is the validation and identification of co-creation factors by subject matter experts and consumer co-creators who have experienced these factors in context (real-life NPD scenarios). This provides a richer understanding of the factors outlined in the literature, enables the identification of new factors and develops an understanding of how these factors behave in real-life NPD scenarios. The insight gained through the data collection and analysis provides a more profound understanding of how and why the co-creation factors are relevant, and the factors that brands and consumers are likely to face in a co-creation-NPD scenario.

Brands assume responsibility for the design and management of co-creation experiences. This means that in the design of the co-creation experience, the brand must not only understand the factors that they may face, but also those that are significant in driving or inhibiting consumer participation. This shapes the discussion to examine the research findings with the aim to provide brands with foundational knowledge to guide the design co-creation experiences, to ensure both the brand and consumers are willing and able to co-create throughout the NPD lifecycle.

7.2.1.1 Brand perspective

The analysis of the brand perspective validates the co-creation factors collected from the literature, identifies additional factors, and builds an in-depth knowledge of how and why the co-creation factors are relevant in the research context. The results of this are expanded taxonomies of driving and inhibiting factors, and a greater fundamental knowledge of how the co-creation factors behave in a real-life NPD scenario.

The taxonomies of driving factors (Table 7.1) and inhibiting factors (Table 7.2) are displayed overleaf. These factors deliver new knowledge regarding the co-creation-NPD relationship by validating and expanding the knowledge of existing factors (collected from the literature) and presenting new factors emerging from the data. Validating existing factors (in the research context) and identifying additional factors provides a rich underlying knowledge of the benefits and costs experienced through

co-creation. The explanation of each factor outlines how they behave in context (i.e. real-life NPD scenarios) and creates a fundamental understanding of how and why each factor is impactful. The taxonomies provide the foundations on which to expand and adapt the conceptual framework.

Discussion

Table 7.1: Taxonomy of brand driving factors

Taxonomy of Brand Driving Factors	
Virtually costless acquisition of consumer ideas	Co-creation provides access to a volume of consumer information/ideas at little or no cost
Outsourcing of NPD efforts	Substitute employees' input with consumer input (Bowers, Martin, and Luker, 1990; Lovelock and Young, 1979)
Greater solution information	The information regarding the needs of the market resides with consumers, co-creation provides access to this information
Reduced risk of product failure	Greater access to information, and access to consumer created concepts reduces the risk of product failure
Leagile manufacturing	Brands are able to be more lean and agile. This includes leveraging information across numerous products, and reducing uncertainty, resource waste and inventory holding costs
Faster speed-to-market	Brands are able to move fast, less pivots are required, NPD stages can be merged or removed altogether (Fang, 2008; Joshi and Sharma, 2004; Sawhney, Verona and Prandelli, 2005)
Greater consumer understanding of NPD process	Consumers are educated in respect to the challenges, costs and constraints brands face (consumer empathy)
Adjustments of consumer preferences	Providing consumers access to information and educating them (in respect to the NPD process and the product) can result in adjustments of preferences. Involvement in co-creation makes the consumer better acquainted with the challenges, costs, and constraints of creating a new product, resulting in adjustments in preferences and a better appreciation of the product (Dabholkar, 1990; Joshi and Sharma, 2004)
Better appreciation of the product	Consumers assume a greater understanding of the challenges of creating a product, a sense of ownership from co-creating with a brand, and in turn appreciate the product more (Dabholkar, 1990; Joshi and Sharma, 2004)
Strengthening of brand-consumer relationship	The delivery of higher value products and amplified number of connection points results in a stronger brand-consumer relationship (Kumar et al., 2010; van Doorn et al., 2010; Hoyer et al., 2010)
Positive attitudes toward the product	Positive attitudes towards the product translate into a positive impact on consumers' purchase intentions, willingness-to-pay and WOM referrals (Franke, Keinz, and Steger, 2009; Mathwick, Wiertz, and DeRuyter, 2007).
Post launch gains	Co-creation allows for continuous product improvements and consideration of additional usages (Grewal, Lilien, and Mallapragada, 2006; Muniz and Schau 2005; Xie, Bagozzi, and Troye, 2008)
Closer market fit	Co-created products meet the needs and expectations of consumers (Fang, Palmatier, and Evans, 2008; Lilien et al., 2002)
Higher commercial potential	Co-created products link to higher-expected benefits and novelty, providing a route for product differentiation (Song and Adams, 1993)
Table 7.1 continued overleaf	

High expectations and novelty	The developed products are shown to possess high-expected benefits and novelty in the eyes of the consumer, which increases commercial attractiveness (Franke, von Hippel, and Schreier, 2006; Magnusson, Matthing, and Kristensson, 2003)
Resource impact	Access to solution information, the ability to move quickly with self-validated ideas, and a reduction in internal debate and conflict can lead to a reduction of the resources employed
Internal empowerment	Co-creation ensures those within the brand are working towards the same shared goal, this reduces internal debate and conflict
Experience development	Brands are able to understand consumers' expectations and requirement in regards to the experience surrounding the product; Co-creation in itself provides value to consumers through a unique experience
Limitations of traditional methods	Traditional approaches towards NPD are no longer effective in delivering valuable and relevant products

Table 7.2: Taxonomy of brand inhibiting factors

Taxonomy of Brand Inhibiting Factors	
Diminished control over brand's strategic management and planning	Co-creation is effectively sharing control of a vital function of management, aggravating brand's strategic planning objectives (Ernst, Hoyer, Krafft, and Krieger, 2010; Han, Kim, and Srivastava, 1998; Moorman and Miner, 1998)
Complexity of managing brand's objectives and interests of diverse stakeholders	Brands have to manage the complexity of achieving their own objectives and meeting those of consumers (Hoyer et al., 2010) Consumers are not within direct control of the brand, brands are likely to struggle with the management of mis-performance (Etgar, 2008)
Coordination requirements, constraints and other non-monetary costs	There is a risk of incurring costs through managing the co-creation process (Hoyer et al., 2010) Co-creation can be more complex to arrange, more people are involved and it can be very time hungry
Infeasibility of product ideas	Consumers may not possess the ability to assess the feasibility of ideas or their implications (Magnusson, Matthing, and Kristensson, 2003)
Consumer heterogeneity	A diverse group of consumers are likely to possess different needs. Brands are unable to deliver products that will satisfy everyone
Asymmetrical effects	Consumers are likely to take credit for successful products but shirk responsibility in the light of poor outcomes (Bendapudi and Leone, 2003).
Table 7.2 continued overleaf	

Conflicting preferred outcomes	There is a possibility of a power struggle as consumers are likely to opt for customisation whereas brands are more likely to prefer efficiency and cost reduction (Hoyer et al., 2010)
Consumers as competitors	Empowered consumers can become a formidable source of competition, they may be unwilling to purchase a brand's offerings or develop products which damage sales (Cook, 2008; Fodness, Pitegoff, and Sautter, 1993)
Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	Any benefit derived from a better product fit is dependent on the consumer's ability to articulate their preferences and future needs (Franke, Keinz, and Steger, 2009; Mullins and Sutherland, 1998). Consumers' inability to articulate their needs may render the process useless or require the brand to invest time in identifying these needs
Information overload	The 'wide end' of the NPD funnel becomes much wider in NPD contexts where co-creation is involved (Hoyer et al., 2010). Information overload carries a greater threat at the downstream stages of NPD as they are deadline sensitive, brands have to act on the results of ideation quickly in order to meet market needs
Concerns about secrecy	Brands who rely on secrecy to protect their proprietary knowledge are less likely to undertake co-creation activities in NPD (Liebeskind 1997)
Ownership of intellectual property	The lack of consistency in intellectual property expectations may create perceptions of unfairness amongst consumers (Hoyer et al., 2010) There is a risk of legal repercussions for brands that incur monetary costs. It is in the nature of brands to retain ownership of IP
Risk of retaliation and defection	Brands may face a backlash from consumers if their ideas are not selected with the risk of retaliation and defection to rivals (Hoyer et al., 2010)
Culture	The culture and attitudes of those within brands acts as a key obstacle. This includes individuals being risk-averse, egotistical and unwilling to adopt a new approach or mindset
Lack of co-creation methodologies	The co-creation paradigm is flexible, every project differs, and as result there is not a one-size-fits-all methodology
Resource impact	Co-creation may incur additional monetary/non-monetary costs, particularly if the co-creation experience is poorly designed
Organisational structure	Co-creation requires adopting a collaborative mindset and communication across strategic functions. Organizations may be poorly positioned to do that

The expanded taxonomies of co-creation factors (Tables 7.1 and 7.2) are effective in defining and explaining the potential driving and inhibiting factors that brands face when co-creating in NPD. The discussion in Chapter 5 highlighted the significance of the co-creation factors in loosely grouping the benefits and costs associated with implementing such an approach. These factors are ultimately responsible for shaping a brand's decisions when implementing a co-creation approach to NPD.

The expanded taxonomy of driving factors (Table 7.1) is a major contribution in categorising the factors that brands should look to promote through the design of the co-creation experience. Through the validation of existing factors and identification of additional factors, this provides a comprehensive set of factors that prior to this research may not have been overtly apparent to brands. This is significant in firstly making brands aware of the 'benefits' of co-creation. Secondly, this provides a deep knowledge of how and why each factor can deliver an impact in NPD. Accordingly, Table 7.1 provides the foundations upon which to guide the design of co-creation experiences.

Similarly, the taxonomy of inhibiting factors (Table 7.2) presents a clear set of risks or costs that can be incurred through co-creation from the brand perspective. An extensive knowledge of 'what' the inhibitors are is the first step in designing co-creation experiences to reduce the risks or costs incurred through a co-creation approach. This is supported by the rich explanation of each factor in a co-creation-NPD setting, which provides further insight into the impact of these factors and, in turn, how to avoid them. The taxonomy of inhibiting factors is built from factors that result in a tangible impact (i.e. information overload or resource impact), but also from factors that relate to the mind-set and prejudices towards co-creation (i.e. culture). These tangible inhibiting factors can be mitigated by the design of effective co-creation experiences. The factors associated with a shift in mind-set or arrogance towards a co-creation approach are most likely to be addressed through a greater fundamental knowledge of the competitive impact of co-creation on NPD. A greater understanding of the impact of co-creation on NPD is likely to promote the shift in mind-set towards a more collaborative approach. This is further explored in section 7.3, through the implications of the research findings.

7.2.1.2.1 Brand co-creation factors across the NPD lifecycle
The expanded taxonomies of co-creation factors provide valuable knowledge in respect to the design of co-creation experiences. As this research maintains a focus

on complete co-creation, it was considered vital to examine the significance of the co-creation factors in respect to the stages of the NPD lifecycle.

The notion of the brand co-creation varying in significance over the NPD lifecycle was identified and discussed in Chapter 3, and corroborated by the research findings in Chapter 5. Each stage of NPD is built from a unique set of activities and objectives. Accordingly, the significance of the co-creation factors varies across the NPD lifecycle. In respect to a complete co-creation approach, co-creation experiences must be designed in accordance with each stage of NPD. Of particular relevance is ensuring that a positive trade-off of co-creation factors (driving factors outweighing inhibiting factors) is achieved at each stage of NPD. The research findings in respect to the brand perspective identify the set of relationships between the co-creation factors and the NPD lifecycle. This outlines the most significant driving and inhibiting factors at each stage of NPD derived from the knowledge of subject matter experts on how the co-creation factors manifest in context. Chapter 5 explained how and why each co-creation factor assumes significance at each stage of NPD and manifests in a co-creation-NPD scenario. This contributes a deep understanding of how the co-creation factors provide a positive (driving factors) or negative (inhibiting factors) impact across the NPD lifecycle. This is of significant value in designing effective co-creation experiences. A fundamental knowledge of the likely co-creation-NPD scenarios provides a clearer understanding of the factors that the design of the co-creation experience should seek to promote or reduce at each stage of NPD.

From the research findings, it is clear that the co-creation factors differ in significance across the stages of the NPD lifecycle. The unique nature of every co-creation project indicates that it is not possible to prescribe a definitive set of co-creation factors at each stage of NPD. However, the analysis in Chapter 5 builds a holistic knowledge of potential co-creation-NPD scenarios based on the collective knowledge of the subject matter experts. This is key in resolving the co-creation-NPD relationship, and providing guidance on the design of effective co-creation experiences. By outlining the potential scenarios brands may face across the NPD lifecycle (with respect to the co-creation factors), the co-creation experience can be designed to maximise the benefits (driving factors) and minimise the risks/costs (inhibiting factors). This is a fundamental step in promoting a complete co-creation approach, by designing co-creation experiences to deliver value across the whole NPD lifecycle.

Discussion

Chapter 5 outlines the research findings in respect to the brand perspective. In reference to the relationships between the co-creation factors and the NPD lifecycle, Chapter 5 uses morphological analysis principles to build a holistic set of co-creation-NPD scenarios (i.e. the potential driving/inhibiting factors that manifest at each stage of NPD). To aid with the discussion, Tables 7.3 and 7.4 overleaf summarise the set of relationships outlined in Chapter 5 (summarising Tables 5.20-5.26). Tables 7.3 & 7.4 were created by replacing the qualitative explanation of how and why each co-creation factor assumes significance at a given stage of NPD with a + (driving factor) or – (inhibiting factor). This provides a simple but effective summary of the research findings and adds context to the discussion that follows Tables 7.3 & 7.4.

The set of relationships between the driving factors and the stages of the NPD lifecycle are summarised in Tables 7.3 and 7.4 (overleaf). The significance of a driving factor (Table 7.3) in respect to a stage of NPD is denoted by +. This signifies a positive impact of the driving factor at a given stage of NPD based on the results of the research findings. Similarly, Table 7.4 outlines the inhibiting factors against the stages of the NPD lifecycle. The significance of an inhibiting factor at a given stage of NPD is denoted by -. This signifies the negative impact of an inhibiting factor at a given stage of NPD derived from the research findings.

Table 7.3: Potential co-creation-NPD scenarios (brand driving factors)

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
Virtually costless acquisition of consumer ideas	+	+		+		
Outsourcing of NPD efforts	+	+	+	+	+	+
Greater solution information	+	+	+	+	+	+
Reduced risk of product failure		+	+	+	+	
Leagile manufacturing	+	+	+	+	+	
Faster speed-to-market	+	+	+	+	+	
Greater consumer understanding of NPD Process				+	+	+
Adjustments of consumer preferences	+				+	+
Better appreciation of the product				+		+
Strengthening of brand-consumer relationship	+	+	+	+	+	+
Positive attitudes toward the product		+	+	+	+	+
Post launch gains	+	+	+	+	+	+
Closer market fit	+	+	+	+	+	+
Higher commercial potential	+	+	+	+	+	+
High expectations and novelty	+	+	+	+	+	+
Resource Impact	+	+	+	+	+	+
Internal Empowerment	+	+	+	+	+	+
Experience Development	+	+	+	+	+	+
Limitations of traditional methods	+	+	+	+	+	+

Table 7.4: Potential co-creation-NPD scenarios (brand inhibiting factors)

	Up Front Homework	Ideation	Feasibility	Development	Testing	Launch
Diminished control over brand's strategic management and planning						
Complexity of managing brand's objectives and interests of diverse stakeholders	-	-	-	-	-	-
Coordination requirements, constraints and other non-monetary costs	-	-	-	-	-	-
Infeasibility of product ideas		(red)	(red)			
Consumer heterogeneity	(red)	(red)	(red)			
Asymmetrical effects	-	-	-	-	-	-
Conflicting preferred outcomes						
Consumers as competitors				-		
Information overload	-			-	-	
Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs		-			-	
Concerns about secrecy				-		
Ownership of intellectual property				-		
Risk of retaliation and defection				-		
Culture	-	-	-	-	-	-
Lack of co-creation methodologies	-	-	-	-	-	-
Resource impact	-	-	-	-	-	-
Organisational structure	-	-	-	-	-	-

Tables 7.3 and 7.4 illustrate the set of relationships between the co-creation factors and the stages of NPD as a result of the research findings. This provides an indication of the likely scenarios brands may face when co-creating in NPD. Particular attention must be placed not on the number of co-creation factors that populate a given stage of NPD, but the significance and impact of each co-creation factor.

A complete co-creation approach necessitates the need for co-creation at each stage of the NPD lifecycle. When considering the research findings, Table 7.3 displays the potential positive impact that co-creation can deliver at each stage of NPD. This is evident through the majority of the driving factors impacting multiple if not all stages of the NPD lifecycle. This implies that brands are able to promote the positive impact of co-creation at each stage of NPD, through designing co-creation experiences to promote a range of potential driving factors.

The results of the set of relationships between inhibiting factors and the NPD lifecycle clearly outline the costs or impediments that brands may face. From the outset, this provides an indication of the factors that brands should be aware of, and look to reduce/avoid through the design of co-creation experiences. A key learning point taken from the research findings is that the cause of the significance of an inhibiting factor is often linked to the poor design of a co-creation experience. This was supported and discussed by the subject matter experts (brand perspective) and was apparent through the explanation of each inhibiting factor across the stages of the NPD lifecycle in Chapter 5. This is of particular significance in necessitating that the design of the co-creation experience should be guided by knowledge of how and where co-creation can add value, and the costs/risks the design of the co-creation should seek to avoid. The research findings contribute a significant understanding in respect to this aspect of the design of co-creation experiences.

As the co-creation paradigm is built on the premise that value is interactional, and production and consumption are inseparable parts of value creation (Vargo and Lusch, 2008 & 2016; Ramaswamy and Ozcan, 2018), brands must seek to design co-creation experiences spanning all stages of the NPD lifecycle. This does not necessarily mean that consumers adopt roles previously occupied by those within the brand, but some value-creating experiences must be evident throughout the NPD lifecycle.

As an example, evidence of co-creation in stages such as development are rare due to IP and secrecy concerns, and the lack of consumers' technical knowledge amongst other factors. Brands must be able to recognise how to design and implement a value-creating experience at this stage, without aggravating the inhibitors that have previously hindered co-creation. This should be built on interaction and involvement as the locus of value. Recognising the risks of IP stealing, or the lack of technical knowledge, brands should seek to collaborate on other aspects of this stage. A wide range of potential driving factors are apparent at this stage, and rather than including consumers in the technical aspects of development that require sharing proprietary knowledge, as an example the co-creation experience could be centred on promoting '*faster speed-to-market*' or '*reduced risk of product failure*' through iteration, testing or ongoing feedback (Cooper, 2013).

This signifies that the understanding of potential co-creation factors at each stage of the NPD lifecycle (Tables 7.3 and 7.4) must be used in application with a deep knowledge of a brand's value creating processes and requirements of the NPD project in hand. It is not necessarily the number of potential co-creation factors at a given stage that is of importance, but how the co-creation factors align with the activities and characteristics of a given NPD project at a given NPD stage. This is supported by the co-creation landscape (Chapter 3), and a shared sentiment expressed by the subject matter experts vis-à-vis the degree of co-creation. Brands must be able to recognise both the value and risks of co-creation in respect to their specific project, and design the co-creation experience to promote the relevant drivers and avoid the likely inhibitors.

The taxonomies of co-creation factors and understanding of their relevance across the NPD lifecycle provide a significant contribution in resolving the co-creation-NPD relationship from the brand perspective. This is built from a fundamental knowledge of the factors that drive and inhibit co-creation, and, how and why they are relevant in real-life co-creation-NPD scenarios. In essence, the co-creation factors enlighten the brand perspective on the potential benefits or costs of co-creation. The significance of the co-creation factors across the NPD lifecycle provides a greater understanding of how and where co-creation can add value, and the most significant barriers to co-creation at each stage of NPD. The design of the co-creation experience should seek to promote driving factors, reduce inhibiting factors and, importantly, create a synergy between the co-creation factors and the specific requirements of the NPD project across the NPD lifecycle.

7.2.1.2 Consumer perspective

As both brands and consumers are considered vital collaborators in value creation, the research also explored the design of effective co-creation experiences from the consumer perspective. The research findings aim to provide brands (who maintain responsibility for the design and management of co-creation experiences) with the knowledge to stimulate consumer co-creation throughout the NPD lifecycle. Hoyer et al. (2010) stress the importance of the design of the co-creation experience in motivating consumers, stating:

> *"Even consumers who are otherwise predisposed to active participation in co-creation activities may not engage in such activities with a particular firm, if the benefits involved are too low or the costs involved are too high"* (Hoyer et al., 2010)

Brands must stimulate consumer co-creation by designing experiences that (1) increase the benefits that consumers receive, or (2) reduce the costs to consumers of participating in co-creation (Hoyer et al., 2010). In line with this notion, a key aim of the analysis was to deliver a greater fundamental understanding of the factors that drive and inhibit consumer participation in co-creation. The results provide brands with a profound knowledge of the co-creation factors consumers' experience, and are valuable in guiding the design of co-creation experiences to promote consumer involvement throughout the NPD lifecycle. Exploring the co-creation factors from both the brand and consumer perspective ensures that outcomes of this research are not limited to one perspective. This contributes knowledge to guide the design of co-creation experiences to motivate both brands and consumers as necessary collaborators in value creation.

The research findings contribute expanded taxonomies of consumer co-creation factors, categorising the driving and inhibiting factors consumers face in respect to co-creation with a brand. These collections of factors deliver new knowledge regarding the co-creation-NPD relationship (from the consumer perspective) by validating and expanding upon the knowledge of existing factors (collected from the literature) and presenting new factors emerging from the data. The expanded taxonomy of driving factors is displayed overleaf (Table 7.5).

Discussion

Table 7.5: Taxonomy of consumer driving factors

Taxonomy of Consumer Driving Factors	
Financial	Consumer co-creators often expect a financial reward for their time, ideas and input Some consumer profiles will only co-create if there is a financial incentive
Social	Consumers are driven as a result of the titles or recognition they gain from co-creating with a brand (Hoyer et. al., 2010) This factor includes increased status, social esteem, good citizenship and strengthening ties with other consumers as a result of co-creation (Nambisan and Baron, 2000)
Technological	The gain of technological knowledge by participating in product development can be highly motivating Co-creators can experience important cognitive enhancements through information acquisition and learning (Nambisan and Baron, 2009).
Psychological	Consumers may be driven by their intrinsic motivation, the sense of self-expression and feelings of pride from participating in creative pursuits of co-creation, enjoyment of contributing, sense of altruism and psychic utility from participating (Csikszentmihalyi, 1996; Etgar, 2008, Burroughs and Mick, 2004; Evans and Wolf 2005; Nambisan and Baron, 2009, (Kwon and Wen, 2010, Hoyer et. al., 2010)
Consumer-brand relationship	Consumer affinity towards a specific brand is highly motivating, they value interaction, experience and involvement with the brand Consumers desire to co-create with brands they admire, have grown up with or are highly involved with – this can be hugely rewarding

In effect, the taxonomy of driving factors outlines the benefits that consumer's value most in being motivated to co-create. A key insight gained from this is that aside from 'Financial', the motivations of consumers stem from an intrinsic impact of co-creation. Social, Technological, Psychological and Consumer-brand relationship are factors that do not necessarily deliver a tangible impact to consumers, however they are key in driving their motivation to co-create. Additionally, there is lack of focus placed on the end product or outcomes of co-creation. These two notions support the view that value is interactional, and consumers derive value from the experience of co-creation. This is significant in detailing the shifting nature of value from the consumer perspective. The taxonomy of driving factors not only categorises the factors that brands should consider in the design of co-creation experiences, but signifies the importance of delivering valuable experiences to consumers alongside tangible products.

The expanded taxonomy of inhibiting factors outlines the costs/risks faced by consumers when co-creating; these are the factors brands should seek to reduce through the design of co-creation experiences. The research findings in respect to the consumer inhibiting factors are detailed overleaf (Table 7.6).

Table 7.6: Taxonomy of consumer inhibiting factors

Taxonomy of Consumer Inhibiting Factors	
Risk of failure despite invested effort	Co-creation requires both monetary and nonmonetary investments from consumers (e.g. costs of time, resources, physical, and psychological efforts to learn) and may entail some risks for consumers, failure presents a substantial risk
Lock in	There is a shift of responsibility from brands to consumers, consumers may feel locked in to the relationship (Bolton and Saxena-Iyer 2009; Etgar 2008)
Loss of freedom of choice	The coalescing of brand and consumer roles may mean the consumer feels a loss of freedom of choice (Bolton and Saxena-Iyer 2009; Etgar 2008)
Psychological efforts to learn	Technological knowledge is required to contribute to NPD, consumers are likely to face greater psychological efforts to learn (Hoyer et al., 2010)
Resources	Co-creation monetary investments from consumers (e.g. costs of time, resources)
Time	Co-creation projects may require consumers to invest significant amounts of time in collaborating with a brand
Effort	Co-creation projects can require consumers to invest significant time, psychological efforts to learn and physical efforts to co-create value
Forgone opportunities	An opportunity cost exists relative to the costs of the resources consumers have to invest co-creation and the benefits of engaging in other activities (Etgar 2008; O'Hern and Rindfleisch 2009)
Intellectual property	Consumers may not be happy to relinquish their IP rights. They invest significant effort in ideas and designs from which the brand is able to take all of the plaudits
Co-creation experience	A poorly designed co-creation experience delivers suboptimal value to the consumer. This can be frustrating and inhibit future participation in co-creation
Lack of authentic co-creation	Brands may give the impression they are exploiting consumers, and not working towards value maximisation for both brands and consumers

Table 7.6 categorises the inhibiting factors consumers face as a result of the research findings. These provide the guidelines of the factors brands should look to reduce through the design of co-creation experiences. Through validating existing factors, identifying additional factors, and building a profound understanding of each factor in a co-creation-NPD scenario, the research findings are valuable in providing guidance in the design of co-creation experiences to stimulate consumers.

A valuable insight gained is the emergence of 'Co-creation experience' as an inhibiting factor. This signifies the importance of the way in which brands structure interaction and involvement (co-creation) on the motivation of consumers. The explanation built on this factor outlines the importance of access to information and transparency on the value attributed to the co-creation experience by consumers. This embodies the dimensions of the DART Framework (Prahalad and Ramswamy, 2004) and outlines the value of the existing literature to the design of co-creation experiences. The DART Framework provides the dimensions on which co-creation experiences should be based (Dialogue, Access, Risk sharing, Transparency). The findings in this research provide a deeper understanding of how to design co-creation

experiences starting with a profound understanding of the co-creation factors. The research findings contribute to the knowledge of the design of effective co-creation experiences, and can be used in tandem with the existing literature (DART Framework) to promote the implementation of a complete co-creation approach.

7.2.1.3.1 Multi-pronged co-creation experience design (consumer perspective)
The updated taxonomies of consumer co-creation factors provide a summary of the key sentiments expressed from the consumer perspective. This is the first step in resolving this aspect of the co-creation-NPD relationship, and contributing a greater knowledge on how to design effective co-creation experiences.

To provide a greater understanding of the consumer perspective, Chapter 6 explored the degree of emphasis placed on each factor in respect to driving and inhibiting consumer co-creation in NPD. This was guided by the notion that brands should adopt a 'multi-pronged' approach targeting several driving factors (Hoyer et al., 2010). The research findings display a varied level of significance placed on each co-creation factor across the data set. Each consumer participant possesses a unique set of skills and experiences. Accordingly, the significance of the co-creation factors is likely to vary due to a vast array of factors. The relevance of this is in the implicit notion that the co-creation experience should be designed to stimulate as many driving factors as possible, whilst reducing the total inhibiting factors.

Tables 7.7 and 7.8 (overleaf) provide summaries of the research findings in respect to the degree of emphasis placed on the co-creation factors by each consumer co-creator. This was done by creating heat maps that collate the results of the degree of emphasis placed on each consumer driving/inhibiting factor by each participant. This is valuable in illustrating the lack of consensus regarding the significance of the consumer co-creation factors for each individual, and provides evidence of the need to design multi-pronged co-creation experiences. Emphasis was measured on four levels: *Little or no mention, Mention, Sight Importance, Significant Importance.* The rows show responses from each consumer participant, whilst the columns present the driving/inhibiting factors. Tables 7.7 and 7.8 succinctly display the varying attitudes of the consumer co-creators in respect to the significance of the co-creation factors.

Table 7.7: Degree of emphasis (consumer driving factors)

	Financial	Social	Technological	Psychological	Consumer-Brand Relationship
PARTICIPANT A	Mention	Slight importance	Mention	Slight importance	Significant importance
PARTICIPANT B	Little or no mention	Significant importance	Little or no mention	Slight importance	Significant Importance
PARTICIPANT C	Significant importance	Slight importance	Slight importance	Significant importance	Little or no mention
PARTICIPANT D	Slight importance	Slight importance	Mention	Significant importance	Slight importance
PARTICIPANT E	Significant importance	Slight importance	Slight importance	Mention	Little or no mention
PARTICIPANT F	Mention	Significant importance	Slight importance	Significant importance	Significant importance
PARTICIPANT G	Significant importance	Slight importance	Mention	Slight importance	Slight importance
PARTICIPANT H	Slight importance	Mention	Little or no mention	Significant importance	Significant importance
PARTICIPANT I	Slight importance	Mention	Mention	Significant importance	Little or no mention
PARTICIPANT J	Mention	Significant importance	Mention	Slight importance	Slight importance
PARTICIPANT K	Little or no mention	Slight importance	Mention	Significant importance	Significant importance
PARTICIPANT L	Little or no mention	Slight importance	Little or no mention	Slight importance	Mention
PARTICIPANT	Significant importance	Slight importance	Mention	Slight importance	Little or no mention
PARTICIPANT N	Slight importance	Mention	Mention	Significant importance	Little or no mention

Table 7.8: Degree of emphasis (consumer inhibiting factors)

	Risk of failure despite invested effort	Lock in	Loss of freedom of choice	Psychological efforts to learn	Resources	Time	Effort	Forgone opportunities	Intellectual property Concerns	Co-creation experience	Lack of authentic co-creation
PARTICIPANT A	Significant importance	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Slight importance	Little or no mention
PARTICIPANT B	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention	Little or no mention
PARTICIPANT C	Mention	Little or no mention	Little or no mention	Mention	Little or no mention	Slight importance	Significant importance	Little or no mention	Slight importance	Slight importance	Mention
PARTICIPANT D	Slight importance	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention
PARTICIPANT E	Slight importance	Little or no mention	Little or no mention	Little or no mention	Slight importance	Slight importance	Slight importance	Slight importance	Mention	Little or no mention	Little or no mention
PARTICIPANT F	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention
PARTICIPANT G	Mention	Little or no mention	Little or no mention	Slight importance	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Slight importance	Little or no mention
PARTICIPANT H	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention	Little or no mention
PARTICIPANT I	Slight importance	Little or no mention	Little or no mention	Mention	Little or no mention	Mention	Little or no mention	Little or no mention	Little or no mention	Slight importance	Little or no mention
Table 7.8 continued overleaf											

PARTICIPANT J	Slight importance	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention
PARTICIPANT K	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention
PARTICIPANT L	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Slight importance	Little or no mention	Little or no mention	Little or no mention	Significant importance	Significant importance
PARTICIPANT M	Mention	Little or no mention	Mention	Little or no mention	Little or no mention	Slight importance	Little or no mention	Little or no mention	Little or no mention	Little or no mention	Little or no mention
PARTICIPANT N	Significant importance	Little or no mention	Little or no mention	Significant importance	Mention	Mention	Significant importance	Mention	Little or no mention	Mention	Little or no mention

Discussion

Tables 7.7 and 7.8 summarise the varied responses of the research findings in respect to the significance of the consumer driving and inhibiting factors. There is a clear lack of consensus of the most significant driving or inhibiting factors impacting consumer's motivation to co-create. This suggests that no single driving factor is sufficient in guaranteeing consumer participation, and no single inhibiting factor can be singled out as the most significant cost/risk of co-creation. Brands should seek to design co-creation experiences that stimulate as many driving factors as possible. Similarly, the design of the co-creation experience should seek to reduce the total costs (inhibiting factors) to consumers of participating in co-creation activities (Hoyer et al., 2010).

From the outside in, it is impossible to understand the significance of each co-creation factor to a potential consumer participant. Chapter 6 builds a rich understanding of the nature and characteristics of each co-creation factor based on the experience of consumer co-creators. This delivers a significant contribution as to how and why the co-creation factors are relevant to consumers, guiding the design of co-creation experiences towards a multi-pronged approach, targeting several driving factors. Figure 7.2 (overleaf) displays a multi-pronged approach in respect to the consumer co-creation factors.
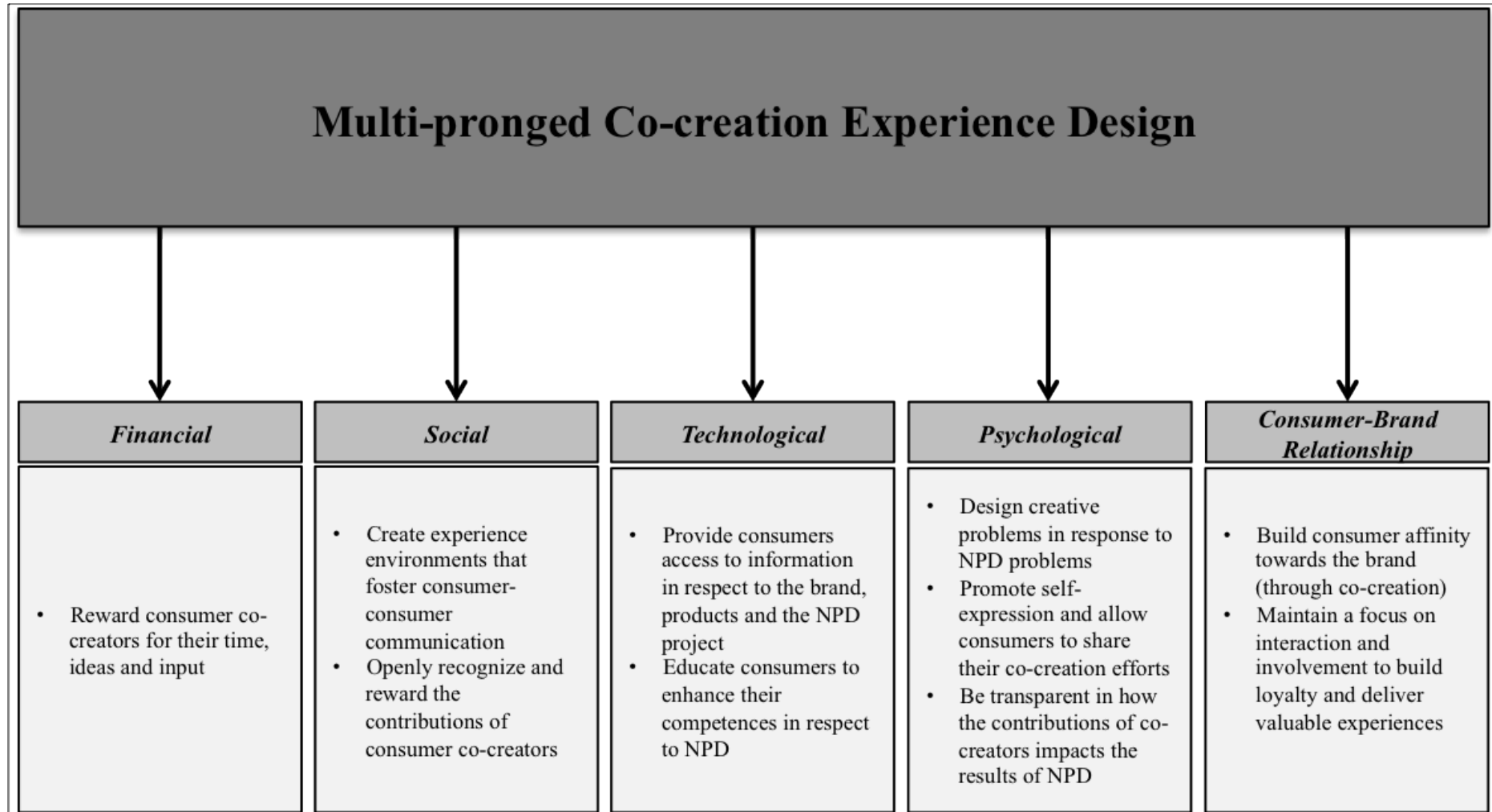
The research findings clearly implicate that brands must adopt a multi-pronged co-creation experience design to promote consumer co-creation. The varying attitudes and values of consumers means that no single driving factor is effective in ensuring consumers are motivated to co-create in NPD. The rationale for adopting a multi-pronged co-creation experience design is in ensuring consumers are sufficiently motivated to partake in a co-creation project, and delivering value through a myriad of driving factors. As the driving factors are built primarily of intrinsic factors that deliver experiential value (i.e. a lack of a focus on products), this approach to the design of co-creation experiences promotes the co-creation of valuable experiences. This is in line with the core principles of the co-creation paradigm, signifying that involvement and interaction are the locus of value creation.

The findings in respect to the consumer perspective contribute a greater understanding of the factors that both drive and inhibit consumer participation in co-creation. This is evident through the categorisation of driving and inhibiting factors, and the understanding of how and why these factors may assume relevance from the perspective of consumers. In addition, examining the varied significance of these

factors across a set of consumer co-creators (consumer perspective data set), greater insight is given to the implications of the research findings in guiding the design of co-creation experiences from the consumer perspective. This is evident through the proposed 'Multi-pronged Co-creation Experience Design' (Figure 7.2 overleaf).

Figure 7.2: Multi-pronged co-creation experience design

Multi-pronged Co-creation Experience Design

Financial	*Social*	*Technological*	*Psychological*	*Consumer-Brand Relationship*
• Reward consumer co-creators for their time, ideas and input	• Create experience environments that foster consumer-consumer communication • Openly recognize and reward the contributions of consumer co-creators	• Provide consumers access to information in respect to the brand, products and the NPD project • Educate consumers to enhance their competences in respect to NPD	• Design creative problems in response to NPD problems • Promote self-expression and allow consumers to share their co-creation efforts • Be transparent in how the contributions of co-creators impacts the results of NPD	• Build consumer affinity towards the brand (through co-creation) • Maintain a focus on interaction and involvement to build loyalty and deliver valuable experiences

7.2.1.3 Co-creation factors summary

The research findings in respect to the co-creation factors from both the brand and consumer perspectives contribute valuable knowledge to guide the design of effective co-creation experiences. The co-creation factors embody the benefits and costs/risks that both brands and consumers face when co-creating in NPD. The overarching notion shaping the discussion of the implications of the research findings is that co-creation experiences should be designed to promote driving factors and reduce inhibiting factors. This is vital in ensuring both brands and consumers are willing and able to co-create throughout the NPD lifecycle, promoting a complete co-creation approach. The research findings contribute applicable knowledge to real-life NPD scenarios, building on existing theory and incorporating contextual knowledge gleaned from the data collection and analysis. The research findings provide seminal knowledge to this aspect of the co-creation-NPD relationship, and have significant implications on the design of co-creation experiences.

In addition to knowledge of the factors that brands and consumers face when co-creating in NPD (co-creation-NPD relationship), the research was also driven to explore the role of social media in enabling co-creation. The co-creation factors are the factors that arise from the interaction and collaboration between brands and consumers in co-creation in NPD. Social media is regarded as a platform that enables this interaction and collaboration. Consequently, the focus was on the role of social media in positively impacting the co-creation-NPD relationship. The following section discusses the implications of the research findings in respect to social media and the design of co-creation experiences.

7.2.2 Social Media

In the context of this research, co-creation experiences are defined as the interaction and collaboration between brands and consumers. The design of effective co-creation experiences is regarded as a vital forerunner in promoting a complete co-creation approach. A key component of co-creation experiences lies in the platform(s) used to host interactions between the brand and consumer. The rise of social media platforms in recent years has fundamentally changed interactions between brands and consumers (Hoyer et al., 2010; Kaplan and Haenlein, 2010; Kim et al., 2010). Social media provides an unparalleled platform for users (both brands and consumers), to intentionally or unintentionally, establish different types of content and exchange ideas (Calder et al., 2009; Steyn et al., 2010).

The focus on social media in enabling co-creation is as a result of the understanding gained through the literature review. Social media is considered a platform that enables brands and consumers to interact and collaborate more easily and more frequently than in the past (Gallaugher and Ransbotham, 2010). The early discussion of social media in Chapters 1 and 2 specified a focus on digitally enabled social networks (DESNs) and virtual consumer communities (VCCs) as the platforms of interest.

This discussion deliberates on the research findings in respect to social media in enabling co-creation. In order to do so, the enquiry addresses this from the brand perspective. Brands assume responsibility for the design and management of the co-creation experiences. This involves the platform(s) through which they choose to interact with consumers. In this regard, consumers accept a passive role in the design of the co-creation experience and are enabled to co-create by the brand.

To further explore the role of social media in enabling co-creation, the research focuses on the role of social media in enabling co-creation on two levels. Firstly, in defining the characteristics of social media that underpin its role in enabling co-creation. This provides a deeper knowledge of the impact of social media on the co-creation-NPD relationship. This categorises the specific characteristics that deliver a positive impact on co-creation in NPD. Secondly, greater emphasis is placed on understanding the potential outcomes of using social media to enable co-creation. This results in the categorisation of key themes regarding the impact of social media on the co-creation-NPD relationship. The implications of the research findings are discussed both in support of social media as an enabler of co-creation, and in terms of the potential impact that 'social media enabled' co-creation experiences can deliver.

7.2.2.1 Social media characteristics

The rationale for a focus on social media results from the literature review. The existing literature promotes the significance of social media in empowering consumers, and promoting interaction and collaboration (Prahalad and Ramaswamy 2004. DeLanda, 206; Ramaswamy and Ozcan, 2018). In this regard, the literature widely supports the impact of social media in enabling co-creation. This research seeks to explore the role of social media in enabling co-creation by exploring the specific features that underline social media as an efficient or effective platform to enable co-creation. This is done by exploring specific characteristics of social media

that deliver a positive impact on the co-creation-NPD relationship. A positive impact is recognised in respect to the ease at which brands and consumers collaborate, or in heightening the outcomes of co-creation. This is done in line with contributing to a fundamental understanding of how and why social media enables co-creation, and categorising specific features that brands should seek to leverage in the design of co-creation experiences.

Social media as a component of the conceptual framework is underpinned by a number of characteristics. The characteristics relate to the structure of the social media platforms (DESNs and VCCs) and the behaviours of those using them. The collection of social media characteristics (Chapter 3) results from a thematic literature review in respect to information access, global view, networking and connectivity. These are the web-based characteristics considered responsible for shifting innovation management strategies towards co-creation (Prahalad and Ramaswamy, 2004).

The research findings examine the relevance and impact of these characteristics on the co-creation-NPD relationship. The result of this is the expanded taxonomy of social media characteristics. This is vital in categorising the specific characteristics that underpin the role of social media in enabling co-creation. Moreover, the taxonomy of social media characteristics defines and explains the specific characteristics of social media that brands can leverage in respect to delivering an impact on co-creation in NPD. The taxonomy of social media characteristics is presented in Table 7.9 (overleaf).

A deeper understanding of the specific characteristics of social media that positively impact the co-creation-NPD relationship provides an insight into the features that brands should seek to leverage. In this respect, social media is considered a strategic asset in the design of co-creation experiences. Through the characteristics outlined in Table 7.9 (overleaf), brands have the ability to connect and interact with a volume of consumers, encouraging information exchange and active participation throughout the NPD lifecycle (Schiavone, Metallo and Agrifoglio, 2014). Social media is regarded as a platform that enables co-creation on a mass scale, due to its pervasiveness and the ease with which brands and consumers can connect and interact.

Discussion

Table 7.9: Taxonomy of social media characteristics

Social Media Characteristics	Description
Range	- High-range networks are built of relationships that span multiple knowledge pools, this has a complementary effect on knowledge transfer - Range promotes the reachability and talkability of co-creation projects, brands can connect and engage with more people
Diversity of information	- DESNs and VCCs are characterised by both large (heterogeneous) and small (homogenous) networks. Consumers and brands have access to a mass of diverse information, knowledge, perspectives and skillsets
Density	- The high-level of ties on social media enables large scale interactions, knowledge creation and transfer
Roles	- Roles within networks allow brands to target specific consumers. Consumers can exert influence, motivating other consumers to co-create - The emergence of 'social media influencers' is significantly impacting the power consumers have over their peers
Ease of ties	- Ties consist of a relationship transferring resources, most notably knowledge - The number of ties people form is likely to increase as a result of social media as they can be formed more cheaply and easily
Strength of weak ties	- Weak ties provide access to diverse information and differing user's perspectives and experiences - Barriers to exchange are relatively lower, vast amounts of knowledge can be shared even through weak ties
Overcoming geographical and temporal boundaries	- Social media enable geographically-dispersed individuals with shared interests to gather - Users can interact in their own time as there are no time restrictions and any message is sent in a digital format
Knowledge sharing and creation	- Social media enabled interactions can result in knowledge sharing and creation through socialisation, dissemination, internalisation and capture - Brands get a deeper connection, barriers to exchange are lower and consumers are more comfortable communicating on social media
Ease of knowledge conversion (capture)	- Online interaction in a digital format aids the conversion of tacit knowledge to explicit knowledge by codifying it through text - C2C interactions help consumers articulate their knowledge
Community effects (consumer motivation)	- Development of community markers reduce barriers to exchange and drive consumers to interact - Consumer are much more open and comfortable in sharing information online
Unlocking social relations	- Online profiles allow users to overcome social status and norms, opening up communications between diverse users - The distinction between brand and consumer is not as clear online
Pervasiveness of social media	- The number of online users is in excess of 2 billion people. This provides brands with access to a large pool of potential co-creators and resources
Low degrees of separation	- Brands and consumers can access almost anyone through the network relatively easily, facilitating the creation and transfer of diverse knowledge (Facebook, 2017: Degree of separation of 3.56)
Table 7.9 continued overleaf	

Ease of search	- DESNs and VCCs allow users to search for others with similar interests, demographics and preferences. These tools can be used to form ties
Empowerment of consumers	-Consumers are increasingly empowered through social media as they have greater access to information (educated) and access to the brand and value creation - Social media provides consumers with a voice, they now have greater control (in NPD) and the power to make or break brands
Intensity of interactions	- The low costs associated with interacting online allows iterative interactions to take place over long periods of time - Consumers want to interact in their preferred language and style. Social media provide multiple forms of expression, this delivers richer interaction.
E-WOM	- Co-creating through social media allows consumers to be passionate about what they are doing and advocate it - 'WOM has gone from your closest 30 relatives and friends to your 3000 person network'
Visibility of preferences/interactions	- Consumers can overtly display interests and activities in their everyday life through social media platforms
Centrality/connectivity	- Influencers on social media play a large role in information exchange, they have a huge impact on sharing knowledge (through 'millions' of followers) and influencing the perceptions and decisions of consumers

The taxonomy of social media characteristics (Table 7.9) outlines the specific characteristics of DESNs and VCCs that underpin their role in enabling co-creation. The social media characteristics relate primarily to the role of social media in promoting information exchange, knowledge creation, ease of interaction, and access to a volume of potential co-creators.

The social media characteristics categorise features of social media that positively impact the co-creation-NPD relationship. This contributes a deeper knowledge of how and why social media can enable co-creation. The social media characteristics outline specific features of social media that brands can leverage in the design of co-creation experiences to deliver a positive impact. This presents guidelines for the design of social media enabled co-creation experiences to maximise the role and impact of social media in enabling co-creation.

7.2.2.2 Social media impact themes

The research findings also categorise the high-level impact of social media on co-creation. The social media impact themes outline the ways in which social media can deliver value in co-creation throughout the NPD lifecycle. In effect, this explores the outcomes of social media enabled co-creation. The high-level impacts embody the manifestation of the social media characteristics in a co-creation-NPD scenario. The impact themes denote the impact of social media both in replacing traditional 'connection' points between the brand and consumer, and in respect to the exclusive impact of social media due to their structure and behaviours of social media users. The research findings in respect to the impact themes are summarised below.

Information: The information impact of social media on co-creation pertains to the acquisition of information as an operant resource, and the ease with which brands can capture and make sense of this information. Access to knowledge is vital, however if brands incur significant costs in sorting and making sense of information, access to greater information becomes less desirable. According to Vargo and Lusch (2008 & 2016), knowledge is the fundamental source of competitive advantage. This is particularly relevant in the field of NPD where the success of solutions relies largely on a deep understanding of the consumer. The pervasiveness and ease of interaction of social media provides brands with easy access to a vast number of potential consumer co-creators.

Discussion

In respect to DESNs, brands are able to openly view the interests of consumers (through their online profiles) and assess the potential value of their knowledge (Ellison, 2007). VCCs are regarded to have positive effects on an enterprise's value creation practices, as they can be commercial in nature and group members' common interests in a brand or product segment (Laroche et al., 2012; Albert et al., 2008; Zaglia, 2013). Not only do the social media platforms provide ease of interaction and information exchange, brands are able to target their search for potential consumer co-creators with valuable knowledge through the characteristics of the social media platforms.

Co-creating with a large number of consumers is considered a benefit, particularly in the early stages of NPD. Brands are able to directly and indirectly solicit information from a volume of consumers. The volume of potential consumer co-creators is particularly valuable in identifying problem states, developing key insights, and having a volume of co-created ideas from which the brand can refine, iterate and select. Moreover, brands can 'sit in' on consumer communities to both watch and listen to consumer-to-consumer interactions and access tacit information.

In addition to the brand accessing consumer knowledge, brands can enhance consumers' knowledge by leveraging the features of social media (Verganti, 2009). Brands can connect to consumers immediately, exchange information, knowledge and ideas, and enhance a consumer's competences in respect to the co-creation project (Kaplan and Haenlein, 2010). This boosts the speed and potentially the quality of co-creation proposals (Kao et al., 2010). Additionally, the characteristics of social media aid in sorting, understanding and filtering consumer data. This has an impact on the process of information capture, by providing an efficient platform and method to internalise consumer knowledge.

A notable element of this impact, emerging from the discussion of the co-creation-NPD relationship and now social media, is the role of social media in providing access to consumers on a global scale. This is signified by the lack of geographical restrictions on information. This is particularly relevant when revisiting the NPD CSFs, specifically '*The World Product - a Global Orientation*' (Cooper, 2013). This CSF stresses a global product targeted at an international market as being far more profitable than a product designed to meet one country's needs. In this case, insights, product definitions and ongoing feedback can be collected from multiple geographies through social media platforms. This enables brands to integrate knowledge from

geographically dispersed individuals into global NPD projects at relatively little or no extra cost. The lack of restrictions on information enabled by social media is vital in developing global products, and in turn delivering a competitive impact in NPD.

In the co-creation paradigm, knowledge is considered to be the source of strategic benefit (competitive advantage) (Vargo and Lusch, 2006). Consequently, the information impact of social media fundamentally impacts a brand's value creating process by providing the operant resource on which they can leverage their technical capabilities and skills. Through ease of communication and tools reducing search costs for consumers, social media significantly impacts the volume of knowledge a brand can access. This impact signifies the role of social media in providing brands with access to vital solution information, from which they can build effective product solutions.

Behavioural impact (brand-consumer relationship): Social media is recognised to have impacted the brand-consumer relationship, signified by a downstream shift in power, democratising NPD (von Hippel, 2005). This has resulted in the changing behaviours of both brands and consumers as their roles coalesce. Additionally, users of social media adopt a unique set of behaviours compared with face-to-face interactions that are regarded as beneficial in enabling co-creation. Knowledge is considered the source of strategic benefit in the co-creation paradigm (Vargo and Lusch, 2008). Social media is respected in boosting knowledge creation and sharing, both through the structure of the platforms, and the changing behaviours of brands and consumers. This is evident through the literature (Chapter 2) and the research findings.

This impact is shown by the changing behaviours of brands and consumers on social media, and the resultant impact on the brand-consumer relationship. Chief amongst this, are the higher levels of information exchange and co-creator motivation apparent online. Social media enables higher levels of engagement. Engagement through social media can boost the motivation of consumer co-creators; engagement is a proven precondition for consumers to respond to and participate in the enterprise's activities (Brodie et al., 2013; Porter et al., 2011). Additionally, a brand can use social media to strengthen the dialogues and connections between consumers and the brand, or amongst the consumers. This is valuable in offering consumers' diversified experiences and feelings that may deepen their engagement with the brand (Gallaugher and Ransbotham, 2010). High-levels of engagement promote brand

Discussion

loyalty, co-creation motivation and information exchange (Algesheimer et al., 2005; Zaglia, 2013, Chang et al., 2013; Muniz and O'Guinn, 2001).

Moreover, social media is key in empowering consumers, both with the knowledge to contribute to NPD and with the platform to impact value creation processes. Brands seek to share information with consumers to enhance their competences in respect to NPD projects; this is enabled through the ease of communication via social media. Social media is regarded as empowering consumers through opening up the 'transportability of the consumer voice', and this is evident as the 'people powered information channels' are increasingly shaping the purchase intentions of consumers.

The community aspects of social media are vital in promoting knowledge sharing. Users may feel a moral obligation to the community; this is as a result of social bonding and social bridging (Zaglia, 2013). Social media platforms lower barriers to interaction and encourage more self-disclosure, enabling interactions and connections that otherwise would not occur (Bargh, McKenna and Fitzsimons, 2002; Tidwell and Walther, 2002). This is particularly relevant in the case of VCCs as greater emphasis is placed on the role of information exchange in functioning as social interaction. Communication and interaction are the focus of online collaboration in a VCC. In the context of VCCs, users gather primarily to discuss a specific subject, brand or product category (Andersen, 2005; Bagozzi and Dholakia, 2002; Woisetschläger, Hartleb & Blut, 2008). Membership of a VCC and shared interests are likely to reduce the barter in exchange for information between users (Craig and Zimring, 2000). As members share an interest, involvement and interaction produces affinity, may create a bond, and generate consumer feelings of empowerment (Cova and Pace, 2006; De Valck et al., 2009). The strengthening of the bond between both consumers (C2C) and brands (B2C) promotes information exchange, interaction and involvement – the cornerstones of co-creation.

Finally, social media reduces the distinction between 'brand' and 'consumer' as both are regarded as users in an online setting. Social media allows users to overcome social status and norms, opening up communications between diverse users (Rheingold, 1993; Barlow, Birkets, Kelly and Slouka, 1995, Hoyer et al., 2010). Social media users construct a public profile; this is how they want to be viewed in the network. There is less distinction between brand and consumer and both are considered social media users with an equal voice.

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The behavioural impact centres primarily on the impact of social media in promoting information exchange and knowledge creation through interaction. Additionally, ease of engagement is considered to strengthen the bond between brand and consumer. This is valuable in motivating consumer co-creators, boosting brand loyalty and offering diversified and valuable experiences. This presents a clear link between value creation through co-creation and social media. Value creation in the co-creation paradigm is embodied through interaction and collaboration. The research findings convey the behavioural impact of social media in boosting engagement and interaction between brands and consumers. This is likely to deliver an impact through effective product solutions (resulting from higher levels of information exchange) and valuable experiences (through dialogue and engagement). This presents clear implications of the use of social media in co-creation.

Promotions: This theme highlights the role of the consumer in advocating and promoting new products on social media. A key notion shaping the attitude of brands towards co-creation is the competitive impact co-creation delivers. The promotions impact of social media specifies an impact primarily in the launch and commercialisation of new products, contributing to new product success.

Advocacy reach is regarded as crucial in the diffusion and success of a new product; this was stressed in the discussion of the co-creation factors. Social media is particularly impactful on consumer advocacy, as users tend to build larger networks than with offline connections. This is indicated through the range and pervasiveness of social media, providing a platform where advocates can openly discuss and promote new products.

This is further shown by E-WOM, which significantly influences purchase intentions through its impact on consumers' trust (Chan and Ngai, 2011). The co-creation of value is likely to boost positive E-WOM as the consumer and brand are intimately involved in jointly creating value (Prahalad and Ramaswamy, 2004). The range and diffusion of information on social media provides the consumer with a powerful voice to spread either positive or negative E-WOM. Positive E-WOM enhances purchase intention and is meaningful from the perspective of the brand (Bailey, 2004; Xia and Bechwati, 2008). Additionally, positive E-WOM impacts a consumer's trust, and is likely to motivate other consumers to co-create value with a brand (Abela & Murphy, 2008).

Another aspect of this theme linking to the discussion of the co-creation factors, is the role of consumers in co-creating marketing and promotions solutions. Consumers are efficient in 'managing social technologies'. In respect to co-creating through social media, this implies that consumers are able to utilise their knowledge of how people interact and behave on social media platforms, and use this to inform their co-created solution.

The promotions impact of social media relates to the impact of social media on a product launch. Social media amplifies the effects of consumer advocacy and WOM through the range and ease with which information is diffused. Consumers have a greater voice, reach and influence in promoting new products, directly enabled by social media. Brands must realise the significance of the promotions impact of social media and adjust their marketing strategies accordingly. Moreover, through the day-to-day use of social media, consumers are considered efficient in managing social technologies and possess valuable information in respect to co-creating digital marketing solutions. This once again shows the value of consumer knowledge to which brands have access.

Targeting and recruiting co-creators: A key concern brands consider in the design of a co-creation experience is targeting consumer co-creators. The co-creation project is only as good as those contributing to it; to create value, the co-creation experience must seek out knowledgeable and informed consumers (regarding the specific NPD project) (Piller and Ihl, 2009). Social media is highly valuable in searching for and targeting consumer co-creators whilst incurring relatively low search costs.

Social media is effective in openly advertising the interests and activities of users (through their public profile) and also in grouping users with shared interests (VCCs or dedicated groups on DESNs). The visibility of preferences and 'grouping' of consumers is particularly valued when targeting consumer co-creators. By targeting groups or VCCs dedicated to a shared interest in a product category or brand, brands have access to informed and passionate consumer co-creators (Muniz and O'Guinn, 2001; Zaglia, 2013; Albert, Merunka, and Valette-Florence, 2008).

This groups the consumers with valuable knowledge together, reducing search costs for brands in respect to their NPD projects (Piller and Ihl, 2009). The shared interest in a product category or brand promotes subject specific information exchange. Both

consumers and brands share personal experiences, learn more information about products, and take advice from other consumers (Zaglia, 2013). Greater emphasis is placed on the role of information exchange in VCCs in functioning as social interaction, as users gather primarily to discuss a specific subject, brand or product category. Ongoing interaction in the community develops users' product knowledge, users often engage in product-related conversations, with a large focus on solving peer problems and generating new product ideas (Fuller et al., 2007). Focused communication leads to brand/product knowledge being accumulated over time, and the development of strong ties between community members.

This is of significant value to co-creation projects, both in reducing the search costs for consumers, and in the creation of valuable knowledge. DESNs and VCCs provide tools with which brands can seek out and target consumers. The openly viewable interests, preferences and activities of users online are considered particularly beneficial in targeting consumer co-creators. Moreover, the existence of dedicated groups/networks in a DESN or VCCs dedicated to a brand, group consumers with a shared interest. This is not only in 'localising' consumers with relevant knowledge online, but also promotes knowledge sharing and creation through product or brand related discussions. Consequently, the targeting impact of consumers is considered pivotal in reducing the search costs incurred by brands, and increasing the effectiveness of co-creation projects through the easy access and integration of knowledgeable consumers.

Communication: The final theme draws from the co-creation factors and the co-creation literature. Co-creation requires ongoing and intense dialogue between the brand and consumers (DART dimension). This is vital in a complete co-creation approach, which specifies intense collaboration throughout the NPD lifecycle. This is in respect to developing a superior product, but also in creating value through experience. Value creation is interactional (Vargo and Lusch, 2006); social media provides a touch point between the brand and consumer on which two-way interactions are built. The high levels of interactivity are the first step in allowing the consumer to co-create their own valuable experience. Interaction with a brand may result in consumers feeling a sense of accomplishment, feelings of self-efficacy and overall enjoyment of the process, an increased sense of belonging to a community, or a better product fit with their own needs (Dong et al., 2008; Meuter, et al., 2005; Schneider and Bowen, 1995; Nambisan and Baron, 2009; Franke et al., 2010; Piller and Ihl, 2009). This stipulates not only benefits to the consumer, but involvement and

interaction produce affinity towards the brand, boost loyalty and generate consumer feelings of empowerment, which are vital in the success of a product launch (Cova and Pace, 2006; De Valck et al., 2009).

In respect to the stages of the NPD lifecycle, whilst it is widely recognised that consumers possess valuable knowledge, their ability to articulate this knowledge is often questioned. Intense interactions between the brand and consumer rely on ongoing and instantaneous communication to ensure the consumer is able to express their knowledge both fully and accurately. Social media provide multiple forms of expression, through textual, graphical, animated, audio or video-based media. The various methods of expression provide a path for the easy transfer of knowledge, and reduce the damaging effects of a consumer's inability to articulate needs and problems (Hamel and Prahalad, 2004). The myriad of ways consumers can express themselves is viewed as highly beneficial in allowing consumers to articulate both their tacit and explicit knowledge

Moreover, the 'interactivity' of social media not only provides valuable experiences, and strengthens the brand-consumer relationship, it also provides speed of interaction and instantaneous communication. This is valuable in providing brands access to solution information, and gaining feedback through iterations and the test-and-learn approach to NPD. The speed at which these interactions occur reduces the overall development time and allows brands to act on information faster than their competitors (Fang, 2008; Joshi and Sharma 2004; Sawhney, Verona, and Prandelli, 2005) Similarly, brands are able to leverage advancements in social media and digital technologies to replace 'traditional' face-to-face engagement. One example of this is the growth in the creation of virtual prototypes to gain consumer feedback. This reduces the cost of producing iterations of prototypes, and also replaces the need for face-to-face engagement to an extent.

This approach of using digital technologies to leverage the collective wisdom of the crowd is evident through real-world examples. The US Defence Advanced Research Projects Agency (DARPA) gamified the structure of a retrovirus enzyme, whose structure had baffled scientists for over a decade. Through a game named 'Foldit', players collaborated and competed in predicting protein molecule structures. The gamers generated models good enough for the researchers to refine, and in the space of a few days determine the enzyme's structure (Stefanovitch et al., 2014). This exemplifies the role of digital technologies in engaging with the crowd. The highly
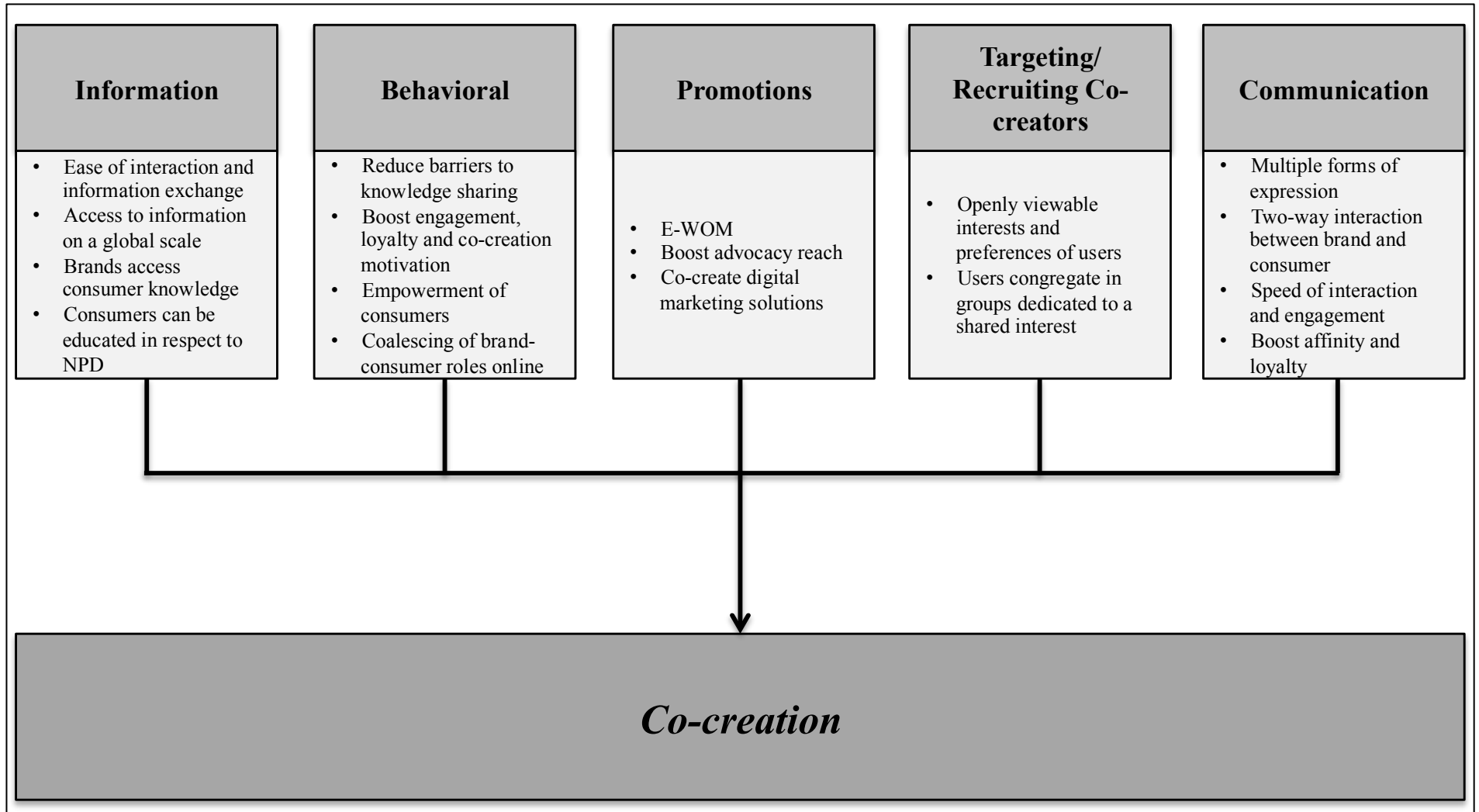
technical nature of the project was ultimately not a limiting factor of the contribution of the crowd. The design of the experience focused on human intuition, resulting in a breakthrough discovery. Gamers (consumers) were able to contribute their knowledge through the expression of a game format, something they would be unable to do without the use of digital technologies.

A key learning point from the research findings and the example outlined above is that brands must be able to understand the perceptions and expectations in regards to co-creation experiences. Brands must understand how consumers view co-creation projects/tasks. Through the gamification of a highly technical project, DARPA empowered consumers to use their intuition, resulting in a technological breakthrough. In this regard, the communication between brand and consumers should focus on a product solution, valuable experiences, but also seek to understand the consumer perspective to design the most effective co-creation experiences. The communications impact of social media represents the impact of social media in enabling intense and deeper interactions. As interaction and involvement form the basis of value creation, a platform that enables richer and more meaningful communication (i.e. social media) provides an efficient means of structuring and hosting interaction. The depth of insight and richness of communication enabled by social media is regarded to impact the development of effective product solutions, valuable experiences and deep understanding of the expectations and preferences of consumers.

The impact themes signify the value of the use of social media as a strategic asset in the design of co-creation experiences. The discussion of the impact themes explore this high-level impact of social media based on the expertise of those who have used social media to enable co-creation experiences (subject matter experts) coupled with the relevant literature. The impact themes detail the specific ways in which social media can deliver a positive impact on the co-creation-NPD relationship. Figure 7.3 (overleaf) displays the impact themes of social media, summarising the key sentiments underlining each impact.

Figure 7.3 Social media impact in NPD

Information	Behavioral	Promotions	Targeting/ Recruiting Co-creators	Communication
• Ease of interaction and information exchange • Access to information on a global scale • Brands access consumer knowledge • Consumers can be educated in respect to NPD	• Reduce barriers to knowledge sharing • Boost engagement, loyalty and co-creation motivation • Empowerment of consumers • Coalescing of brand-consumer roles online	• E-WOM • Boost advocacy reach • Co-create digital marketing solutions	• Openly viewable interests and preferences of users • Users congregate in groups dedicated to a shared interest	• Multiple forms of expression • Two-way interaction between brand and consumer • Speed of interaction and engagement • Boost affinity and loyalty

Co-creation

7.2.2.3 Social media summary

The research findings in respect to the social media characteristics and impact themes support the role of social media in enabling co-creation. The social media characteristics outline features of DESNs and VCCs that can be leveraged in the design of co-creation experiences, whereas the impact themes detail the impact of the proper application of social media in enabling co-creation experiences.

Social media is considered a key touch point between a brand and consumers in the co-creation of value. The discussion about social media outlines how social media can connect brands and consumers, promote information exchange, create valuable experiences, and deliver an impact throughout the NPD lifecycle. From the brand perspective, knowledge is considered an operant resource and the source of a strategic benefit (Vargo and Lusxh, 2008). In this regard, easy access to a volume of consumer knowledge (enabled by social media) presents significant implications in the context of co-creation in NPD.

However, the impact of social media extends beyond the impact themes outlined in Figure 7.3. The co-creation paradigm is founded on the core principle that value is interactional, and brand-consumer interaction is seen as the locus of value creation (Prahalad and Ramaswamy, 2004). In addition to delivering need reducing product solutions, brands must seek to co-create value through unique interactions and experiences. As a touch point that enables interaction on an unprecedented scale, brands must recognise the impact of social media in delivering valuable experiences. Valuable experiences are co-created through personalised interactions. Social media enables an experience environment whereby consumers are able to have active dialogue and co-construct personalised experiences (Prahalad and Ramswamy, 2004).

A particularly relevant consideration is that co-creation experiences are built on multiple points of interaction (Prahalad and Ramaswamy, 2004; Ramaswamy and Ozcan, 2018). Whilst the research focus is on social media, brands should seek to design co-creation experiences across a range of touch points. The discussion in this chapter provides a clear indication of the role and impact of using social media in the design of co-creation experiences. However, this being said, social media may not always provide the most beneficial point of interaction regarding a specific task in a specific NPD project. This was a sentiment expressed through the data (Brand

perspective). As an example, for brands seeking feedback or to refine the feel or taste of a product (e.g. cosmetics or food/drink), engaging with consumers face to face is likely to provide more value in respect to this activity. However, social media can still be used as a touch point by the same brand in respect to the early product definition or in packaging design. Whilst social media provides a significant impact in enabling co-creation, brands must be able to identify the most efficient engagement platform at each point during the NPD lifecycle.

However, the value of social media is considered to lie in the ease of communication and the amount of personalised interactions enabled through this medium. Social media is regarded as a platform on which unique and personalised experiences can be built. This is a vital consideration resulting from the research findings. Social media enabled co-creation experiences can be used in the development of an effective product solution, but also to foster the co-creation of value through experience. Social media is a platform with which brands can transfer information and tools to enable consumers to co-create value. This is likely to impact the effectiveness of a product solution. Additionally, social media provides an experience environment built on personalised and diversified interactions (Prahalad and Ramaswamy, 2013; Payne et. al., 2008; Storbacka and Lehtinen, 2001). Social media enabled co-creation allows the co-creation of experiences, and also the extraction of economic value (through an effective product). Maintaining a focus on interaction as the locus of value creation, brands should seek to interact and collaborate with consumers through social media to deliver experiential value alongside the tangible product. This is built on the core principle that co-creation should result in the shared realisation of value, a brand that is able to co-create an effective product solution and valuable experiences is ultimately going to create and sustain a strategic benefit.

7.2.3 *Implications on the Design of Co-creation Experiences*
The design of effective co-creation experiences is considered key in promoting a complete co-creation approach. A complete co-creation approach is necessary in maximising the high-level impact of co-creation on NPD, hence the relevance of the design of co-creation experiences to the overall research aim. The focus on the design of co-creation experiences explores the overarching implications presented by the research. The discussion describes the contribution and value of the research findings in respect to guiding the design of effective co-creation experiences.

Discussion

The existing literature is effective in detailing how experiences should be conditioned around the co-creation of value. This is evident through the DART framework and 'Dimensions of Choice' (Prahalad and Ramswamy, 2004). The DART framework outlines the building blocks of co-creation (Dialogue, Access, Risk-sharing and Transparency). These are the foundations upon which the design of the co-creation experience should be based and on which brand-consumer interactions should be constructed. The dimensions of choice are used to refine the design of the co-creation experience, detailing the need to provide opportunities for personalised co-creation experiences. The existing literature defines 'what' a co-creation should consist of (DART framework) and the need to empower consumers to personalise their experience (dimensions of choice). In effect, this outlines the core values upon which a co-creation experience should be based, however little guidance is given in respect to how to implement these values in an NPD context.

This research contributes knowledge of how to implement these principles in context. This provides a mid-range perspective, guiding the implementation of the meta-theoretical principles of co-creation (Vargo and Lusch, 2016, Prahalad and Ramaswamy 2004, 2006 & 2013; Ramaswamy and Ozcan, 2018. This is evident through exploring the contextual factors (co-creation factors) that brands and consumers face, and the tools available to design effective experiences (DESNs and VCCs). The co-creation factors deliver a profound understanding of the driving and inhibiting factors both brands and consumers face when co-creating in NPD. These outline the fundamental factors that impact a brand or consumer's motivation to co-create in NPD. Whilst a co-creation experience may be built on the dimensions of the DART Framework, in reality, the co-creation experience must deliver a favourable trade-off of co-creation factors. This is vital in ensuring both the brand and consumers are motivated to co-create. This signals the value of the research findings in respect to the design of co-creation experiences. In effect, the research findings provide a deep insight into 'how' to implement the core values of a co-creation experience, by guiding the design of co-creation experiences to deliver a positive trade-off of co-creation factors throughout the NPD lifecycle.

The research findings in respect to social media outline the role and impact of social media in enabling co-creation. This contributes knowledge of the specific characteristics of DESNs and VCCs that brands can and should leverage to deliver a positive impact on co-creation in NPD. This is further supported by exploring social media in the lens of the existing research. A key component of the DART Framework

is that co-creation experiences are built through *Dialogue.* The research findings clearly convey the impact of social media in promoting dialogue (or interaction) both as a forum on which dialogue can occur, and also in empowering consumers with a voice (Prahalad and Ramaswamy, 2013).

In addition, the dimension of *Access* specifies the need to provide consumers with access and tools to co-create personalised experiences. Prahalad and Ramaswamy (2013) highlight the impact on the level and span of engagement on a global level due to the emergence of digital technologies. Moreover, the research findings support social media as a platform whereby brands can efficiently educate consumers and a platform on which consumers have access to almost unlimited amounts of information. In this regard, social media is considered to significantly impact the access to tools and information that consumers have to co-create their own experiences.

Finally, of relevance is the dimension of *Transparency.* Information asymmetries are rapidly disappearing in the market place as information is becoming increasingly accessible through social media (Prahalad and Ramaswamy, 2013). Consumers are becoming increasingly informed, educated and empowered through social media. As a result, they are increasingly equipped with the knowledge and tools to co-create value. In this regard, the research findings in respect to social media not only provide guidance on the tools brands can leverage and the potential impact of these, but also in how social media impacts the core values that co-creation experiences should be built on.

The existing literature and research findings present clear guidelines in the design of effective co-creation experiences. An additional consideration is the need for the co-creation experience to be designed in line with a deep knowledge of the requirements and objectives of a specific NPD project. Each NPD project is likely to present a unique challenge to a brand. The market, brief, objectives and business opportunities differ from project to project. In this regard, a strict methodology outlining the design of a co-creation experience would be ineffective. A co-creation approach must allow the flexibility for a brand to tailor the co-creation experience to deliver value throughout a specific NPD project. Brands must develop a deep knowledge of how and where co-creation can deliver value through an initial understanding of the requirements and objectives of an NPD project.

Discussion

Consequently, the design of a social media enabled co-creation experience should be designed in line with knowledge of four key aspects: NPD project, co-creation literature, co-creation factors and social media. These are considered 'pieces of the puzzle' that underline the effectiveness of a co-creation experience. Figure 7.4 conceptualises the key considerations in the design of a co-creation experience. These are discussed following Figure 7.4

Figure 7.4: Key considerations in the design of co-creation experiences
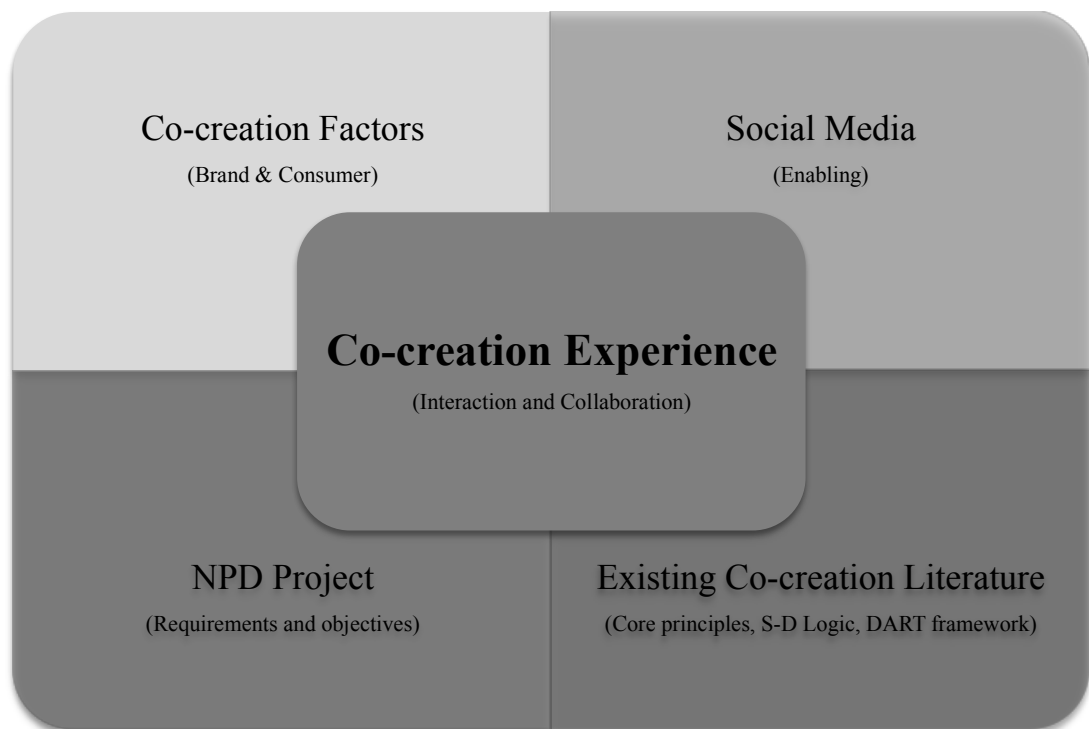
NPD project: A key insight resulting from the brand perspective is that a good foundation of an effective co-creation experience lies in a deep knowledge of the NPD project. Every NPD project presents a unique challenge to a brand. Consequently, the co-creation approach must be flexible and tailored to meet the specific needs of the NPD project. Brands must build an in-depth knowledge of the specific nature, characteristics and objectives of an NPD project prior to the design of an effective co-creation experience. Following this, the brand can consider how and where co-creation can add value throughout the NPD lifecycle. Brands must seek to engineer co-creation experiences that result in an impact on the effectiveness of a product solution, and co-create valuable experiences throughout the product lifecycle. In this regard, a synergy must be achieved between the specific NPD project and the co-creation experience.

Discussion

Based on knowledge of an NPD project, that brand can deliberate how and where co-creation can add value. This includes from whom and where (i.e. consumers) valuable information resides, and how this can be integrated into the NPD lifecycle. In addition, an ongoing consideration must be how experiences can be co-created alongside the end product.

Co-creation literature: A co-creation approach should be guided on the core principles of the creation paradigm. This embraces the interactional nature of value, the need to co-create valuable experiences and a complete co-creation approach. These principles should form the underlying mind-set on which brands design co-creation experiences. The literature review (Chapter 2) explored the literature guiding the design of effective co-creation experiences. The existing literature outlines the core values that a co-creation experience should be built on. Particular emphasis is placed on the DART framework and 'dimensions of choice' (Prahalad and Ramaswamy, 2005). Effective co-creation experiences should be based on the dimensions of the DART framework and allow personalised interactions between the brand and consumer. This is vital in maintaining a focus on interaction as the locus of value creation and the need to deliver effective products and valuable experiences.

Co-creation factors: The research findings in respect to the co-creation factors outline the fundamental factors that drive and inhibit brand and consumer participation in a co-creation project. Brands should seek to design co-creation experiences that promote driving factors and reduce inhibiting factors throughout the NPD lifecycle. The knowledge of the co-creation factors should be coupled with the understanding of the specific NPD project and the dimensions of a co-creation experience. This guides the design co-creation experiences to deliver a net value gain (to both brand and consumer) throughout the NPD lifecycle. This is most likely achieved through an understanding of how and where co-creation can add value (knowledge of the NPD project) and the potential benefits and risks/costs that may result (co-creation factors). This provides a deeper understanding of how to implement the values of co-creation in context, in order to deliver the greatest impact on value creation throughout the NPD lifecycle.

Social media: The final consideration should be the ways in which the brand and consumer engage and interact. This research project focuses on social media enabled co-creation experiences. The research findings provide a deep insight into the specific characteristic of social media that can deliver a positive impact on the co-

creation-NPD relationship. This provides a guideline on the specific features that brands can leverage in the design of the co-creation experience, and the potential impact that can be achieved (social media impact themes).

Social media provide a range of benefits in the design of co-creation experiences. These include, but are not limited to, access to valuable consumer knowledge (an operant resource), a strengthening of the bond between brand and consumer, and enabling engagement that creates valuable experiences. The potential impact of social media outlines the role of social media in impacting the effectiveness of product solutions and the creation of valuable experiences. Consequently, social media enabled co-creation experiences are considered to significantly impact value creation and the co-creation of a value proposition.

Through the research findings and relevant literature, it is noted that brands must empower consumers to co-create valuable experiences alongside tangible products. Valuable experiences are built through engagement and involvement between consumers and brands. Consequently, social media is considered an efficient platform through which to enable wide scale interaction. In this regard, social media is considered the most effective platform in allowing brands to communicate with the mass consumer population, and should be a key consideration in the co-creation of valuable experiences.

The design of effective co-creation experiences is a vital forerunner to a complete co-creation approach. This is relevant to the overall research aim as a complete co-creation approach is a vital antecedent of a high-level impact of co-creation in NPD. The discussion of the implications of the findings to this point contributes a deeper insight into how brands can maximise the high-level impact of co-creation in NPD. The research findings contribute knowledge guiding the design of co-creation experiences. This is evident through a deep knowledge of how to drive interaction and collaboration throughout the NPD lifecycle (co-creation factors) and the tools available to enable interaction and collaboration (social media). This is considered vital in providing applicable knowledge with which brands can implement the core values of a co-creation experience (i.e. DART framework). The implications of the research findings explore how to design and implement effective co-creation experiences in a co-creation-NPD scenario, and the potential role and impact of social media in enabling co-creation. This is vital in resolving the interconnected

relationships between co-creation, NPD and social media, and in contributing a profound understanding of the research topic.

The discussion to this point has explored the implications of the research findings in line with the research aim and with the objective of proposing a framework for social media enabled co-creation. The next stage of this is to explore the implications of the research findings in respect to the high-level impact of co-creation in NPD.

7.3 Co-creation-NPD Relationship (High-Level Impact)

The design of effective co-creation experiences is vital in promoting a complete co-creation approach. Through a complete co-creation approach, brands can maximise the high-level impact of co-creation on NPD. In the context of this research, a high-level impact of co-creation on NPD is signified by the enhancement of brands' competences in NPD. A brand's competences in respect to an NPD project denotes their capability to design and deliver effective value propositions. The term 'value' is used to shift the focus from product solutions, to one of experiential value (new experience development). This signifies the changing nature of how value is both created and perceived, as a result of the understanding of the literature (S-D logic, co-creation core principles) and the research findings. Value is considered interactional, and goods are the distribution mechanisms for service provision (Deighton, 1992).

The co-creation literature widely advocates complete co-creation as the value maximising approach to NPD. The literature review (Chapter 2) outlined co-creation as a necessary approach to create and sustain a strategic benefit (competitive advantage). Co-creation is considered to increase the efficiency of a brand's NPD lifecycle and boost product effectiveness (Hull, 2004; Payne, Storbacka, and Frow, 2008; Prahalad and Ramaswamy, 2000). This signals the impact of co-creation in enhancing a brand's ability to develop value propositions. However, the discussion in Chapters 2 and 3 highlighted a lack of understanding of the specific ways co-creation delivers this impact. This research seeks to explore this in further detail, building knowledge of the high-level impact by exploring the co-creation-NPD relationship in context. This provides a greater insight into how a high-level impact manifests in a real-life NPD scenario, and the specific impact of co-creation throughout the NPD lifecycle. A key sentiment emerging from the data collection (brand perspective) is that the lack of tangible proof of the impact of co-creation in NPD is an underlying reason as to why brands continue to resist adopting a co-creation approach (signified

by *Brand inhibiting factor: Culture*). This supports the need for a profound understanding of the impact of co-creation in NPD, and the need for research into this area.

It appears that the current literature is not sufficient in detailing this impact, and a greater understanding of the high-level impact of co-creation on NPD is of value. The existing literature is effective in describing 'what' the high-level impact of co-creation is. However, there remains a dearth of literature detailing the specific ways in which co-creation can impact the activities and stages that underpin the NPD lifecycle. Moreover, there is a lack of practical research exploring the co-creation-NPD relationship in a B2C context. The majority of prior research explores this on a theoretical level and is ineffective in resolving the co-creation-NPD relationship.

This drives the overall focus of this research, to explore the role of co-creation in enhancing NPD competences, i.e. a high-level impact. The focus to this point has been the steps leading up to a high-level impact (effective co-creation experience design to promote a complete co-creation approach). The discussion now explores the implications of the research findings in elucidating the high-level impact of co-creation on NPD.

The collection of data from subject matter experts (Brand perspective) is extremely valuable to this aspect of the research topic. These represent individuals who have adopted a co-creation approach in real-life NPD scenarios, and witnessed the impact first hand. Chapter 5 explores this by identifying emergent impact themes in respect to co-creation, and the activities and stages that underpin the NPD lifecycle. The following section summarises the key impact themes, and discusses their relevance and implications to the overall research aim.

7.3.1 Co-creation Impact Themes

The research findings categorise five high-level impacts of co-creation on NPD. Accordingly, these are knowledge and insight, marketing, product performance, process and new experience development. An impact of co-creation on NPD implies that through co-creation, a brand is better equipped to approach NPD projects. The impact themes denote the value that co-creation can deliver across the NPD lifecycle. This is achieved through combining the skills and knowledge of brands and consumers in the joint pursuit of value creation. This collaboration is considered to significantly enhance the competences of brands in respect to NPD projects. The

following discussion provides a summary of each impact theme, through a combination of the key learning points and relevant literature.

Knowledge and insight: NPD relies on a deep understanding of consumer wants, needs and expectations; knowledge is considered a key operant resource (Payne et al., 2008). Throughout the NPD lifecycle, knowledge can be viewed as the central theme of NPD. Access to valuable knowledge and insights build the skills and competences that brands can use to gain a strategic benefit (competitive advantage) (Mokyr, 2002; Madhavan and Grover, 1998). In regards to the impact of co-creation on NPD, co-creation delivers a volume of knowledge, 'out of the box' thinking, a deep understanding of the target consumer, and their needs and expectations in respect to a new product.

Ongoing interaction with consumers allows brands to not only capture 'hard' data, such as consumer satisfaction measures, but allows access to tacit knowledge, incorporating a deep understanding of consumer experiences and processes (Payne et al., 2008). The knowledge and insight gained from co-creation is utilised across the NPD lifecycle, and its impact goes further than just understanding the needs and requirements of consumers. Consumers view NPD problems in a different light, they are not restricted by the brand's hierarchy and their knowledge is built directly on their experience in the product category. Co-creation provides the means to capture real-time knowledge in contrast to traditional market research methods, and ultimately puts the consumers directly at the heart of the NPD process.

By interacting with consumers throughout the NPD lifecycle, brands can continually add to their knowledge base, and sense check concepts, ideas, prototypes and promotions. Moreover, equipping the internal team with greater knowledge is considered to reduce resource wastage and boost internal empowerment as everyone is working towards the same shared goal.

Marketing: The latter stages of the NPD lifecycle are geared towards launching a successful product. A vital component of this is the marketing and promotions of products. A key theme emerging from the data was the potential for co-creation to impact and transform the marketing of product concepts.

Of particular relevance are the effects of advocacy reach and the roles consumers can play in creating marketing solutions for new products. There is a growing trend

for organisations to adopt advocacy-based strategies in response to the growing access (of consumers) to powerful new media, tools and information to compare brands and their products (Pitt et al., 2002; Hagel and Singer, 1999; Wind and Rangaswamy, 2001; Prahalad and Ramaswamy, 2000). Advocacy reach is considered to significantly impact the effectiveness of marketing new products, and is largely unobtainable through traditional marketing approaches.

Consumer advocacy can be defined as an advanced form of market orientation that responds to the new drivers of consumer choice, involvement and knowledge (Lawyer and Knox, 2006). This links directly to the characteristics of co-creation whereby consumers are actively involved. Both the brand and consumer share and gain knowledge, and ultimately the consumer has a greater say in the final product. Moreover, advocacy-based strategies are based on high levels of trust, accountability and transparency, linking directly to the dimensions of Prahalad and Ramaswamy's (2004) DART framework. The advocacy reach gained through co-creation can yield benefits not only for a specific product, but also across the brand as a whole and for future product offerings. Strong relationships can deliver lifetime loyalty, lower costs and superior profitability (Christopher et al., 1991; Gummesson, 1987; Payne and Holt, 2001).

Another emergent aspect of the marketing impact is the role of consumers in actively co-creating marketing and promotions solutions in response to a brief or guidance by the brand. Brands now actively seek to facilitate the creation and sharing of knowledge and boost competences held by their consumers (Gibbert et al., 2002). This is particularly relevant in respect to marketing and promoting new products. Brands seek to co-create marketing solutions by briefing consumers, supporting them with marketing strategies and tactics that help them to proactively convey their experiences to their counterparts (Lawyer and Knox, 2006).

Finally, the ease with which brands are now able to co-create with a volume of consumers can deliver a considerable marketing impact. Sawhney and Prandelli (2000) describe the increasing information intensity of products as enhancing the incentives for customers to connect and communicate with brands and each other. Consumers actively seek to discuss and promote need reducing or relevant products through their own personal networks. This is entirely relevant when considering that a closer preference fit of co-created products can in turn increase positive attitudes toward the product, subsequent purchase intentions, willingness-to-pay, and

referrals/word of mouth (Franke, Keinz, and Steger, 2009; Mathwick, Wiertz, and DeRuyter, 2007).

Product performance: Co-creation is widely regarded to deliver highly relevant, need reducing and competitive solutions. The co-creation literature highlights the role of the consumer in providing product ideas and co-creating product designs. A study by Kristensson and Gustafsson (2004) outlines that of 195 development projects in European companies, those adopting co-creative techniques tended to generate more profit, and the most valuable ideas were co-created with ordinary users. This results in greater value derived through the use and experience of a co-created product.

Additionally co-creation is recognised as boosting performance through building consumer affinity towards the brand (Kumar et al., 2010 and van Doorn et al., 2010). The effect of maintaining a close collaborative relationship with consumers throughout the product lifecycle can considerably impact product performance. A close relationship with consumers ensures the co-created products meet both their explicit and implicit needs.

Co-created products result from the collaboration of brands and consumers. This couples the technical knowledge and capabilities of brands with the valuable knowledge consumers possess. A product performance impact places a focus on the outcomes of co-creation in delivering highly relevant, need reducing product solutions. Competitive solutions result from a deep knowledge of consumers' wants and needs, and the constant integration of consumer knowledge throughout the NPD lifecycle (knowledge and insight impact). Additionally, consumers actively promote and advocate a brand and its product offerings due to their involvement in value creation processes (marketing impact).

Process: Co-creation is considered to boost the efficiency of internal processes, specifically through a positive impact on the cost, time and resources employed in NPD. Early co-creation literature highlights its role in boosting the efficiency of the NPD process (Prahalad and Ramaswamy, 2004; Ostrom et al. 2010). Complete co-creation can reduce the need for pivots (course corrections) in NPD, reducing time to market and the resources employed. Faster speed to market is vital in ensuring the product offering meets the current needs of the market, and brands are able to act on

information faster than their competitors (Fang, 2008; Joshi and Sharma, 2004; Sawhney, Verona, and Prandelli, 2005).

In respect to efficiency and the ability to be lean and agile, co-creation is highlighted as an approach to possibly reduce or merge traditional stages of the NPD lifecycle. Of particular relevance is the notion of 'self-validated' concepts (coming from the consumer) that allow brands to move quickly in NPD. The iterative approach designated by co-creation eliminates wasted time and resources (Moogk, 2012).

Another emergent impact of co-creation on NPD is the notion of internal empowerment. Time is often wasted as internal teams deliberate, discuss, and debate on the product direction. By adopting a co-creation approach, the internal team can continuously and iteratively collaborate with consumers. This ensures the internal team is empowered with the information to understand precisely what consumers want, and work towards the same shared vision or goal. This depth of insight and understanding reduces the waste of resources and time, and drives a consensus on the recommended way forward for the business (Blank, 2013).

New experience development: The final impact of co-creation on NPD focuses on the changing nature of product development and indeed the changing nature of how value is perceived and experienced. The traditional view of NPD proposes that value is embedded in the final tangible product, and as a result, the NPD process should be geared to delivering the most relevant and competitive products. This denotes a value-chain focus, whereby the brand creates value and the consumer is the recipient of value.

However, more recently, the nature of value and how consumers perceive value has fundamentally shifted towards experience-based consumption. The early discussion of the S-D logic and co-creation literature (Chapter 2) stressed the importance of delivering valuable experiences alongside tangible products. This is shaped by the notion that both tangible products and unique experiences should be seen as inseparable antecedents of value.

Vargo and Lusch (2004) state that goods are the distribution mechanisms for service provision. Rather than buying objects, consumers buy products for what they mean and their performance (Levy, 1959; Deighton, 1992). In essence, this signifies that consumers attribute intangible value to the products they purchase. Whilst the

functions and features of the products must fit their needs, they experience value through what the product 'means'. Service is now considered the basis of exchange. When goods are involved, the economic activity is driven by service; innovation is no longer defined by what brands produce as output, but how better they serve (Lusch et al., 2007; Vargo and Lusch, 2008).

A co-creation experience in itself is a source of value, through the interaction and involvement between consumer and brand. The process of collaborating on an NPD project can deliver value to consumers through experience; interaction is considered the locus of exchange (Vargo and Lusch, 2006). In addition, brands must be able to deliver valuable experiences once a co-created product is launched. Co-creation equips brands with the knowledge of consumer's expectations and preferences in regards to the experience delivered alongside a tangible product. The collaboration between brands and consumers ensures that brands understand the importance of what the product 'means' to the consumer and how value will be derived from the product in use. In this regard, the co-creation process in itself is a source of value, but access to the knowledge ensures that the results of the co-creation process (i.e. a product solution) also deliver valuable experiences.
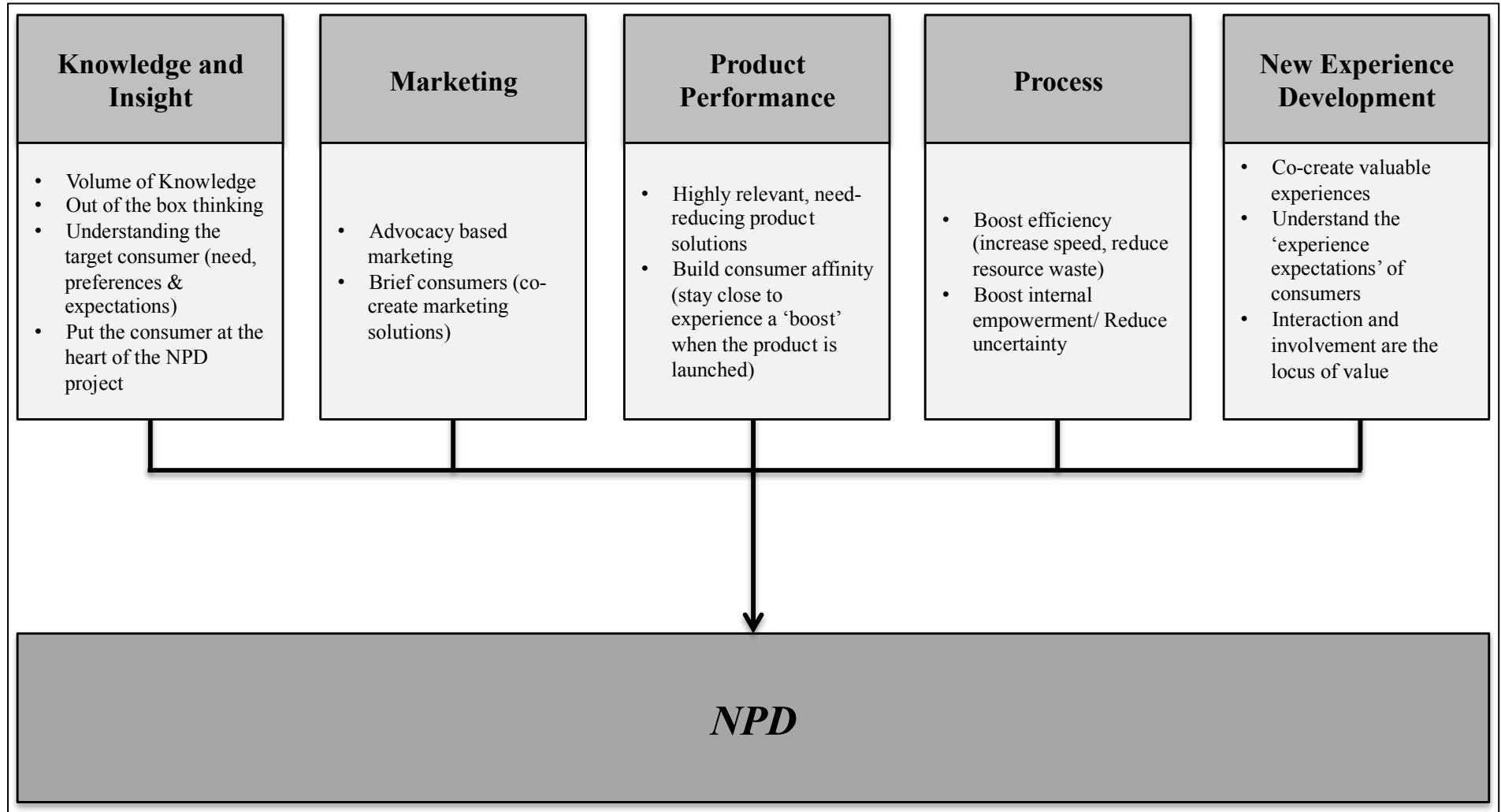
The need to deliver customisable and valuable experiences alongside products emerged as perhaps the most significant trend in shifting innovation management approaches to co-creation. The discussion of the need to deliver customisable experiences from the subject matter expects (brand perspective) validates that this is a real-world factor in shaping brands' approaches to value creation. Moreover, the emergence of the consumer-driving factor '*Consumer-brand relationship*' signifies interaction and involvement as a key source of value for the consumer. The research findings present clear implications in the need to shift to a service-dominant logic, and co-create value through experience networks. This provides evidence of the core principles of co-creation (outlined in the literature) being applied in an NPD context. Brands must build the capability to deliver valuable experiences alongside tangible products in response to the shifting nature of value and emergence of the co-creation paradigm.

The impact themes signify the value that implementing a co-creation approach can deliver in respect to NPD. The discussion of the impact themes explores the high-level impact of co-creation based on the expertise of those who have implemented a co-creation approach (subject matter experts) coupled with the relevant literature.

Discussion

The impact themes detail the specific ways in which co-creation can enhance a brand's competences in respect to an NPD project. Figure 7.5 (overleaf) displays the impact themes of co-creation in NPD, summarising the key sentiments underlining each impact.

Figure 7.5: Co-creation impact themes

Knowledge and Insight	**Marketing**	**Product Performance**	**Process**	**New Experience Development**
• Volume of Knowledge • Out of the box thinking • Understanding the target consumer (need, preferences & expectations) • Put the consumer at the heart of the NPD project	• Advocacy based marketing • Brief consumers (co-create marketing solutions)	• Highly relevant, need-reducing product solutions • Build consumer affinity (stay close to experience a 'boost' when the product is launched)	• Boost efficiency (increase speed, reduce resource waste) • Boost internal empowerment/ Reduce uncertainty	• Co-create valuable experiences • Understand the 'experience expectations' of consumers • Interaction and involvement are the locus of value

NPD

Discussion

The impact of co-creation on NPD is signified by the impact themes outlined in Figure 7.5. This summarises the research findings in respect to the co-creation-NPD relationship. A high-level impact of co-creation in NPD signifies that brands are better equipped to deliver successful products. This research project maintains the focus that co-creation is the value maximising approach to NPD. Through the effective design of co-creation experiences and the positive impact of social media on the co-creation-NPD relationship, co-creation can deliver a high-level impact on NPD. A high-level impact implies that co-creation boosts the effectiveness and success of product solutions, i.e. a competitive impact. Consequently, in light of the research findings, the researcher identified the opportunity to examine the research findings in respect to the potential for co-creation to deliver a competitive impact in NPD. This explores the high-level impact of co-creation further, exploring how enhanced competences (through co-creation) can boost the commercial success of a product.

7.3.2 Competitive Impact of Co-creation in NPD

The results of the research findings provide the opportunity to explore the competitive impact of co-creation. This is done by examining the link between the co-creation impact themes, and the factors that underpin successful NPD (NPD CSFs). The literature review (Chapter 2) discussed the NPD CSFs at the project level. These are considered the factors necessary to ensure the commercial success of a new product. Throughout the data collection and analysis, the researcher noted clear synergies arising from the impact of co-creation in NPD, and the NPD CSFs. Consequently, this discussion explores the competitive impact of co-creation on NPD.

The literature review (Chapter 2) outlined the CSFs of NPD at the project level. These factors have been extensively researched though the NPD literature, and are widely regarded as the antecedents for the commercial success of NPD projects. The reasoning for this avenue of exploration results from the research findings, and specifically the notion that until co-creation can be proved to be a foolproof approach to NPD, brands and those within them will resist adopting this approach. Moreover, a competitive impact of co-creation on NPD supports co-creation as a competence enhancing approach to NPD. In line with the research aim, this discussion seeks to outline any synergies or links between the ways in which co-creation impacts the NPD lifecycle, and the NPD CSFs. This approach leverages the insight gained from the research findings, to examine the themes arising from the research findings against the existing literature of the factors that underpin NPD success.

Discussion

The first step is to revisit the CSFs outlined in the literature review. Table 7.10 outlines the taxonomy of CSFs of NPD at the project level (Cooper, 2013, 2017 & 2018).

Table 7.10: NPD CSFs

NPD CSFs	
Critical Success Driver	**Description**
Striving for unique superior products	A differentiated product that delivers unique benefits and a compelling value proposition to the customer or user—is the number one driver of new product profitability.
Creating market-driven products and building in the voice of the consumer (VoC)	A market-driven and customer-focused new product process—is critical to success.
Predevelopment work - the homework	Doing the homework and front-end loading the project is key to success: Due diligence done before product development gets underway pays off!
Sharp, early, stable and fact-based project and product definition	Getting sharp and early product and project definition and avoiding scope creep and unstable specs—means higher success rates and faster to market.
Spiral development - build, test, feedback and revise	Build, test, obtain feedback, and revise— putting something in front of the customer early and often gets the product right.
The world product - a global orientation	A global or glocal product (global concept locally tailored) targeted at international markets—is far more profitable than the product designed for to meet one-country needs.
Planning and resourcing the launch	A well-conceived, properly executed launch is central to new product success. And a solid marketing plan is at the heart of the launch.
Speed	There are many good ways to accelerate development projects, but not at the expense of quality of execution.

Adapted from: Cooper (2013, 2017 & 2018)

The NPD CSFs relate primarily to the activities and stages that underpin the NPD lifecycle. The NPD CSFs detail the competences and resources that combine to promote the commercial success of a product. Through the researcher's understanding of the NPD CSFs and the research findings, a number of connections between the NPD CSFs and co-creation impact themes are apparent. The following discussion examines the co-creation impact themes and their potential link to achieving goals supporting the NPD CSFs. This is done by discussing each of the co-creation impact themes (knowledge and insight, marketing, process, product performance and new experience development) in respect to their relevance to the NPD CSFs. To support this, relevant quotations are used from the subject matter

experts (brand perspective) to ground the discussion in the context of co-creation in NPD.

7.3.2.1 *Knowledge and insight*

The knowledge and insight impact of co-creation centres on the role of co-creation in providing brands with access to valuable and relevant information (Cooper, 2018; Vargo and Lusch, 2016). Knowledge is viewed as an operant resource. This is vital in developing the initial definition of the product concept, and throughout the NPD lifecycle to inform the various strategic functions involved in taking a concept from ideation to launch. The significance of this impact is substantiated by the responses of the subject matter experts, who heavily stress the impact co-creation has on the knowledge base of the brand. In regards to the NPD CSFs, this impact is likely to support the attainment of goals associated with a number of factors:

Predevelopment work – the homework: A key underpinning of this factor is a deep study of consumers' wants and needs to identify requirements for the ideal product (Cooper and Edgett, 2006; Cooper, 2018). This CSF focuses on knowledge in the early stages of the NPD lifecycle to ensure a clear direction and strategy is in place to guide the NPD project. As a CSF that focuses explicitly on knowledge, a clear link is evident to the knowledge and insight impact of co-creation. Co-creation is regarded as the most effective approach to market research, providing deep insights, uncovering need states and a detailed picture of the target consumer. Chapter 5 discusses the impact of co-creation at the upfront homework stage of NPD, and outlines a myriad of benefits in respect to this impact. To support the link between the knowledge and insight impact and predevelopment CSF, Table 7.11 (overleaf) outlines evidence from the brand perspective:

Table 7.11: Knowledge and insight/predevelopment work - the homework

Predevelopment Work - the Homework	
PARTICIPANT C	• Co-creation allows you to develop a clear definition of the target consumer, insight and databanks • By developing a key insights, you'll be thinking much deeper in terms of how can products better fit consumers' lives
PARTICIPANT B	• Co-creation is vital in problem definition and identifying unmet needs
PARTICIPANT L	• Co-creation provides volume and diversity • Consumer's experience leads insights, they give a different perspective on product innovation (not as a professional) • Co-creation provides value on the creativity side, the dreamer side, identifying the consumer gaps, the frustrations and needs • Co-creation gives fresh creativity from the crowd at a global scale
PARTICIPANT E	• Co-creation builds deeper insights and finds new angles
PARTICIPANT J	• Co-creation is vital in identifying new needs, new products

The statements in Table 7.11 display a number of responses that outline the knowledge and insight impact of co-creation in the early stages of NPD. This signifies the role of co-creation in 'front-end loading' NPD projects with valuable knowledge, indicating a clear link to the predevelopment CSF. This CSF is fundamentally defined by a brand's access to knowledge in the early stages of NPD. Through the research findings, the knowledge and insight impact of co-creation presents clear implications in respect to a brand's access to information from the onset and throughout an NPD project.

Spiral development - build, test, feedback and revise: The knowledge and insight impact of co-creation is particularly relevant in market research, testing, and informing the advertising and launch of new products. Spiral development specifies ongoing interaction and feedback loops in development, staying close to consumers and continuously integrating their knowledge (Cooper, 2018). Spiral development specifies the need to continuously interact and solicit feedback from consumers to ensure the best product solutions are developed. This approach mirrors co-creation in the sense that co-creation stresses the need to maintain a close collaborative relationship throughout the NPD lifecycle Table 7.12 (overleaf) outlines supporting evidence, focusing on the role of co-creation in respect to spiral development.

Table 7.12: Knowledge and insight/spiral development

Spiral development	
PARTICIPANT C	• Traditional market research methods provide rear view mirror data, co-creation provides deep, real time data • You can get feedback around the product functionality • Get consumers in to the process early to provide feedback and test the early bundles, product functionality, packaging and prototypes
PARTICIPANT B	• Co-creation is market research and insight gathering
PARTICIPANT A	• Stay close with the consumers to sense check and fine-tune the prototype • Complete co-creation raises the issue which is should you be doing testing (removing the need for traditional testing altogether) • Co-created communications campaigns can be more powerful than those from traditional agencies • Market research has evolved, traditional aspects of marketing are not redundant but brands must keep stretching and pushing the limits (through co-creation)
PARTICIPANT D	• Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product
PARTICIPANT J	• Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers

The research findings promote co-creation in respect to a test and learn approach and iterative development of products. This is regarded as a vital way to keep consumers in the loop, gain their feedback and ensure the product meets the needs of the market. As collaboration is considered necessary throughout the NPD lifecycle, the co-creation approach promotes iteration and continuous feedback. This is heavily stressed in the data analysis, ongoing interaction provides a continual flow of knowledge and feedback and delivers concepts that test better or do not need to be tested altogether.

Co-creation not only ensures the product meets the needs of the market, but the knowledge gained should inform the delivery mechanism, the promotions and advertisement of the new product. This includes involving consumers in co-creating promotions and advertising development, once again stressing the importance of keeping them in the loop through the NPD lifecycle. The constant collaboration through co-creation resembles spiral development. Consequently, a clear link emerges between this impact and CSF.

Sharp, early, stable and fact-based project and product definition: This CSF is characterised by a deep understanding of the target market, of consumer's needs, wants and preferences, as well as the product concept and product requirements

(Cooper, 2018). This knowledge resides primarily with the consumers and collaboration through co-creation is vital in ensuring the brand is able to gain a deep understanding of each characteristic and create a clear definition of the product (Hauser, Tellis and Griffin, 2006). Complete co-creation ensures that the early product definitions meet the needs of the market, and on an ongoing basis, the involvement of consumers ensures the concept evolves and is fine-tuned to deliver products that consumers truly want and need. Table 7.13 (below) supports this.

Table 7.13: Knowledge and insight/product definition

Product definition	
PARTICIPANT C	• Get consumers into the process as early as possible to help deliver the kind of products that they really and truly need and want • Co-creation allows you to understand the reasons why people buy stuff and why people consume stuff
PARTICIPANT A	• The product is going to be absolutely geared towards a specific group because they will have designed it with you • Iterate through the NPD lifecycle to continually develop concepts and fine tune • Product characteristics can be discussed and validated with consumers as they evolve
PARTICIPANT E	• The hypotheses developed through insights (co-creation) feed ideation
PARTICIPANT F	• Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts
PARTICIPANT M	• Involving the consumers gets straight to the point, you don't lose time proposing products which in the end do not meet the needs
PARTICIPANT H	• Co-creation strengthens the NPD process and gives brands the opportunity to look with consumer glasses at all the ideas
PARTICIPANT J	• Engage with consumers early so that they can feed the brand with their thoughts about products they wish to find on shelf

Table 7.13 outlines supporting data regarding the impact of co-creation in developing an early product definition. This is built through a deep understanding of consumer needs and wants through collaboration in the early stages of NPD. Co-creation with consumers in the early stages is the most effective way to develop a clear product definition, as consumers are directly involved.

Creating market-driven products and building in the voice of the consumer (VoC): An important characteristic of this CSF is an indication of the consumers' need level for the product type. As a function of market research, brands must understand the consumer landscape, and identify need and benefit spaces within which consumers desire new and more effective products (Cooper, 2018). This requires a deep understanding of the target market and direct communication with consumers

to understand the products they truly desire. Similar to the upfront homework activities, this activity entails exploring the market to understand how and where brands can deliver valuable products. Moreover, consumers can actively contribute to products and co-create their own experiences.

Through co-creation, brands are able to build and leverage their resources and capabilities based on the knowledge and information they possess (Vargo and Lusch, 2004). Ongoing co-creation provides brands with a wealth of knowledge to create a clear definition of the target consumer and product. Consequently, this is used to inform each of the strategic functions involved in developing a new product, and potentially access technical knowledge and solutions from empowered consumers. Table 7.14 (below) supports this.

Table 7.14: Knowledge and insight/VoC

VoC	
PARTICIPANT H	• Co-creation is vital for finding/devolving relevant propositions • Co-creation develops key insights, benefits spaces which is extremely valuable
PARTICIPANT B	• You can squeeze out a lot of interesting problems to solve which perhaps you weren't overtly aware of (with a bigger community)
PARTICIPANT C	• Co-creation gives you the ability to learn and gather consumer insights. Even if you do nothing with your product portfolio development, you have learnt a whole heap around what consumers are looking for in a much more direct way • Co-creation gives you help to develop insight and provides databanks, when you want to dive into an adjacent project, it allows you to look at some of the insights and see how you can collide them with other categories • It used to be marketers guessing or figuring out what they want from rear view mirror data what consumers want, in reality its best to ask people
PARTICIPANT J	• The more data brands have to understand consumers (the way that people are using their products and services) the quicker they can design products and services that are going to achieve the particular objective • Co-creation allows the brand to be responsive and as responsive to needs as others • It is important in the early stages to engage with consumers so that they can feed us with their thoughts about products they wish to find on shelf
PARTICIPANT M	• When you co-create with people you can ask them what they want, but you can also observe them in real situations in their daily life (sociology, anthropology, ethnography) and discover problem states • If you involve the consumer very early in the process, you will produce products which fit with their explicit and implicit needs
PARTICIPANT G	• Leaning in on consumers as experts in a category or in a product segment is the perfect way of getting it straight from the horse's mouth

The best way to incorporate the voice of the consumer into product development is to actively involve them in the NPD process. Through the interaction with consumers and their involvement in the NPD lifecycle, brands are able to identify the areas in

which product opportunities exist. Moreover, co-creation ensures that products are developed in line with the active demands of consumers. This is achieved through direct communication and real-time data, building a clearer picture of the consumer landscape and both their explicit and implicit needs.

As consumers are collaborators in NPD, co-creation is the most effective way of building the voice of the consumer into a product. Consumers assume greater control in value creation and have greater influence over the final outcomes (value proposition). In effect, co-creation empowers consumers to build their voice into products.

7.3.2.2 Marketing impact

The marketing impact of co-creation on NPD is primarily concerned with the advertising and promotion of new products. Key characteristics of this impact include the benefits of WOM advertising, consumer advocacy and the roles consumers place in co-creating marketing solutions. This relates to marketing related CSFs, as discussed below:

Planning and resourcing the launch: This CSF is concerned with the fit of the brand's resources and capabilities with respect to advertising, promotions and market research. The role of co-creation in impacting market research was discussed in the previous section and is primarily concerned with the knowledge and insight impact on market research.

In respect to planning and resourcing the launch, the role of consumers in actively co-creating solutions and the benefit of this over traditional methods is particularly relevant. This includes both consumers as information providers, but also as an extension of the brand's marketing team, creating high quality, out-of-the-box marketing solutions. In essence, brands are now able to collaborate with consumers to extend both their resources and capabilities in respect to advertising and promoting new products.

The marketing impact of co-creation details the role of consumers in co-creating marketing and promotions solutions. Co-creation not only builds in the voice of the consumer to the tangible product, but also in the delivery mechanism and promotions of new products. This signifies the link between the marketing impact of co-creation (co-creating marketing solutions) and building in the voice of the consumer

(integrating consumer knowledge into the delivery mechanism). This is vital in ensuring the marketing plan and strategies align directly with the preferences of consumers, boosting the likelihood of a successful launch. Table 7.15 outlines supporting evidence of this.

Table 7.15 Marketing impact/product launch

Product launch	
PARTICIPANT K	• Consumers look at marketing in different ways and come up with creative solutions
PARTICIPANT D	• Co-create the delivery mechanism, the sales mechanism, the distribution channels, and the experience that the consumer has (from experiencing the branding all the way through experiencing how they make decisions around the product, this is happening more and more online)
PARTICIPANT C	• The advocacy reach you can gain from co-creation is something you would never get if you pay for it, this is crucial in the early stages of product launch
PARTICIPANT B	• Co-creation creates brand loyalty and word of mouth marketing • Co-creation is the strongest most powerful form of advertising also at your disposal • Co-created communications campaigns can be more powerful than those from traditional agencies
PARTICIPANT F	• Consumers will be aware of the value proposition before the results are tangible • As words spreads (WOM) the brand will experience a 'boost' in launch • Complete co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics

Planning and resourcing the product launch is regarded as a CSF that underpins the successful launch of a new product. Development of a clear marketing plan and effective marketing solutions are vital. Brands can co-create effective marketing solutions with consumers to promote this CSF. Moreover, co-creation can deliver benefits that go above and beyond this. One way in which brands can boost the success of a product launch is through the marketing impact of co-creation. Of particular significance is the growth of consumer advocacy and word of mouth advertising as a result of co-creation. The role of advocacy reach and advocacy-based marketing strategies is particularly relevant in successfully launching a product.

7.3.2.3 Product performance impact

The impact of co-creation on product performance was widely discussed across the brand perspective. In particular, the role of co-creation in delivering highly relevant, need reducing, and competitive solutions (Fang, Palmatier and Evans, 2008; Lilien et al., 2002). This results in an impact on the commercial success of co-created products. The antecedents of a product performance impact are the role of the

consumer as an information provider, the role of co-creation in delivering value through experience, and, the strengthening of the brand-consumer relationship (consumer affinity and advocacy). In respect to the NPD CSFs, the following are particularly relevant:

***Striving for unique superior products*:** Unique superior products offer a compelling value proposition to consumers. This is signified by a product advantage, residing in the consumer's perception of product superiority in respect to quality, cost-benefit ratio and function relative competitors. The co-creation paradigm necessitates the need for brands to deliver valuable experiences alongside tangible products. Consequently, the product performance impact of co-creation denotes an impact through the delivery of relevant and need reducing products in tandem with valuable experiences.

A significant shift in the way in which value is created means superior products are now defined by both the tangible and intangible value they provide. In this regard, co-creation is a necessary approach to ensure brands offer unique superior products. This is built through an impact on tangible products and in co-creating valuable experiences.

Through the data analysis, co-creation emerged as an approach to promote the development of products that better fit the needs of the market. Co-creation ensures that are tangible products are highly relevant, need reducing and competitive. Co-creation throughout the NPD lifecycle improves product quality, reduces risk and increases market acceptance (Business Wire 2001). Additionally co-creation builds a stronger relationship between the brand and the consumer, and consequently boosts the commercial potential of products. This is vital in developing a product advantage through the effectiveness of a co-created product, and in building an awareness of the product prior to launch (Franke, Keinz and Steger, 2009; Mathwick, Wiertz and DeRuyter, 2007). This is a key component in delivering a unique superior product.

In addition to a focus on the characteristics of the tangible end product, the core principles of co-creation build on the notion that value is delivered through experiences. Goods are regarded as the distribution mechanism for service provision (Vargo and Lusch, 2006). Effectively, the product is only as good as the service or experience it provides. This necessitates a focus on the creation of valuable and unique experiences as a key component in ensuring a product advantage. Table 7.16

outlines supporting evidence in respect to providing both valuable end products and experiences.

Table 7.16: Product performance/superior products

Superior products	
PARTICIPANT D	• The experience really matters, and it matters more and more than price and function and features; more and more of the value is moving toward the experience • Co-creation is a must in today's environment, the consumer experience matters so much in addition to the product that companies absolutely have to move to a co-creation type of environment
PARTICIPANT A	• If you involve consumers more they're going to buy your products more
PARTICIPANT B	• The brand forces consumers to be hands on in development because that's all part of the experience • Every single co-created product launched (by a specific brand) has sold out • Co-creation can deliver improvement in terms of the success of new product launches • Because consumers are involved in the process, the brand has a target community to sell to and that are more likely to buy
PARTICIPANT F	• Co-created products are highly relevant for the consumer, as they have worked to get the results and have been involved in every major decision.
PARTICIPANT I	• By co-creating and speaking directly to the consumer, brands are able to understand what consumers want, deliver better products and gain market share

The link between the product performance impact of co-creation and the delivery of unique superior products couples the need to provide valuable products and experiences in tandem. The ability for brands to co-create relevant products and valuable experiences is regarded to impact the perceived quality and effectiveness of products. In delivering highly relevant and need reducing products, coupled with valuable experiences, the brand's offerings are likely to appear more attractive relative to their competitors, reducing the significance of market competitiveness (von Hippel and Schreier, 2006; Magnusson, Matthing and Kristensson, 2003). Through co-creation, brands can deliver relevant products ensuring the functions and features meet the needs of the market, and differentiate their product offerings by constructing a unique experience environment (Song and Adams, 1993).

7.3.2.4 Process impact

The process impact of co-creation centres primarily on the effect of co-creation on efficiency, arising from cost minimisation and reducing development time (Cooper, 2018; Hull, 2004; Payne, Storbacka and Frow, 2008; Prahalad and Ramaswamy, 2000). In addition, the emergence of internal empowerment as a driving factor signifies the effect of co-creation in motivating brands' employees and boosting

Discussion

productivity. In this sense, co-creation is regarded as an approach to directly influence organisational performance, increasing the efficiency of operations, product turnover, employee satisfaction and finally, revenues and profitability (Hoyer et al., 2010; Ostrom et al., 2010). In respect to the NPD CSFs, the following are particularly relevant:

Speed: Speed to market in the context of this research is both an NPD CSF and a brand driving factor, as a result there is a direct link. This is concerned with the efficiency of the NPD lifecycle and the desire to reduce the development cycle time. Faster speed to market is vital in ensuring the product offering meets the current needs of the market and brands are able to act on information faster than their competitors (Fang, 2008; Joshi and Sharma, 2004; Sawhney, Verona and Prandelli, 2005). Speed to market is recognised as a vital impact of co-creation in boosting efficiency and reducing costs (Cooper, 2018; Fang, 2008; Joshi and Sharma, 2004; Sawhney, Verona, and Prandelli, 2005).

The process impact of co-creation specifies the role of co-creation in boosting speed-to-market through reducing the need for pivots and prototype iterations, ensuring the brand is equipped with the knowledge to move quickly through the stages of the NPD lifecycle and removing the need for traditional validation gating stages. Moreover, the notion of internal empowerment reduces time and resource wastage through internal conflict and debate and allows brands to allocate their funds much more specifically. Table 7.17 (overleaf) outlines supporting evidence in respect to a process impact and speed.

Table 7.17: Process/speed

Speed	
PARTICIPANT E	• You're much more likely to get it a product to launch quicker, because everyone's in agreement, you're all going in the same direction and so you get a very empowered team (internal empowerment) • You have a more empowered team. Co-creation avoids the waste of resources and allows people within the organisation to make a difference immediately
PARTICIPANT D	• The more data brands have to understand consumers (the way that people are using their products and services) the quicker they can design products and services that are going to achieve the particular objective
PARTICIPANT F	• Co-creation negates the need for pivots in NPD • Co-creation has an effect over the whole product lifecycle, you don't need as many resources, you can allocate your funds much more specifically because you know where you're going
PARTICIPANT G	• The speed of execution, quality of entries and attention to detail helped the brand visualise potential solutions and arrive at an agreement on which direction to follow quicker than traditional design processes • Co-creation is a highly efficient means to get to the next point in the NPD process or cycle. With co-creation you move fast, you're going deep, with a volume of consumers
PARTICIPANT L	• Co-created concepts pass through the consumer validation stage better. This saves significant time and money

The statements in Table 7.17 support the impact of co-creation on the speed at which brands are able to move through the NPD lifecycle. A particularly relevant aspect of co-creation is the effect on internal empowerment in motivating employees, and boosting collaboration. Co-creation requires brands to adopt a collaborative mind-set, by equipping the internal team with the knowledge to work towards a shared goal; this is likely to impact their internal relations. Boosting internal empowerment and employee satisfaction is likely to deliver benefits across the NPD lifecycle and promote efficiency internally (Ostram et al., 2010). Aside from the direct impact of co-creation on the NPD lifecycle, the effects on motivating and empowering the internal team can significantly boost the efficiency of brand-centric activities.

7.3.2.5 *New experience development*

The value of experience as an emerging basis for exchange in impacting NPD CSFs is highlighted in the preceding discussion. Delivering valuable experiences is vital in addressing the changing nature of the market and how value is perceived (Ramaswamy and Ozcan, 2018; Vargo and Lusch, 2016). The discussion highlights the experience impact predominantly in respect to product advantage and market competitiveness (*striving for unique superior products*). Experience is now the foundation of economic exchange, and the NPD landscape is now defined as how

brands can better service in place of what they can produce (Vargo and Lusch, 2006). Value creation is interactional; this impacts the NPD CSFs by providing differentiation and greater value through the experience environments constructed alongside tangible products. Superior products are underpinned by a product advantage and market competitiveness, concerned with the value that the brand can provide to consumers. The emergence of new experience development highlights the idiosyncratic nature of value, and how it is experiential, contextual, and meaning laden (Vargo and Lusch, 2004, 2006 & 2016; Lusch et al., 2007). To differentiate products, provide greater value and reduce competitiveness, brands must adopt a co-creation approach and recognise the worth of experience.

The shifting nature of value is ultimately transforming how value is created. An effective product solution is no longer sufficient in ensuring the commercial success of a product. Brands should seek to compete through the valuable experiences they can co-create and deliver alongside tangible products. In this regard, product superiority results from the delivery of an effective need reducing product solution coupled with unique and valuable experiences. New experience development should be considered a vital component of value creation, with a complete co-creation approach presenting the basis on which to create valuable experiences.

The discussion of the competitive impact of co-creation on NPD examines the themes resulting from the data analysis against the NPD literature. Through this approach, clear similarities exist between the co-creation impact themes and the factors that underpin NPD success (NPD CSFs). The discussion explores this aspect of the co-creation-NPD relationship on a conceptual level, identifying the links between the impacts of co-creation and how they support the attainment of goals relating to the various NPD CSFs. A competitive impact of co-creation in NPD denotes that a brand is better equipped to design and deliver a value proposition. In turn, this is considered to support a high-level impact of co-creation in NPD, as commercially successful products are built on the suitability of a brand's capabilities and competences in respect to an NPD project.

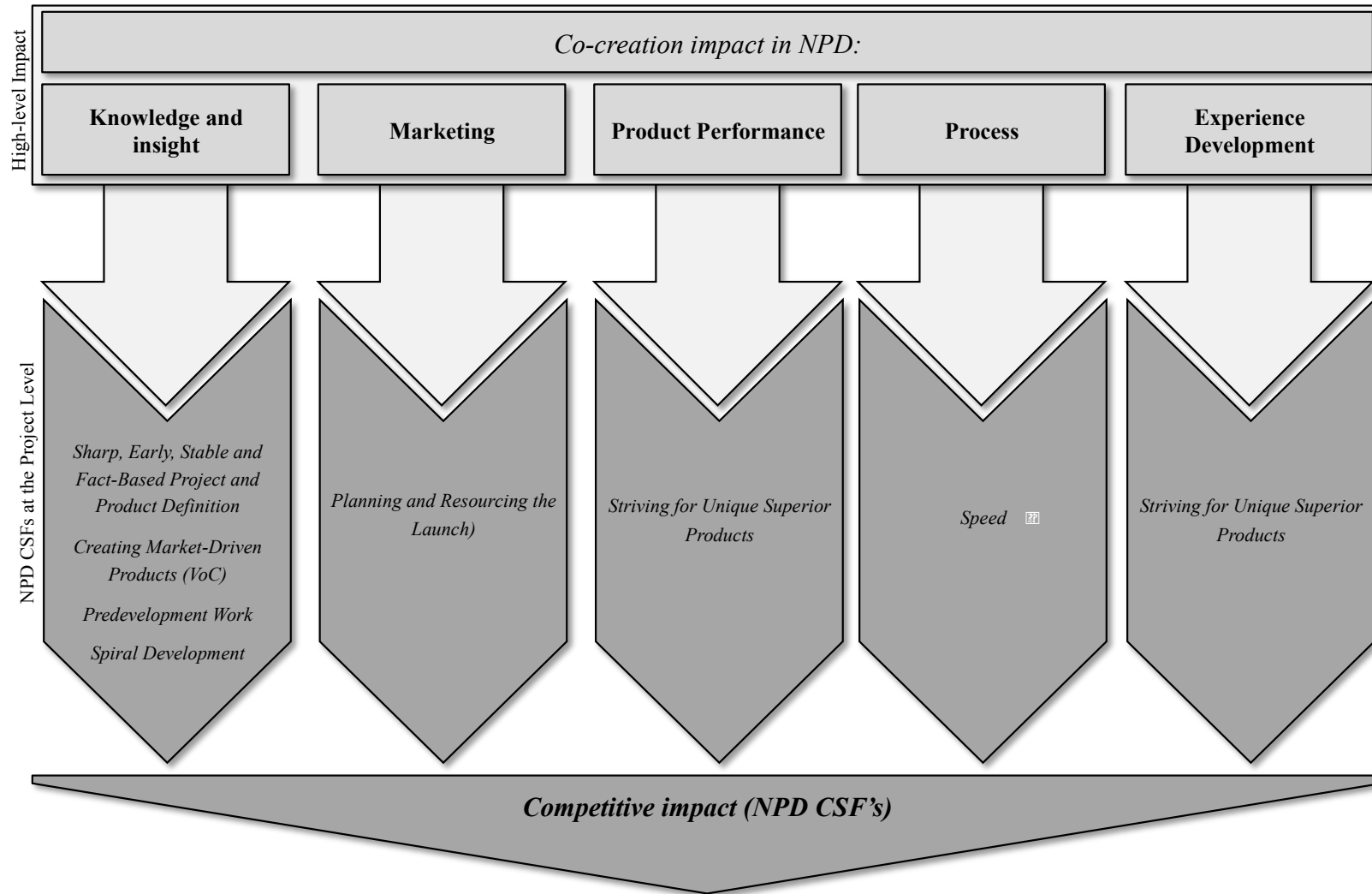*Figure 7.6: Competitive impact of co-creation on NPD CSFs*

Figure 7.6 summarises the discussion of the competitive impact of co-creation in NPD. The research findings provide the basis to explore a link between co-creation and a competitive impact in NPD. This is apparent through the discussion of the co-creation impact themes and their impact in respect to NPD CSFs. The conceptual links identified between the high-level impact of co-creation and NPD CSFs are summarised in Figure 7.6. These represent the potential for the high-level impact of co-creation to support goals associated with NPD CSFs at the project level. The result of this is termed 'competitive impact'. A competitive impact is considered to result from a positive impact of co-creation on a brand's ability and competences to design and deliver a value proposition.

This line of enquiry embodies the final aspect of the co-creation-NPD relationship under consideration. The discussion of the co-creation-NPD relationship outlines two key contributions. Firstly, a greater knowledge of the factors that drive and inhibit co-creation is detailed (brand and consumer perspective). Of particular relevance is understanding how and why these factors are relevant in the research context, and the implications this can have on the design of co-creation experiences. Secondly, the high-level relationship between co-creation and NPD is examined. Specifically, the ways in which co-creation impacts NPD throughout the product lifecycle, and the ways in which this can deliver a competitive impact.

The discussion above explores their implications both in respect to the design of effective co-creation experiences and the high-level impact of co-creation in NPD. It explores the interconnected relationships between co-creation, NPD and social media in line with research aim. This contributes a profound understanding of the research topic and provides the basis on which to build a proposed framework for social media enabled co-creation. The final discussion of this chapter outlines the proposed framework, and how the research findings have contributed to its design.

7.4 Framework for Social Media Enabled Co-creation

The discussion in this chapter is guided by the overall research aim and the objective to conceptualise a framework to guide social media enabled co-creation. The research findings are explored both in respect to the role of co-creation in enhancing NPD competences, but also in the steps leading up to a high-level impact. This results in a holistic understanding of the research topic in hand (designing co-creation experiences). This is evident through a contribution to the knowledge to guide the design of co-creation experiences, promote a complete co-creation approach,

maximise the high-level impact of co-creation on NPD, and deliver a competitive impact through the commercial success of NPD projects.

The early discussion in this chapter outlines the steps leading up to a high-level impact of co-creation on NPD (***effective co-creation experience design**, **complete co-creation approach**, **high-level impact of co-creation on NPD competences***; see Figure 7.1). When considering the design of the framework, it is important to understand how each aspect of the discussion in this chapter contributes to the overall framework design.

Effective Co-creation Experience Design

Co-creation experiences are built on the interaction between brand and consumer. In the context of this research, there is a focus on social media as a platform to foster interaction and collaboration. This is explored in this chapter through discussing the co-creation factors in respect to both the brand and consumer perspective (co-creation-NPD relationship), the role of social media enabling co-creation experiences (through a positive impact on the co-creation-NPD relationship), and other emerging research findings (e.g. tailoring co-creation experiences to each unique NPD project). Particularly significant contributions to this area are evident in Tables 7.3 & 7.4 (Potential co-creation-NPD scenarios) Figure 7.2 (Multi-pronged co-creation experience design), Figure 7.3 (Social media impact in NPD), Figure 7.4 (key considerations in the design of co-creation experiences) and the relating discussions. Tables 7.3 & 7.4 and Figures 7.2-7.4 provide the foundational knowledge of the framework, under the premise that effective co-creation experience design is vital in promoting a complete co-creation approach.

Complete co-creation approach

A complete co-creation approach results from the design of effective co-creation experiences, whereby both the brand and consumer are motivated and able to co-create value throughout the NPD lifecycle. A complete co-creation approach is stressed throughout this thesis as necessary to maximise the high-level impact of co-creation on NPD. Complete co-creation shifts the focus of value creation to not only develop highly relevant, need-reducing and competitive solutions; but also to co-create value through unique and personalised experiences. In this regard, any brand seeking to implement co-creation should do so with the aim to achieve a complete co-creation approach, and maximise the high-level impact of co-creation on NPD.

High-level impact of co-creation on NPD competences

The final aspect of the discussion examines the research findings in respect to a high-level impact of co-creation on NPD. This impact is most likely maximised through a complete co-creation approach, implemented through effective co-creation experiences. Of significance is Figure 7.5 (Co-creation impact themes) and Figure 7.6 (Competitive impact of co-creation on NPD CSF's). These provide summaries of the discussion of the research findings in respect to a high-level impact, and contribute a clearer indication of how and why co-creation can deliver a high-level impact in NPD.

Building on these key findings and discussion, the proposed framework should guide the design of social media enabled co-creation experiences to enhance brands' competences in respect to NPD projects, and potentially deliver a competitive impact. The proposed framework embodies the interconnected relationships between co-creation, NPD and social media and is guided by the discussion of the implications of the research findings in this chapter. The following discussion outlines the design of the framework.

7.4.1 Redefining Value Creation

The core focus of this research project is co-creation. This is defined as a collaborative approach to value creation between brands and consumers and this thesis maintains a focus on interactional creation (Ramaswamy and Ozcan, 2018). Consequently, the proposed framework is based on the notion that brands and consumers must collaborate in the co-creation of value. The research findings present implications in respect to how value is created. The first step in designing the proposed framework is to define value creation in the context of this research.

The co-creation literature outlines the shifting nature of value. This is typified by a shift from a goods-dominant logic to a service-dominant logic. The service-dominant logic outlines the mind-set that underpins the co-creation paradigm. The research findings support this by providing evidence of the shifting nature of value in real-life NPD scenarios. This is apparent by the emergence of new experience development as a key driver and impact of co-creation (brand perspective). Despite a focus on the process of NPD, goods must be considered the provision mechanism for services, and interaction the locus of value creation.

This presents clear implications in guiding the design of the proposed framework. Traditional approaches to NPD specify a value-chain approach, and maintain a focus on products as the delivery mechanism of value. There is a lack of focus on the need to deliver valuable experiences alongside tangible products; in this regard, the traditional value-chain view is no longer effective in guiding the creation of value. As a result, value creation must be redefined in line with the research findings and co-creation literature.

The proposed framework is defined by a 'value creation network'. This shifts the locus of value creation away from tangible products to experience networks (Prahalad and Ramaswamy, 2004, 2006 & 2013; Ramaswamy and Ozcan, 2018). Value is created through interaction and involvement, and the market as a whole becomes inseparable from the value creation process. This specifies the need for both a focus on new product development and new experience development, the approach to value creation must unify these two dimensions (Ramaswamy and Ozcan, 2018). Both are considered necessary processes in the co-creation of value. In a value creation network, production and consumption are inseparable components of value; this denotes that brands and consumers should co-create value throughout the NPD lifecycle.

Figure 7.7 (overleaf) conceptualises a value creation network. This presents the basis of the proposed framework, conceptualising how value is viewed and created as a result of the research findings. Both NPD and new experience development are considered vital processes in the co-creation of value. The value creation network does not have a starting or ending point, as value is co-created throughout the NPD lifecycle. Moreover, brands should seek to continuously interact with consumers as experience is considered the fundamental basis of exchange (Vargo and Lusch, 2016). This implies that value can be co-created through experience prior to a product concept, and after the commercialisation of a finished product. The interaction and involvement between the brand and consumer is the locus of value.

Figure 7.7: Value creation network
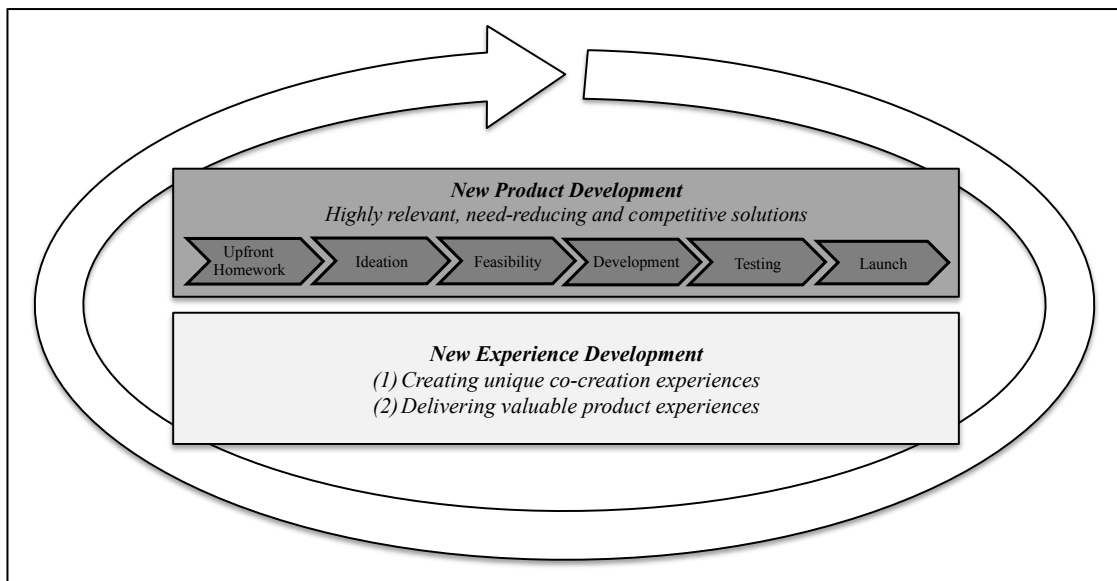
The value creation network is derived from the research findings and the relevant literature. This marks a fundamental shift in how value is both created and perceived. As markets continually shift, the roles between brands and consumers coalesce, as such, value is increasingly embedded in experience and brands are likely to be obligated to adopt co-creation approaches to remain competitive. Complete co-creation delivers highly relevant, need reducing and competitive solutions. This results from the impact of co-creation across the NPD lifecycle, specifically the knowledge and insight, marketing, product performance, process, and experience impact. New experience development delivers value through experience, primarily through two ways: (1) by creating unique experiences through interaction and involvement between the consumer and brand, and (2) by delivering valuable product experiences. Valuable product experiences are built on the knowledge gained through co-creation regarding consumer perceptions and expectations of the product experience.

The value creation network is characterised by brands and consumers as co-creators of value, collaborating throughout the NPD lifecycle. Both NPD and new experience development are considered necessary in value creation. Delivering a competitive product solution is necessary, however it is not sufficient in maximising value creation or creating and sustaining a competitive advantage. Products must be seen as the delivery mechanism of service, with a greater focus on what the product means to the consumer, or how value is experienced through the product in use (Vargo and Lusch, 2016). Brands can no longer compete solely on their capacity to deliver relevant and

need reducing product solutions. Product solutions and experiences must be co-created alongside one another. The ability to co-create unique and valuable experiences is considered the basis of competition. Accordingly, both NPD and new experience development (NED) must present the basis of value creation.

The value creation network conceptualises the value-maximising approach to value creation. This is grounded on the core principles of the co-creation paradigm and the research findings. Overall, the value creation network specifies a focus on both products and experiences as providers of value, and the ongoing collaboration between brands and consumers to create value. This is considered the most effective approach to value creation, and provides the basis on which to build the proposed framework.

7.4.2 Co-creation Experiences

The value creation network specifies that value is co-created through interaction and involvement between brands and consumers. As production and consumption are inseparable components of value creation, this implies that brands and consumers should collaborate throughout the whole NPD/NED lifecycle. Accordingly, the value creation network focuses on a complete co-creation approach in value creation. A complete co-creation approach is implemented through co-creation experiences. These are defined by the interaction and collaboration between brands and consumers in value creation. Co-creation experiences embody 'how' value is created, i.e. through interaction and involvement. Accordingly, both the brand and consumer perspective must be present in the proposed framework.

The research findings maintain a focus on the design of effective co-creation experiences to promote a complete co-creation approach. Effective co-creation experiences ensure that both brands and consumers are motivated and able to collaborate in value creation throughout the NPD lifecycle. This is guided by the research findings in respect to the brand and consumer co-creation factors. Brands assume responsibility for the design and management of co-creation experiences. To promote a complete co-creation approach, brands should seek to design co-creation experiences that promote driving factors (for both the brand and consumer) and reduce inhibiting factors. This ensures that both the brand and the consumer experience a net value gain. The research findings in respect to the design of effective co-creation experiences are summarised below, from the brand and consumer perspective.

7.4.2.1 Brand perspective

Brands maintain control over the design of co-creation experiences. This includes the stages of the NPD lifecycle that they co-create with consumers, and control of the degree of co-creation (how extensively they co-create in NPD). To guide the design of effective co-creation experiences, the research findings categorised the driving and inhibiting factors that brands potentially face in a co-creation-NPD scenario. These were presented as expanded taxonomies of co-creation factors, which defined the co-creation factors and explored their relevance and impact in NPD. A deeper knowledge of the brand co-creation factors is the first step in guiding the design of effective co-creation experiences.

To promote a complete co-creation approach, the research findings explored the significance of the co-creation factors across the NPD lifecycle. This contributes a deeper knowledge of the most significant drivers and inhibitors at each stage of the NPD lifecycle. Consequently, this guides the design of effective experiences through a knowledge of 'what' the most significant co-creation factors are at each stage of NPD, and 'how' and 'why' they are relevant in co-creation-NPD scenarios. A knowledge of the co-creation factors across the NPD lifecycle ensures that co-creation experiences can be designed to promote driving factors and reduce inhibiting factors at each stage of NPD.

The final consideration given to the brand perspective is the need to have a clear understanding of the requirements and objectives of an NPD project and design the co-creation experience with this in mind. Brands should seek to identify where and how co-creation can deliver value in the context of a specific NPD project. A synergy should be achieved between the requirements and objectives of an NPD project and the design of the co-creation experience to ensure that co-creation delivers a positive impact on the outcomes of the NPD project.

7.4.2.2 Consumer perspective

Brands must stimulate and empower consumers to co-create through the design of effective co-creation experiences. Consequently, the research findings categorised the consumer co-creation factors to identify and explore the fundamental factors that both drive and inhibit consumers from co-creating in NPD. A deeper knowledge of these factors elucidates the factors that shape consumer motivation and involvement in co-creation. Co-creation experiences must be designed to stimulate consumer co-creation by increasing benefits (drivers) and reducing risks/costs (inhibitors).

A key notion emerging from the research findings is the varying emphasis placed on the co-creation factors by consumers. The significance of the co-creation factors is likely to vary from consumer to consumer, accordingly there is not one driving factor or inhibiting factor that is responsible for the decision to co-create or not co-create. To guide the design of co-creation experiences, the research findings stress a multi-pronged approach targeting several drivers. This approach ensures that consumers are driven over a range of factors and is likely to stimulate and boost consumer involvement.

In the context of the proposed framework, value is created through the collaboration of brands and consumers. Subsequently, the brand and consumer perspective are present in the proposed framework as necessary collaborators in the co-creation of value.

7.4.3 Social Media in Enabling Co-creation

The research findings explore social media as an enabler of co-creation. Social media provides the platform on which brands and consumers can interact and engage with one another. In this regard, social media enables co-creation experiences by facilitating ongoing interaction between brands and consumers. Social media is considered an effective and efficient platform in boosting interaction and collaboration between brands and consumers.

The research findings categorise the specific characteristics of social media (DESNs and VCCs) that positively impact the co-creation-NPD relationship. This contributes a taxonomy of social media characteristics that can deliver a positive impact on the co-creation-NPD relationship. The understanding of how and why each social media characteristic can deliver a positive impact and its relevance to co-creation in NPD is of particular value. A deeper knowledge of these specific characteristics provides guidelines on the features of social media that brands should seek to leverage in the design of co-creation experiences.

Categorising the high-level impact of social media on the co-creation-NPD relationship (through impact themes) contributes an understanding of the potential outcomes of social media enabled co-creation experiences. Essentially, a knowledge of the social media characteristics guides how social media can be used in the design of co-creation experiences. The social media impact themes explore the impact or outcome of social media enabled co-creation experiences. This contributes a deeper

understanding of the impact of social media on the co-creation-NPD relationship. This supports the role of social media in enabling co-creation; through a deeper knowledge of the impact that social media can deliver in co-creation in NPD. Consequently, social media forms a key construct of the proposed framework, as an enabler of co-creation and in impacting the co-creation-NPD relationship.

7.4.4 High-level Impact on NPD Competences/Competitive Impact

The proposed framework conceptualises value creation through social media enabled co-creation experiences. This is driven by the notion that co-creation is a value maximising approach to value creation in respect to delivering competitive products and valuable experiences. The final construct of the proposed framework is concerned with the outcome of social media enabled co-creation experiences. This is signified by the interconnected relationships of co-creation, NPD and social media in enhancing the competences of a brand in respect to an NPD project.

This is underpinned by the identification of high-level impact themes of co-creation on NPD, contributing a profound knowledge of how co-creation can deliver an impact throughout the NPD lifecycle. The high-level impact also categorises the need to develop valuable experiences alongside tangible products (new experience development). The research findings support the competence enhancing nature of co-creation on NPD and provide a deeper insight into how and why co-creation delivers a high-level impact.

As a construct of the proposed framework, the high-level impact is delivered through the effective design of co-creation experiences, the use of social media to enable co-creation and the co-creation of products and valuable experiences in tandem. A greater knowledge of the high-level impact of co-creation provides the opportunity to conceptualise the potential competitive impact of co-creation, through exploring the links between the impact themes and NPD CSFs.

The discussion to this point outlines the key constructs and considerations in respect to the proposed framework. This results from the research findings and their implications in relation to the research aim. The conceptual framework is displayed in Figure 7.8 (overleaf).

Figure 7.8: Framework for social media enabled co-creation

Social Media
(Characteristics of VCC's and DESN's)

Engaging

Engaging

Enabling

Creating

Creating

Brand Perspective
(Brand Co-creation Factors)

Collaborating

Consumer Perspective
(Consumer Co-creation Factors)

Collaborating

New Product Development
Highly relevant, need-reducing and competitive solutions

Upfront Homework | Ideation | Feasibility | Development | Testing | Launch

New Experience Development
(1) Creating unique co-creation experiences
(2) Delivering valuable product experiences

Impacting

Enhanced NPD Competences/ Competitive Impact
(High-level Impact/ NPD Critical success factors)

The proposed framework outlines the interconnected relationships between co-creation, NPD and social media, as validated and expanded upon through empirical research. This is grounded on the research findings and the discussion of their implications in respect to the research aim. The framework proposes a new approach to value creation, guided by the core principles of the co-creation paradigm and research findings. This signifies how value is created (i.e. value creation network). To adopt this approach to value creation, both brands and consumers are necessary collaborators in the co-creation of value (i.e. who is responsible for value creation). To enable this approach, social media is included as efficient and effective platform to facilitate interaction and collaboration (i.e. the platform used to enable co-creation). The result of this is the enhancement of a brand's NPD competences and potentially a competitive impact (i.e. the outcome of social media enabled co-creation). The proposed framework is derived from the research findings, and resolves the relationships between co-creation, NPD and social media in response to the research aim.

The proposed framework is underpinned by the discussion in this chapter, specifically the expanded taxonomies of co-creation factors, social media characteristics and high-level impact of co-creation on NPD. The framework is constructed exclusively in the lens of a co-creation approach to NPD. This is signified by a collaborative approach to NPD through the interaction and partnership of brands and consumers (value creation network) – the corresponding relationships are termed *'collaborating'*. This stipulates that brands and consumers should collaborate in the co-creation of value through experience networks.

The co-creation-NPD relationship is characterised by the NPD lifecycle and NED lifecycle. The NPD lifecycle is underpinned by six stages, signifying that co-creation can and should occur at each stage of the NPD lifecycle, promoting a complete co-creation approach. The NED lifecycle runs in tandem with the NPD lifecycle, this signifies that experiences should be developed alongside the tangible end product and be a formal component of a brand's value creation process. This aspect of the framework is denoted as *'creating'* and is the process of brands and consumers collaborating in the creation of value.

Social media is embodied by the characteristics of DESNs and VCCs, and is an enabler of co-creation. Social media facilitates communication and exchange between brands and consumers; this is evident by the relationships between social media and each stakeholder

perspective (*'engaging'*). This signifies social media as platform to foster interaction and involvement between brand and consumer. The bidirectional nature of these relationships signifies that social media fosters two-way interaction between brands and consumers.

In addition, social media impacts the co-creation-NPD relationship at a high-level. This is in relation to the use of social media in the design and managing of co-creation experiences, as supported by the discussion of the social media impact themes. This relationship outlines the high-level connection between social media and co-creation in NPD. This is termed *'enabling'* and signifies the role of social media in enabling co-creation in NPD.

The outcome of this collaborative approach to NPD is a competitive impact in respect to a high-level impact of co-creation on NPD and the commercial success of products (brand perspective). This results from the effective design of co-creation experiences enabled by social media. Accordingly, this relationship is termed *'impacting'.* This is built on the co-creation impact themes and their link to NPD CSFs.

The framework outlines the relationships between co-creation, NPD and social media as validated and explored through the empirical research. The key constructs of the framework have been defined and discussed throughout this chapter. The discussion in this chapter outlines the research findings and applicable knowledge on which to guide the design of social media enabled co-creation experiences. The proposed framework also details the potential impact/outcome of the relationships. It must be used in tandem with the deep knowledge of each relationship contributed throughout this chapter. The research provides the grounds on which to design effective co-creation experiences, through exploring the research topic in context. This is valuable in outlining the key considerations of the design of a co-creation experience, the most significant factors brands and consumers are likely to experience, the ways in which social media can be leveraged to deliver an impact, and the potential impact on a brand's competences and commercial success of a product.

7.5 Chapter Summary

This chapter discussed the implications of the research findings in respect to the research aim. The research findings and relating discussion contribute to both the theoretical and

practical perspective in respect to co-creation in NPD. The key contributions of this chapter are outlined below:

Co-creation experience design: Effective co-creation experience design is vital to promote a complete co-creation approach. The research findings contribute a deep insight into the fundamental factors that drive and inhibit both brands and consumers in co-creation. To provide greater practical contributions the discussion in this chapter deliberates on the key components of an effective co-creation experience design, combining the research findings, existing research, use of interactive platforms, and the important of context in guiding the use of the research findings.

Competitive impact: In relation to the overall research aim, this chapter explores the high-level impact of co-creation on NPD competences further, discussing the significance of the research findings. Additionally, the researcher identified the opportunity to conceptualise the link between the co-creation impact themes and the factors that underpin NPD success (NPD CSFs). This provides a deeper insight into the competitive impact of co-creation in NPD, formalising the link between co-creation and NPD.

Value creation network: Through the research it emerged there was a lack of existing frameworks capable of conceptualising the co-creation of value in respect to both the dimensions of product and experience development. To refocus the research area and ensure the meta-theoretical principles of co-creation are implemented, the creation of a value creation network introduces new experience development as a formal component of value creation. This is vital in ensuring a focus on interactional creation and provides a reference point to ensure co-creation is implemented in line with the theoretical underpinnings.

Practical framework; The results were used in a framework, which illustrates the relationships between NPD, co-creation and social media. The framework is based, therefore, on the outcomes of this research and uses all of the building blocks (relevant taxonomies) that were tested explored, validated and expanded through the empirical work. The framework resolves the interconnected relationships between co-creation, NPD and social media, and provides a blueprint on which to guide the implementation of social media enabled co-creation experiences.

Discussion

The next chapter, Chapter 8 will provide conclusions and make recommendations for further research.

Chapter 8: Recommendations and Conclusions

8.1 Introduction

This chapter presents the conclusions and recommendations of the research. The chapter provides an overall summary of the major findings resulting from this study, and highlights the key conclusions derived from it. As an exploratory study, the research aim to deliver a greater fundamental knowledge of the impact of co-creation in enhancing NPD competences and the role of social media in enabling co-creation. The early discussion in this thesis highlights the lack of research in respect to the interconnected relationships between NPD, co-creation and social media.

In addition, this research seeks to extend the existing literature, providing practical contributions upon which the core principles of co-creation can be implemented in real life NPD scenarios. A large portion of prior 'co-creation based' studies deviate from the meta-theoretical principles of co-creation by focusing on either the concept of co-production or value-in-use (Ranjan and Read, 2014). This study seeks to refocus the research area, focusing on the notion of interactional creation and unifying these two perspectives of co-creation (Ramaswamy and Ozcan, 2018). The outcomes of this research enrich the literature and provide practical contributions with which the meta-theoretical principles of co-creation can be implemented.

8.2 Key Findings

This study remained exploratory in nature and, as is the case with most empirical studies, it provided significant contributions, despite its various limitations. First, the study, being one of very few previously attempted, examined the research topic from both the brand and consumer perspectives, this approach enhances both the theoretical perspective and provides practical contributions to guide the implementation of social media enabled co-creation experiences.

The research explored the interconnected relationships between co-creation, NPD and social media. In exploring the high-level linkages between the research elements, the data collection and analysis identified, validated and explored the relevant characteristics and factors, and identified key themes in respect to the relationships between co-creation, NPD

and social media. The result is a deep understanding of how and why the research elements impact one another and the potential outcomes of social media in enabling co-creation in NPD. The key findings are outlined below:

Taxonomy of Brand co-creation factors/ Brand co-creation factors across the NPD lifecycle: These represent the fundamental factors that drive and inhibit brands from co-creation, validated and expanded through the empirical investigation. The brand co-creation factors are explored further by examining the set of relationships between them and the NPD lifecycle. This contributes an understanding of potential co-creation-NPD scenarios by outlining the set of relationships between the brand co-creation factors and the stages of the NPD lifecycle. This provides significant contributions to the design of effective co-creation experiences to promote a complete co-creation approach.

Taxonomy of Consumer co-creation factors: These represent the fundamental factors that drive and inhibit consumers from co-creation validated and expanded through the empirical investigation. The degree of emphasis placed on the consumer co-creation factors is analysed to describe the heterogenous nature of the consumers. From this design implication emerge promoting a multi-pronged co-creation experience design to ensure consumers are empowered and motivate to collaborate with brands.

Taxonomy of Social media characteristics: These represent the characteristics of DESNs and VCCs that enable co-creation, validated and expanded through the empirical investigation. This provides a deep insight into the specific characteristics of social media that enable co-creation and provides a blueprint of characteristics that can be leveraged to enable co-creation.

Co-creation impact themes: The co-creation impact themes resolve the specific ways co-creation can enhance NPD competences, This directly relates to the research aim ad contributes a greater fundamental knowledge of the relationship between co-creation and NPD. The enriches the existing literature, detailing exactly how and why co-creation is a competence enhancing approach to NPD, contributing a clear link between co-creation and the activities associated with NPD.

Social Media impact themes: The social media impact themes effectively resolve the impact of social media on the co-creation-NPD relationship. The categorisation and discussion of these themes outline the specific ways how and why social media enables co-creation and can deliver a positive impact on co-creation in NPD.

Value creation network: The conceptualisation of a value creation network unifies the two perspectives of co-creation to ensure a focus on both new product development and new experience development. This introduces new experience development as a formal component of value creation to ensure that going forward, a focus is maintained on interactional creation. The value creation network is an evolution of traditional value creation theory, embodying the core principles of co-creation and the fundamental shift in value creation.

Conceptual link between co-creation and NPD CSFs: The research explores the competitive impact of co-creation by examining the research findings against existing NPD literature. The outcome of this are conceptual links between the impacts of co-creation and the factors that underpin NPD success. This provides an early indication of the competitive impact of co-creation in NPD and provides fertile ground for future research.

Components of effective co-creation experience design: In line with the aim to deliver practical contributions, the discussion and framework of the components of an effective co-creation experience design outline the significance of the research findings, existing research, interactive platforms and the unique requirements of a brand in respect to an NPD project. This provides an integrated perspective of the components that make up the design of an effective co-creation experience as the first step in a high-level impact of co-creation on NPD.

Practical framework for social media enabled co-creation experiences: The practical framework guides the implementation of social media enabled co-creation experiences, underpinned by the research findings. The framework combines each aspect of the research findings into a holistic, integrated perspective, resolving the interconnected relationships between co-creation, NPD and social media. The underlying discussion and findings relating to each aspect of the framework contribute to the literature and provide practical contributions in line with the initial aims and intentions of the research.

Figure 8.1 (overleaf) summarises the key findings of the research. From the top down, social media is regarded as an enabler of co-creation, as explored through the validation and expansion of the taxonomy of social media characteristics and the emerging themes regarding the impact of social media on co-creation. The social media impact themes focus exclusively on the impact of social media on the co-creation-NPD relationship. Of significance is knowledge of the use of social media to design and manage co-creation experiences and the effect of this in driving the degree of co-creation.

Figure 8.1: Summary of research findings
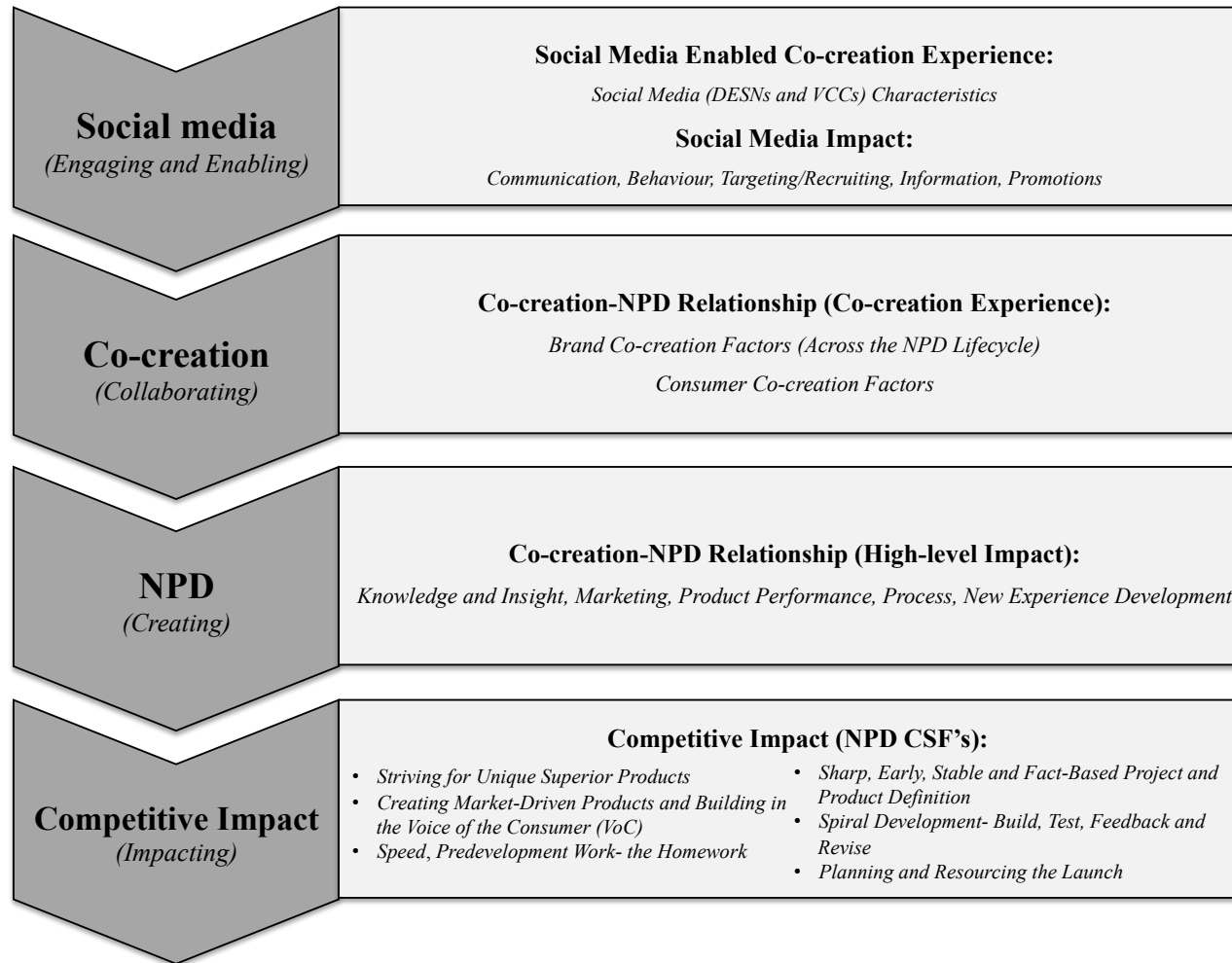
Figure 8.1 provides a summary of the key findings of the research, outlining the relevant aspects of each research element in respect to the overall research aim. The discussion throughout Chapter 7 explored the role of co-creation in enhancing NPD competences and the impact of social media in enabling co-creation. It uncovered vital knowledge in respect to the design of co-creation experiences, both in overcoming challenges to a complete co-creation approach and in using social media as an engagement platform.

Co-creation is denoted as collaboration between the brand and consumer in the pursuit of value creation. This aspect is underpinned by the exploration of co-creation factors, and their impact on the degree of co-creation. This part of the discussion outlined the contextual factors that both brands and consumers face, how this impacts their co-creation participation, and the implications of this on the design of co-creation experiences.

NPD is the process of value creation (termed creating) through tangible products and valuable experiences (new experience development). The relevant discussion outlines the effect of co-creation on NPD, and the ways in which co-creation impacts the NPD lifecycle. This characterises the high-level relationship between co-creation and NPD, through an in depth understanding of how and why co-creation impacts NPD.

Finally, the outcome of complete co-creation is signified through the high-level and competitive impact (NPD CSFs). This is explored through linking the co-creation impacts and NPD CSFs, specifically the role of co-creation in achieving goals associated with these CSFs. This aspect of the discussion leverages the insight gained from the data collection and analysis to explore the role of co-creation in delivering a competitive impact in NPD.

8.3 Research Questions

The investigation was guided by a number of research questions. To assess the extent to which the research achieves the aim, the following discussion outlines the key contributions in respect to each research question.

What are the key factors in driving both brands and consumers to co-create in NPD?/ What are the key factors inhibiting both brands and consumers from co-creating in NPD?

The data collection and analysis present expanded taxonomies of brand and consumer co-creation factors. These characterise the fundamental driving and inhibiting factors of co-creation from both the brand and consumer perspective. These taxonomies result from the empirical investigation, validated by the experience of brands and consumers in real life co-creation-NPD scenarios.

In addition to characterising these factors, the research contributes a deep understanding of each factor I context, enriching the existing literature and providing valuable knowledge to guide practical contributions.

How does the significance of the co-creation factors vary across the NPD lifecycle from the perspective of brands?

The analysis in Chapter 5 utilises morphological analysis principles to explore the set of relationships between the brand co-creation factors and the stages of the NPD lifecycle. The outcome of this is a set of potential co-creation-NPD scenarios outlining the most significant co-creation factors at each stage of NPD. This contributes a deep insight into the factors to be considered in the design of effective co-creation experiences. This is of significance in both enriching the existing literature and in providing practical contributions. The aim of this is to provide tools to guide the implementation of a complete co-creation approach as the first step in achieving a high-level impact of co-creation on NPD competences.

How does co-creation deliver a competitive impact in NPD?

Through the analysis of the brand perspective, several high-level impact themes emerge regarding the relationship between co-creation and NPD. These are valuable in elucidating the high-level impact of co-creation on NPD, particularly the reasons as to how and why co-creation can deliver a competitive impact. In addition, the researcher recognised the opportunity to link the research findings to the NPD CSF, creating a formal link between co-creation and the success of an NPD project.

What are the key characteristics of social media in enabling co-creation?

The data collection an analysis delivers an expanded taxonomy of social media characteristics, typifying the structure of social media and behaviours of social media users that enable co-creation. These present the characteristics that deliver a positive impact on the co-creation-NPD relationship. This is valuable in contributing a deep insight into the specific ways how and why social media enables co-creation, and in guiding the design of social media enabled co-creation experiences.

How does social media positively impact the co-creation-NPD relationship?

Through the analysis of the brand perspective, several social media impact themes emerge regarding the impact of social media on co-creation in NPD. The impact themes detail the potential for the proper application and use of social media to impact co-creation in NPD. This insight and supporting discussion contribute a deep understanding of how the use of social media to enable co-creation can deliver a tangible impact. This is a significant contribution resolving the interconnected relationships between social media, co-creation and NPD, detailing how and why social media enable and can deliver an impact on co-creation.

8.4 Novelty and Contribution

Theoretical contribution: this study has made a major contribution and added to the current body of knowledge by exploring the gap between three existing bodies of literature (NPD, co-creation and social media) through exploratory, empirical research. Primarily, this was achieved through highlighting the relevance and interaction of the NPD lifecycle, co-creation factors and social media characteristics in the context of the consumer goods industry.

Furthermore, various updates from previous studies were provided through this study and new considerations were added in a more significant manner. This study also examined a very large body of relevant literature and unified diverse schools of thought in an integrated perspective. For instance, the study built on traditional NPD literature, creating a link between the NPD lifecycle and the specific impacts of co-creation to explore the role of co-creation in enhancing NPD competences. Similarly, a focus on the co-creation literature in respect to the design of co-creation experiences was then used to apply the areas of social media structure and the behaviours of social media users, exploring the role of social media in enabling co-

creation. The study also integrated the perspective of key-stakeholder orientation by exploring the research topic from the perspectives of both brands and consumers.

The study enriches the existing literature by exploring the meta-theoretical principles of co-creation in NPD and contributing a more mid-range perspective of how to employ these principles in practice. This is evident through the contribution of co-creation factors, social media characteristics, co-creation impact themes and social media impact themes.

Contribution through Research Design: The case study strategy used various data sources in the triangulation of data, and enriched the level of understanding of the impact of co-creation in enhancing NPD competences, and social media in enabling co-creation, in the context of the consumer goods industry. Such an approach allowed the investigation to gain an insight into newly emerging dimensions. This led to a better understanding and a deeper knowledge of how individual factors impact the co-creation-NPD relationship, how specific social media characteristics enable co-creation and the interconnected relationships between NPD, co-creation and social media.

A further contribution made by the study can be seen in the development of a unique research design for exploring social media and co-creation in consumer goods, from both the brand and consumer perspective. This can be seen through the reliance on social media platforms (LinkedIn and virtual consumer communities) to sample and target interview participants. This method allowed the researcher to collect data from geographically dispersed individuals, integrating knowledge from different geographies into the research findings.

The use of social media to target/recruit participants and conduct data collection is a particularly novel facet of the research design. It is quite an interesting observation that social media itself in fact enabled a research project focusing on social media to enable co-creation. Moreover, Chapter 4 outlines the difficulties in identifying subject matter experts (co-creation specialists and industry practitioners) through traditional methods. Social media was pivotal in providing the tools with which the researcher was able to identify and reach out to those with valuable knowledge regarding this research project. Additionally, using social media to collect data on a global level allowed the research to overcome a number of difficulties typically associated with research. For instance, access to data (as the research had potential access to a

global pool of participants) and travel costs/time restraints (as data was primarily collected through digital technologies) were not as significant as impediments. This approach to data collection also allowed for the interactivity, rich and spontaneous communication apparent in face-to-face interviews whilst allowing data collection from geographically dispersed individuals.

The design of the research method was done in stages so as to allow learning, reflection, correction, enhancement and testing. In a unique manner, collecting data from both the brand and consumer perspective was extremely beneficial in providing a holistic understanding of the research topic and also in providing brands with guidance on the design of effective co-creation experiences. The use of multiple participants for each perspective also helped build a holistic knowledge of the research context from the unique experiences of each participant, mobilising knowledge across perspectives, and identifying the key themes in respect to the impact of the research elements upon one another. Lastly, the freedom of semi-structured interviews and a focus on data saturation was in line with a lifecycle perspective of managing the research, constantly reflecting, modifying and updating, so as to lead to the expected outcomes.

Practical contribution: this study is of high relevance to organisations operating in the consumer goods industry regardless of size or scale. Furthermore, the study provides considerable insight into the conceptual side of social media enabled co-creation through the rigorous and up-to-date review of the literature from the point of view of principles and techniques, and the various challenges and obstacles highlighted through other studies.

The study provides a deep insight into the complexity of designing effective co-creation experiences, outlining the potential costs and benefits to both brands and consumers, and the likely co-creation-NPD scenarios brands face throughout the NPD lifecycle. The use and impact of social media in enabling co-creation is apparent though the research findings and the specific ways that social media platforms can be used to design and manage co-creation experiences were outlined. The taxonomies of co-creation factors and social media characteristics were finalised through validation, and expanded through contextual knowledge, these have been accumulated in the proposed framework for social media enabled co-creation experiences.

The framework itself is a blueprint that could be easily implemented in various organisations operating in the consumer goods industry. It is practical, pragmatic and extensively based on a flexible approach that will allow any organisation to customise and guide their value creation processes to suit individual cultures.

To further provide practical contributions, Table 8.1 (overleaf) outlines the axioms of co-creation. This presents a practical guideline of how to view value-creation, and the core principles brands and those within them should follow to put the findings of this research into practice.

Table 8.1 outlines two dimensions of value creation, New Product Development (NPD) and New Experience Development (NED). From the onset this specifies how value should be considered by those within brands. The fundamental principles of each dimension of value creation are explained through two premises, outlining the impact of co-creation both in respect to a tangible product and a valuable experience. The guidelines outlined in Table 8.1 provide several initial deliberations brands should consider guiding their value-creating processes. The explanation of these guidelines further elucidates the importance of each guideline in respect to co-creation and ultimately the success of an organisation.

Table 8.1 provides a simple, actionable and transferable blueprint with which brands can begin to guide their co-creation approach. This presents a simplified version of the research findings in the aim to contribute an easy to digest, and easy to use guideline driving the growth of co-creation in NPD.

Table 8.1: Axoms of Co-creation

Axioms of Co-creation			
Dimension of value creation	Premise	Guidelines	Explanation
New Product Development (NPD)	*Effective co-creation experiences __WILL__ deliver productivity/efficiency gains and a competitive/need reducing product*	Co-create with consumers throughout the NPD lifecycle	• Consumer knowledge is an operant resource, co-creation ensures the product functions and features meet the needs of the market
		Develop the experience alongside the product	• The NPD project should be guided by an understanding of the consumers expectations to both the product __AND__ experience
		Develop a co-creation strategy	• How does co-creation fit in with existing value-creation processes? • How will co-creation align with the requirements of a specific NPD project?
		Design effective co-creation experiences	• What are the drivers we are looking to promote? • What potential inhibitors will manifest? • How are we going to promote the total set of consumer drivers? • How are we going to minimize the total set of consumer inhibitors? • What are the most appropriate engagement channels at each stage of the NPD Lifecyle?
New Experience Development (NED)	*Experience __IS__ the new vector of competition*	Shift the mind-set!	• Focus on interaction and involvement • View the product as a mechanism to deliver valuable experiences
		Interact on an on-going basis	• There is no beginning and no end to the consumer experience • Focus on delivering valuable experiences before, during and after an NPD project
		Leverage digital technologies	• Promote the co-creation of valuable experiences across multiple channels and touchpoints
		Focus on the mutual creation of value	• Empower consumers to co-create their own unique co-creation experience; the value they derive will translate to the success of the product and brand

8.5 Limitations of the Study

This study is exploratory in nature and as such, similar to other research projects, is anticipated to have several limitations. In addition to the most recognisable aspects of time and access to information, these included in particular; the consumer goods context and also difficulty in gaining access to resources for widening the empirical examination and the data collection. Finally, the major limitation perhaps is the generalisability of the outcomes. Care and attention were given from the onset in order to minimise the risks of diluting the results of the research, and to structure it in such a way as to maximise the benefits emerging from the key findings, and to ensure that the outcomes would serve a positive purpose.

The open-ended nature of exploratory and qualitative research means that the researcher was unable to verify the results objectively against the scenarios outlined by the participants. Additionally, the complex nature of the research topic bears a risk of non-consistent conclusions. However, the analysis approach of individual participant analysis and then mobilising the collective knowledge through comparisons across the data sets provides a holistic understanding of potential co-creation-NPD scenarios, based on contextual knowledge and relates directly to the research aim.

To cater for these limitations and ensure the research method provided the best means through which to check the objectives and answer the research questions, the literature was regularly updated. This enabled the researcher to consider any emerging and relevant research outcomes, to preserve the value of the research and the appropriateness and usefulness of its outcomes.

Various challenges emerged in trying to select appropriate participants for the case study approach, as there were very few published reports or case studies that could create a positive foundation for study. A key limitation is in the sense that the number of interviews conducted were small and scattered across different countries. However, the evidence from brand perspective participants who had developed expertise over a range of brands and consumer perspective participants having co-created with multiple brands is recognised to add depth and validity to the research findings. Selection of the interview participants was based on knowledge acquired through different sources outlining their expertise, and on the usefulness of participation and contribution to the study. Access always remained a challenge and,

in some instances, a significant amount of time was spent waiting for interviews to be approved and timescales to be agreed upon.

An initial concern of the researcher was the risk of positive bias, with the research participants only discussing social media and co-creation in a positive light. However, through the research findings, it became apparent that this was not the case with brand perspective participants discussing failed co-creation projects, and consumer perspective participants discussing the reasons as to why they no longer wished to co-create with brands.

Moreover, as the research focus is on NPD, it is common for brands to approach the subject with a certain level of hesitation or secrecy to protect their proprietary knowledge. This was evident through a hesitation to discuss specific NPD activities, both from subject matter experts (brand perspective) and from consumer co-creators (those who were actively collaborating with brands and had some form of IP agreement) at the time the interviews were undertaken.

The time frame was one of the main constraints, in particular, time allocated for exploring the research topic from both the brand and consumer perspective. In respect to the brand perspective, identifying subject matter experts was particularly challenging. Co-creation is a relatively new phenomenon in innovation management; there are few brands that have co-creation-dedicated roles. As a result, identifying individuals with extensive co-creation experience was not easy. This required a significant investment in time, energy and effort in identifying and contacting potential participants, and ongoing dialogue to arrange interviews. Additionally, as the research design specified interviews with subject matter experts (i.e. senior management in large consumer goods brands), in some instances, participants placed time restraints on the interviews and in some cases the level of information received was limited.

In respect to the consumer perspective, as participation offered little in the way of a tangible reward, gaining a positive response from consumer co-creators was a significant challenge in arranging interviews. In the end, the results were positively encouraging, but at the cost of a huge investment of time and effort.

8.6 Recommendations for Future Research

This research at the very least provides fertile ground for new studies that are interested in further examining the role of co-creation in enhancing NPD competences

and social media to enable co-creation. Several useful directions for future research can be proposed:

- To empirically test and refine the proposed framework for social media enabled co-creation to further explore the interconnected relationships between NPD, co-creation and social media. Specifically looking at the interdependency and interrelatedness between social media, co-creation and NPD success.

- Exploring the proposed framework through a focus on alternative social media platforms to provide greater design implications in incorporating holistic, social-media-based strategies in the design of co-creation experiences.

- Exploring the proposed framework across a range of industry sectors to determine its appropriateness and generalisability. With the aim to expand and build a holistic cross-industry framework for brand-consumer co-creation enabled by social media.

- To explore the potential for designing brand-specific, co-creation-based consumer communities and the key characteristics of these to enable a complete co-creation approach.

- This research focuses primarily on social media as the primary engagement channel in the design of co-creation experiences. It would be possible for future research to explore the most appropriate engagement channels across the NPD lifecycle, to build a multi-channel model for implementing complete co-creation experiences.

- Future research could undertake a deeper study into the creation and delivery of value through unique and customisable experiences, outlining criteria for measuring experiential value both from the brand and consumer perspectives.

- It would be interesting to test the relationship between the impact of co-creation on NPD and the NPD CSFs. This could be done by exploring this relationship through empirical data, exploring the attitudes of those within brands on the ways in which co-creation supports goals associated with NPD CSFs.

- A longitudinal perspective could look at the implementation and resultant competitive impact of social media enabled co-creation experiences. This includes a focus on quantitative data to enumerate the competitive impact of using social media to enable co-creation, based on key metrics of new product performance.

- The proposed model could form the basis for creating a more comprehensive blue print that will have a range of toolkits and checklists for organisations to design effective co-creation experiences. This would entail detailed implementation methodology using a range of engagement platforms (including social media) and the roadmap would support organisations in adopting a complete co-creation approach.

8.7 Conclusion

This study comprised an attempt to explore the interconnected relationships between NPD, co-creation and social media in the consumer goods industry. Of specific focus was the role of co-creation in enhancing NPD competences and the impact of social media in enabling co-creation. It focused on building a holistic view of the benefits and challenges to the value maximising (complete co-creation) approach to NPD, and the role of social media in enabling this approach. This was achieved through a comprehensive examination of the existing literature, building taxonomies of co-creation factors and social media characteristics, and conceptualising the interconnected relationship between NPD, co-creation and social media.

The research findings validated and expanded the taxonomies of co-creation factors and social media characteristics through collecting data from the brand and consumer perspective. A greater focus was given to the brand perspective in respect to the design of co-creation experiences, the impact of co-creation in NPD, and the role of social media in enabling co-creation. The research findings accurately convey the relevant factors and characteristics experienced by brands and consumers, and identify the high-level impacts between social media and co-creation, and co-creation and NPD. The range of impact themes are of a tangible direct relevance to practitioners, resolving the relationships between the research elements and providing guidance in the design of effective co-creation experiences. Additionally, the research findings provide an intangible contribution to the body of knowledge and to research design.

The current study addresses widely under-researched phenomena, providing several original aspects of the current study that make it a useful reference for other researchers, but also make its outcomes desirable in the context of co-creation in consumer goods. As social media continues to grow and the co-creation approach becomes increasingly ingrained in the culture of brands, it will be appropriate for

organisations to consider closely the competence enhancing nature of co-creation and the significance of social media in enabling co-creation experiences. This includes the philosophical relevance of implementing a complete co-creation approach to value creation, and the deliverable impact in building NPD competences, new product success, and addressing the fundamental changes in markets and the wider business environment.

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Appendices

Appendix I: Brand Driving Factors, Interview reactions

Brand Participant B:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• Ideas are cheap and worthless, there are an infinite number of them • If you're asking people for their ideas you don't necessarily need to them
BD2: Outsourcing of NPD efforts	• Consumers can give mock-ups of new products • Consumers can invent new products • Ideation is all about quantity and then clustering and prioritising, and your community can help you do all three of those things
BD3: Greater solution information	• Co-creation is market research and insight gathering • You can never discount the possibility that consumers can come up with a radical/startlingly new idea • In some cases the consumer knows the business more than the employees • Co-creation gives you access to more ideas, better ideas, access to more diverse perspectives & access to real time feedback • Co-creation is vital in problem definition and identifying unmet needs; Sometimes when you just ask people to talk about, they can either inadvertently or sometimes deliberately share something that is really quite revealing or interesting • You can squeeze out a lot of interesting problems to solve which perhaps you weren't overtly aware of (with a bigger community)
BD 4: Reduced risk of product failure	• When it works it absolutely results in more successful innovation • It gives you real market data on what people want to buy • Brands can do online concept testing
BD 6: Faster speed-to-market	• If done well it means you go down fewer blind allies and you do stuff better, faster and cheaper • Our client said they got a year worth of consumer insight data in a 3-week project. If done well, a co-creation community can save time or money • It can be much more efficient and cost effective; Access to real time feedback
BD 9: Better appreciation of the product	• Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector
BD 10: Strengthening of brand-consumer relationship	• Co-creation is about building a community around your brand or product; It definitely is about building a close relationship with the customer • Brands develop a more meaningful, two-way relationship with consumers • Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector)
BD 11: Positive attitudes toward the product	• Co-creation is useful in pre-marketing products • It's all about marketing, word of mouth, more brand loyalty and customer loyalty
BD 12: Post launch gains	• Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector) • It's all about marketing, word of mouth, more brand loyalty and customer loyalty
BD 13: Closer market fit	• Co-creation is about actually listening to what consumers care about, what they need, responding to them • You can get really quantitative data on what customers want
BD 14: Higher commercial potential	• Because consumers are involved in the process, you've got a target community that you can then sell to and that are more likely to buy from you • Every single co-created product launched (by a specific brand) has sold out • Co-creation can deliver improvement in terms of the success of new product launches • If you give consumers an experience or the opportunity to tell stories that's really powerful marketing • It's all about marketing, word of mouth, more brand loyalty and customer loyalty
BD 15: High expectations and novelty	• Co-create the marketing campaign that goes with the product and other aspects of the business, generally more outward facing aspects
BD 16: Resource Impact	• If done well it means you go down fewer blind allies and you do stuff better, faster and cheaper
BD 18: User Experience	• The brand forces consumers to be hands on in development because that's all part of the experience • We all like to have more than just a product, some kind of experience that sits around it

Brand Participant C:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• You don't have to pay consumers; You can now get much better impact by not necessarily spending a lot of money
BD2: Outsourcing of NPD efforts	• We did a lot of ideation work around a product in Shanghai, in Brazil, the US, and in Europe • Send consumers briefs and they come back with ideas or virtual prototypes • Bring some managers and marketers from within your organisation and run a workshop with consumers to try and understand new product ideas • Co-creation is the only way forward in ideation, either bring people in or be part of the community • Consumers give you ideas in response to a brief
BD3: Greater solution information	• The whole construct of insight development or insights building has changed fundamentally • Get consumers into the process as early as possible to help deliver the kind of products that they really and truly need and want • Co-creation contests gave me 1 million consumers who I could communicate with it at validating the prototype stage • Co-creation lets you track people's adoption, challenges in respect to using the product and also understand some of the emotional issues going on • Co-creation informed both product development, future packaging, structural development and also communication • Consumers with a genuine cultural appreciation of the category are much more creative and can come up with ideas • Co-creation gives you helps develop insight and provides databanks, it allows you to look at some of the insights and see how you can collide them with other categories • Tap into people and they give you ideas in response to a brief. This can spawn the next stage (feasibility), refine and convert those into concepts
BD 4: Reduced risk of product failure	• Co-creators provide feedback when the early bundles are being created; Co-creation through social media helps validate the prelaunch bundles • You don't always need to have a fully finished product to put into markets, you can you can do test and learn through direct to consumer (D2C) which lowers the risk in terms of success when you launch the product • You can get feedback around the product functionality; it is the most efficient way of assessing failure (test and learn) • The last thing that you would want to do is to ask people within your organisation what new ideas they want to develop, they give you the things that they have thought, which do not necessarily have any relevance to the real-world
BD 5: Leagile manufacturing	• Co-creation gives you helps develop insight and provides databanks, when you want to dive into an adjacent project, it allows you to look at some of the insights and see how you can collide them with other categories
BD 6: Faster speed-to-market	• The test and learn approach gives you feedback right away
BD 7: Greater consumer understanding of NPD Process	• Once your product is at a prototype stage you can use a platform to allow consumers to buy it, the product becomes accessible to a lot of people but they have accept that its not in its fully finished form (early adopters, feedback on functionality and marketing)
BD 8: Adjustments of consumer preferences	• The consumer target has become more diffuse, no longer structured by simple demographics, there is more fragmentation and personalisation • Co-creation was used in the repositioning of a product to repositions it as less 'blokey' and make the product more appealing to everyone • We used groups of product dissenters, so people who weren't really into the product but liked certain characteristics in NPD
BD 9: Better appreciation of the product	• If you bring them (consumers) on the journey early on they become strong, strong, advocates • Co-creation allows insight into how consumers use the product and if they had positive experiences
BD 10: Strengthening of brand-consumer relationship	• If you bring them (consumers) on the journey early on they become strong, strong, advocates. • Co-creators have this sense of satisfaction of being involved in the development, they look on with pride, at the brand or product being successful • Advocacy reach is crucial especially in the early stages of the product launch
BD 11: Positive attitudes toward the product	• Consumers who have co-created upfront, early on, are the ones who have written blogs about how great the products are • Co-creators have this sense of satisfaction of being involved in the development; they look on with pride, at the brand or product being successful because they have had a hand it • Advocacy reach is crucial especially in the early stages of the product launch
BD 12: Post launch gains	• Consumers who have co-created upfront, early on they are the ones who have written blogs about how great the products are • Advocacy reach is crucial especially in the early stages of the product launch

Appendices

Brand Driving Factor	Factor mentioned in Data
BD 13: Closer market fit	• Co-create with people who use the product, this allows you to understand how people actually use the product, to see how to fix packaging, or fix some of the flavours, or even fix fundamentally the messaging on the pack of how you would use it • By developing a key insights, you'll be thinking much deeper in terms of how can our products better fit consumers' lives • Once your product is at a prototype stage you can use a platform to allow consumers to buy it, the product becomes accessible to a lot of people but they have accept that its not in its fully finished form (early adopters, feedback on functionality and marketing) • During launch, co-creation (consumer feedback) allows you to make slight changes to product characteristics • Get consumers into the process as early as possible to help deliver the kind of products that they really and truly need and want (testing the product, testing the packaging in prototype development) It's a more effective product overall because you get early feedback and you reduce the risk of failure
BD 14: Higher commercial potential	• Co-creation allows you to get true consumer pull in an age where; one the brands aren't relevant any more, and two; people are not defining themselves externally by a brand that they connect with • Co-creators become the early adopters and then became the advocates
BD 15: High expectations and novelty	• The advocacy reach you can gain from co-creation is something you would never get if you pay for it
BD 16: Resource Impact	• Co-created products are cost-effective (look and feel of the product) • Co-creating with a group of consumers can reduce the costs of having to create prototypes over and over again
BD 17: Internal Empowerment	• You are now much closer to consumers or to your target group than ever before, and that really has a huge benefit to fire up the organisation
BD 18: User Experience	• Consumers are adopting more esoteric rolls, they help enrich your life by telling stories, by connecting you to sort of memories or part of your current daily life • The experience of the person using the product is vital (feedback on product characteristics)
BD 19: Limitations of Traditional Methods	• Traditional market research is very much like looking in a rear view mirror (dated from data monitoring, looking historically • Categories are colliding, need states are become blurred so the traditional way of analysing and understanding the marketplace has literally gone out of the window • There is a failure culture (products) and resource constraint which is forcing companies to think smarter, simpler, and quicker ways of testing the market for new ideas • Traditional market research gives you insights filtered by one-way glass mirrors

Brand Participant D:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• Instead of spending millions of dollars on traditional research, go out and really research all of your customers (through co-creation) • The power of what your customers are willing to do on your behalf is a really powerful tool
BD2: Outsourcing of NPD efforts	• Consumers can test it (a product) live in production, if it flies, boom they're out with the new one
BD3: Greater solution information	• Get consumer input to make sure they're getting experiences that are going to be meeting or exceeding expectations • Your customers will tell you what they need, if you both watch them and listen to them • Consumer input is less about articulating what the next product looks like, but they will certainly give you the parameters of what it needs to do • The more data brands have to understand consumers, the quicker they can design products that are going to achieve the particular objective • Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product • Brands have the ability to create communities rapidly, to get feedback from those communities; Consumer feedback is unadulterated feedback
BD 4: Reduced risk of product failure	• Failing fast is really important, consumer feedback allows you to embrace that culture • There has been a real compression in the time that a product has a competitive advantage, you've really got to get it right from the beginning and have the data to get it right (it's all about getting it right, and getting it right quickly) • Co-creation allows brands to get consumer feedback very quickly, so that they have leading indicators as to whether the product is going to be successful (failing fast); Consumers can give feedback on whether a product is going to fly
BD 5: Leagile manufacturing	• Co-creation allows the brand to be responsive and as responsive to needs as others
BD 6: Faster speed-to-market	• The more data brands have to understand consumers the quicker they can design products and services that are going to achieve the objective • The collaboration aspect of co-creation will win out eventually because of the speed and agility with which they need to build in todays environment • In about two or three months they (consumers) came up with a solution that researchers had been working at for years (they gamified it and co-created with consumers) • Traditionally we would have to go do the requirements building phase, go out and interview people, that can all be done much more quickly now because of social media platforms • Social media platforms allow tons of input, allow things like sorting and voting and really rapid production of lists (of requirements) as well as the ranking and the trade off of those requirements, being able to get that very quickly and being able to understand that is a huge advantage • Brands now have the ability to create communities very rapidly, and to be able to get feedback from those communities • The whole model is shifting instead of looking at efficiency from the inside-out, the focus is from the outside-in and making every process efficient
BD 8: Adjustments of consumer preferences	• There's whole new realm of influencers that from a Gen Z and Millennial perspective (we're just starting to understand the implications of that) • The set of expectations is going to change for every organisation that serves some type of product (why will you ever stand in the line again when you can pre order it and walk in and pick it up, and its completely customised to exactly what you need)
BD 9: Better appreciation of the product	• Co-creation is an extension of marketing and sales
BD 10: Strengthening of brand-consumer relationship	• Co-creators are being brand ambassadors
BD 11: Positive attitudes toward the product	• WOM has gone from your closest 30 relatives and friends, to your 3000 person network
BD 12: Post launch gains	• Consumers provide post sales support, questions, comment, feedback or other things
BD 13: Closer market fit	• You have to be able to create products that are customisable to your clients needs and wishes • To be able to customise the experience is going to require you to really understand your consumers expectations, and having them in the loop is really going to help understanding the prototypes
BD 14: Higher commercial potential	• Localisation of the branding and experience has become really important, you have to listen to your customers on what that localisation looks like
BD 16: Resource Impact	• Instead of spending millions of dollars on traditional research, go out and really research all of your customers (through co-creation) • The cost of co-creation has come down because of new technologies, crowdsourcing technologies, open source etc. • Brands are able to flex their spend on mass media to more of this personalised marketing (through a social media platform)
BD 18: User Experience	• The experience really matters, and it matters more and more than price and function and features • Co-create the delivery mechanism, the sales mechanism, the distribution channels, and how the experience that the consumer has (from experiencing the branding all the way through experiencing how they make decisions around the product, this is happening more and more online) • The experience matters so much, this integration of product and experience development and delivery at the same time becomes really fundamental • Talk to consumers about this continual experience reengineering, which is a very outside-in reengineering • The consumer experience matters so much in addition to the product that companies absolutely have to move to a co-creation type of environment • Co-creation gives insight into how consumers are going to experience the product through marketing, or whether it's through packaging, or all the way through consumption and post consumption • Customisation issue is the next stage of co-creation, you have to create products that are entirely customisable, (customisable online before you actually get it, customisable when you actually get it) the trend of customisation is really driving the trend for co-creation • To be able to customise the experience is going to require you to really understand your consumers expectations, and having them in the loop is really going to help understanding the prototypes • More and more of the value is moving toward the experience
BD 19: Limitations of Traditional Methods	• The product and experience have to be built in parallel, organisations have to figure out how to align a much closer relationship between R&D and the experience delivery aspects of product launch going forward • The whole trial and error, and let's create a product and see if it flies days are over • Traditionally only 1 in 8 products (NPD) are successful • The challenge is that consumers expectations of experiences are changing so fast

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Brand Participant E:

Brand Driving Factor	Factor mentioned in Data
BD2: Outsourcing of NPD efforts	• Consumers can build on ideas • Co-creation adds value throughout the NPD lifecycle
BD3: Greater solution information	• Insights developed through co-creation reveal a problem • The hypotheses developed through insights (co-creation) feed ideation • Co-creation can reveal insights that your initial research hadn't identified • Co-creation puts your consumer at the heart of your innovation, therefore you can understand their problems much better • Co-creation gives you more perspective, you get more feedback, and you can come up with a greater amount of concepts • Co-creation is much more interactive, feedback is immediate and more constructive than traditional research • You can build deeper insights and find new angles, it's much easier • It's very valuable to get as much feedback as you can at an early stage • Co-create across the product lifecycle to maximise the value from your NPD
BD 4: Reduced risk of product failure	• Co-creation is vital to validate whether the results of ideation and the insights are correct • You avoids the pitfalls that you get by making an assumption that what you think people want is actually what they want • The test and learn approach is very effective in testing prototypes • Iteration in co-creation allows you to hear feedback and then adapt your offering • Co-creation negates the need for pivots (shuts down concepts that are a complete waste of time) • If you can co-create with consumers earlier, it prevents you from going down the wrong avenue
BD 6: Faster speed-to-market	• Involving your consumers earlier saves time and money, you are more efficient in bringing something to market that people actually want • You're much more likely to get launch quicker, because everyone's in agreement, you're all going in the same direction and so you get a very empowered team (internal empowerment) • Ideation can be done quickly • You get feedback immediately • You can immediately get consumers to test product offerings, you can make a difference very quickly
BD 13: Closer market fit	• Iterative interactions in co-creation allows you to identify a problem area to ensure you deliver the best possible solution
BD 14: Higher commercial potential	• Its quick, easy and cost effective approach to marketing; It can reveal other routes that might be more lucrative
BD 16: Resource Impact	• Traditionally you are wasting an enormous amount of resources; Co-creation in the long run gives a more efficient outcome quicker • In the long run co-creation saves money • It becomes very costly to go too far down an innovation route without having tested something. It would be an ineffective use of you resources to wait until the end when its put all together to test it • You might have to make a lot of investment in terms of line investment. It would be very valuable to get as much feedback as you can at an early stage (reduce investment in plant etc.)
BD 17: Internal Empowerment	• Co-creation can positively impact internally, your team becomes much more collaborative • It's a great way to unify a team who are stakeholders in the business. Direct communication with consumers puts everybody on the same page • You have diverse groups internally (e.g. technical, marketing, R&D) consumer feedback allows everybody within the organisation to come to agreement quicker and a much more efficient organisation • It is very hard to get a success when you have key stakeholders within the business who don't buy into your idea. Whereas if everybody guides that development process and they firmly believe that what they are doing is the right thing, they will be advocates within your organisation. • You have a more empowered team. Co-creation avoids the waste of resources and allows people within the organisation to make a difference immediately • You're much more likely to get it a product to launch quicker, because everyone's in agreement, you're all going in the same direction and so you get a very empowered team (internal empowerment)
BD 19: Limitations of Traditional Methods	• Traditional research is much slower in terms of results than the insights gained through co-creation

Brand Participant F:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• Consumer is an information/idea provider
BD2: Outsourcing of NPD efforts	• Co-create with consumers to develop concepts and ideas with them • Consumer is an information/idea provider, the product then links to their perception, their expectations • Consumer co-creation is useful for verification and validation concepts/bundles
BD3: Greater solution information	• Benefits from involving the people who are going to use the product • Co-creation develops key insights, these are vital to provide direction to come up with concepts/ideas • Consumer is an information/idea provider, the product then links to their perception, their expectations • Co-creation negates the need for pivots in NPD; Consumers are used to verify and to give feedback • Co-created products are highly relevant for the consumer, as they have worked to get the results and have been involved in every major decision • Brands benefit from the information and ideas that the customer can add from his/her own unique perspective • Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts • Co-creation allows avoiding making wrong decisions based on assumptions, and avoids an unnecessary waste of time, money and energy that can lead to conflicts and the outcome that is not fully supported by the intended user groups.
BD 4: Reduced risk of product failure	• Co-creation negates the need for pivots; Consumers are used to verify and to give feedback • Co-created products are more credible to potential end-users, because consumer have co-developed them • Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts • Co-creation has a strong positive impact on the quality of the result; the quality of the output is high and sustainable on all levels • Co-creation allows avoiding making wrong decisions based on assumptions, and avoids an unnecessary waste of time, money and energy that can lead to conflicts and the outcome that is not fully supported by the intended user groups.
BD 5: Leagile manufacturing	• Co-creation negates the need for pivots in NPD; Less loops are required in development
BD 6: Faster speed-to-market	• Co-creation negates the need for pivots in NPD; Less loops are required in development • Co-creation requires more time in the early (research) stages, the overall effect is a quicker NPD lifecycle • Co-creation provides internal alignment/empowerment, reduces time wasted on discussion/debates (market insight) • Co-creation allows you to reach a lot of people quickly
BD 7: Greater consumer understanding of NPD Process	• As consumers are directly involved, they are likely to support the process/ results and take joint ownership of the outcome
BD 8: Adjustments of consumer preferences	• The consumer understands the brand is doing all they can to create an offer that truly matches the customer's needs and wishes
BD 9: Better appreciation of the product	• Co-created products link to the consumers perception and expectations • Co-created products are more credible to potential end-users, because consumer have co-developed them • The consumer understands the brand is doing all they can to create an offer that truly matches the customer's needs and wishes • Complete co-creation guarantees a broad support among the stakeholders, since they are directly involved
BD 10: Strengthening of brand-consumer relationship	• Co-creation throughout the product lifecycle allows the brand to stay close with consumers and understand what's going on • Co-creation allows organisations to develop a better brand that is relevant for your customers and creates more loyalty • The brand and consumer get to really know and trust one another
BD 11: Positive attitudes toward the product	• Co-creation allows organisations to develop a better brand that is relevant for your customers and creates more loyalty • Co-creation creates a marketing and resonance advantage; Consumers will be aware of the value proposition before the results are even tangible • As words spreads (WOM) the brand will experience a 'boost' when introducing the offering to the market • Co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics
BD 12: Post launch gains	• Co-creation throughout the product lifecycle allows the brand to stay close with consumers and understand what's going
BD 13: Closer market fit	• Co-creation develops key insights, these are vital to provide direction to come up with concepts/ideas • Consumers are used to verify and to give feedback • Co-created products are highly relevant for the consumer as they have worked to get the results and have been involved in every major decision • Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts • The result takes into account the perception and interests of consumers and the quality of the output is high and sustainable on all levels • Consumer is an information/idea provider because then it links to their perception, their expectations

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	• The products relevance is more credible to potential end-users
BD 14: Higher commercial potential	• Co-created products are highly attractive for the consumer as they have worked to get the results and have been involved in every major decision • Consumers will be aware of the value proposition before the results are even tangible • As words spreads (WOM) the brand will experience a 'boost' when introducing the offering to the market • Co-creation has a strong positive impact on the quality of the result • Complete co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics
BD 15: High expectations and novelty	• Co-created products are highly attractive for the consumer as they have worked to get the results and have been involved in every major decision • Consumers will be aware of the value proposition before the results are even tangible • As words spreads (WOM) the brand will experience a 'boost' when introducing the offering to the market • Complete Co-Creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics.
BD 16: Resource Impact	• Co-creation has an effect over the whole product lifecycle, you don't need as many resources, you can allocate your funds much more specifically = • Co-creation allows avoiding making wrong decisions based on assumptions, and avoids an unnecessary waste of time, money and energy that can lead to conflicts and the outcome that is not fully supported by the intended user groups. • The complete co-creative process is effective and efficient on a resource level
BD 17: Internal Empowerment	• Co-creation provides internal alignment/empowerment, reduces time wasted on discussion/debates (market insight) • Co-creation allows avoiding making wrong decisions based on assumptions, and avoids an unnecessary waste of time, money and energy that can lead to conflicts and the outcome that is not fully supported by the intended user groups. • True co-creation is highly motivating, from the start it is clear how stakeholders will be organized and everybody has the same mission and vision

Brand Participant G:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• A major global client is going through their ideation co-creation archives (past 5 years) to see if the market is ready for some of these ideas
BD2: Outsourcing of NPD efforts	• You can get a significant volume of feedback, ideas, and insights very quickly. So instead of taking 6-8 weeks in field to do a research project, we can effectively be complete in 7 days, and have reached thousands • Ideas can be sent out to consumer co-creation for enhancement, refinement and improvement.
BD3: Greater solution information	• Leaning in on consumers as experts in a category or in a product segment is the perfect way of getting it straight from the horses mouth • Bring the consumer in at the front end, at the pointy end, at the embryonic stage to tap into insights, to tap into those 'aha' moments of opportunity • The product innovation vehicle should be marketing/consumer led • The involvement of the consumers should be throughout the cycle. From ideation, to validation, to chartering, to testing, to prototyping, post launch reviews, post launch improvements and so on • Co-creation delivers value through tapping in to user behaviour and user insights, tapping into influencer insights and influencer behaviours • Engaging with the community and providing them some stimulus gets the dialogue happening and the interactions, you start a wildfire • Consumer entries uncovered several secondary unique attributes of the brand and built on the project's scope with additional logo redesign proposals and brand positioning
BD 4: Reduced risk of product failure	• You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage • Feedback is instantaneous, you can post a question, a challenge, a statement on a platform and within moments have engagement
BD 5: Leagile manufacturing	• The richness of ideation from consumers may mean that other stages in a traditional process could be merged, combined or removed • You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage • You can develop consumer insights which may not be suitable at the time (ahead of their time) but having the possibility to revisit co-created ideas is a great opportunity
BD 6: Faster speed-to-market	• Instead of taking 6-8 weeks in field to do a research project, we can effectively for some projects be complete in 7 days, and have reached thousands • The richness of ideation from consumers may mean that other stages in a traditional process could be merged, combined or removed • You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage • Co-creation a highly efficient means to get to the next point in the NPD process or cycle (ideation, validation or refinement). With co-creation you move fast, you're going deep, with a volume of consumers • You can get dozens of out of the box ideas in less than 2 weeks • Creative questions can prompt fast, creative answers • The speed of execution, quality of entries and attention to detail helped the brand visualize potential solutions and arrive at an agreement on which direction to follow quicker than traditional design processes
BD 10: Strengthening of brand-consumer relationship	• Any Brand worth their weight in salt, need to and always will need to put the consumer first • Consumer entries uncovered several secondary unique attributes of the brand, building the project scope with additional redesign proposals and brand positioning ideas
BD 13: Closer market fit	• Involving consumers in co-creation is powerful because you get to identify and make strategic choices about which insights you lean in on, which insights you tap into to address or support
BD 17: Internal Empowerment	• The speed of execution, quality of entries and attention to detail helped the brand visualize potential solutions and arrive at an agreement on which direction to follow quicker than traditional design processes
BD 18: User Experience	• The principle of consumer involvement and engagement for a better outcome, in theory the experience is a source of value
BD 19: Limitations of Traditional Methods	• The world has shifted, the methods of the past got us to where we are but they're not going to get us to where we're going. The consumer should be king, or should come first, and now this is an evolution of that behaviour • Traditionally the marketers or business owners will form some kind of hypothesis, a proposition, a positioning, and then they will want to take it and have that validated or tested in market. Those classic methodologies are slow

Brand Participant H:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• The premise is that the best ideas can come from wherever
BD2: Outsourcing of NPD efforts	• Consumers can add significant value in developing POS implementations and digital content • The more and better routes you give the consumers to express and propose their value, the more you can build on afterwards and implement
BD3: Greater solution information	• In order to gain consumer insights, the brand needs to interact with the community • Co-creating at the early stage is really powerful since its at the core of the complete strategy (greatest added value) • Co-creation is vital for finding/devolving relevant propositions • The volume, depth and diversity of concepts is by far larger than other traditional methods • Internally the brand came up with 6 concepts, the crowd came up with 100 concepts, 26 of which passed through to validation • Online co-creation provides volume and diversity and richness in graphical assets, it gives more ways of expression to the consumer that are not only in a verbal form • Consumers can deliver ideas about specific products; Co-creation develops key insights, benefits spaces which is extremely valuable • On a specific project, consumers proposed a lot of technical ideas. They were break through ideas, not even close to what the category was doing • Even though consumers are not experts, they are able to translate technology from very different categories and show in a creative way how they could be linked to that category • Consumers give valuable proposals of technical solutions • Co-creation really strengthens the NPD process and gives you the opportunity to look with consumer glasses at all the ideas, and really add great diversity. Consumer research can bring you some new ways of looking at things • Co-creation opens your process up globally and opens your eyes to the category very quickly • Co-creation can develop databanks of interesting approaches to explore later, or on adjacent projects • With co-creation you get the answer to your problem, but you also get a lot of other answers. You can develop separate insights for future projects

	• The community helped to anticipate problems and questions throughout the NPD lifecycle • The quality and volume of ideas from the community was extremely high • Consumer co-creation identified elements that the brand had not previously considered
BD 4: Reduced risk of product failure	• Co-created concepts were evaluated 20% better quantitatively and qualitatively • Consumers evaluate products prior to launch to ensure they are the best solutions
BD 5: Leagile manufacturing	• The quality of consumer contributions was so high that the brand was able to 3D print the idea and bring it right away to evaluation • The diversity of consumer input resulted in the insights being used for other objectives/adjacent projects • Co-creation can develop databanks of interesting approaches to explore later, or on adjacent projects • With co-creation you get the answer to your problem, but you also get a lot of other answers. You can develop separate insights for future projects • The insights and databanks created through co-creation can be leveraged across categories and brands
BD 6: Faster speed-to-market	• New product co-creation helps to understand and explore the benefit spaces in a category, faster than if you would do a six month research project • We developed key insights in one three-week contest • Co-creation with consumers will allow you to create new categories, new products or transform existing ones in a matter of weeks • The brand was able to launch a radical product from start to finish in 18 months (first mover advantage) • The quality of consumer contributions was so high that the brand was able to 3D print the idea and bring it right away to evaluation • You can get dozens of out of the box ideas in less than 2 weeks • Creative questions can prompt fast, creative answers
BD 10: Strengthening of brand-consumer relationship	• Co-creation brings consumers close to the core of the propositions that are offered to them, and that they are involved in making the products respond to their needs • Interactivity is the new vector of innovation for the brand
BD 13: Closer market fit	• Co-created concepts were evaluated 20% better quantitatively and qualitatively • Consumers evaluate products prior to launch to ensure they are the best solutions • In order to be really fine and attuned to your audience and deliver the best solutions, you have to co-create with them
BD 14: Higher commercial potential	• The response to the co-created product was exceptionally good • Late stage co-creation adds tactical value
BD 16: Resource Impact	• The insights and databanks created through co-creation can be leveraged across categories and brands • High quality consumer contributions were used as prototypes and that was a lot faster, cheaper and powerful, it was very different to what the internal team was able to prototype in the past • Co-creation maximises your ROI in NPD • The brand was able to innovate and gain a first mover advantage with limited resources and time
BD 17: Internal Empowerment	• It's key to co-create in the early stages so internally you can understand who is involved in the process, how it can add value and how we can repeat on future projects
BD 18: User Experience	• Consumer co-creation helped the brand realise the importance of content, gamification and experience

Brand Participant I:

Brand Driving Factor	Factor mentioned in Data
BD2: Outsourcing of NPD efforts	• We do product testing with consumers
BD3: Greater solution information	• We co-create with online communities to see their concerns, feedback and comment • Based on the insight from co-creation, we can get changes we need to be making, tweaking product characteristics and packaging • We speak and engage with online bloggers and forums to develop insights and se their behaviours • We've learnt a number of product tweaks we have had to make • Co-creation is vital to improve what you're doing, in the initial stages you're monitoring and watching what people are saying, the next stage once you've actually got a product is to engage with them a lot more and say how can we make this offering better
BD 4: Reduced risk of product failure	• We give our products out to around 10,000 people and they give us their feedback on the product, what their likes are, what their dislikes are, what they thought of the product, what was their first impression, what they thought about it • Usually there is a common underlying factor of what our consumers want, most people have got more things in common than different • We engage with consumers to gain feedback on product concepts and innovate new offerings • Online co-creation is vital for consumer feedback • By gaining consumer feedback, we can immediately go to our design team and tweak the product
BD 5: Leagile manufacturing	• Consumer feedback allows us to address issues immediately • We can actively listen, create forums, create experiences with people, and from that you can change as an when needed quicker
BD 6: Faster speed-to-market	• When you have that kind of power and platform (social media), it is much easier to co-create new ideas, whenever something has to be changed or adjusted it could be done in a click • We can actively listen, create forums, create experiences with people, and from that you can change as an when needed quicker • If you wait for market research data, it can take 3-5 months, whereas you fire of one tweet to your consumer group and you can get an answer within 24 hours and you know more or less what your demographic wants
BD 7: Greater consumer understanding of NPD Process	• When you speak directly to smaller brands (as a consumer) they're more likely to listen to you and change their ways
BD 8: Adjustments of consumer preferences	• Consumers are quite confused, as we educate them about our products they understand quickly and adjust their preferences • There is a big share of people who really want to engage with the smaller brands and tell them what their concerns are, and they can make changes that way
BD 9: Better appreciation of the product	• If you want someone to switch to your brand from the bigger brands you're really going to have to listen to the consumer and not data, you need to speak to them to understand what their concerns are (co-create with them)
BD 10: Strengthening of brand-consumer relationship	• By co-creating and speaking directly to the consumer, brands are able to understand what consumers want, deliver better products and gain market share
BD 12: Post launch gains	• When you speak to the consumer directly, it reaffirms what you are trying to sell to them • On the packaging, we have apps associated to our company, when you scan our packaging, they can have access to games that they can play on the app. We use the games to kind of entice them to be part of the brand
BD 13: Closer market fit	• When you speak to the consumer directly, it reaffirms what you are trying to sell to them • Co-creation is integral for innovation, its having the right idea in you head straight of what you want to do and just reaffirming that with your audience • Consumers are quite confused, as we educate them about our products they understand quickly and adjust their preferences
BD 14: Higher commercial potential	• When we speak to consumers directly, it gives an advantage, getting our message across directly and through the power of them telling others (WOM)
BD 16: Resource Impact	• One of the things you can't do is spend big budgets to try and influence people to buy your products
BD 18: User Experience	• At the moment we're looking to deliver unique experiences to our consumers. It's quite a hard task to do but its something that were working on with our partners to try and spread the message a lot more • On the packaging, we have apps associated to our company, when you scan our packaging, they can have access to games that they can play on the app. We use the games to kind of entice them to be part of the brand • Augmented gives an added user experience
BD 19: Limitations of Traditional Methods	• When you speak to agencies it's not in their interest to tell you the truth sometimes because they want to sell you data • If you wait for market research data, it can take 3-5 months, whereas you fire of one tweet your group and get an answer within 24 hours and you know more or less what your demographic wants

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Brand Participant J:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• Online co-creation delivered valuable consumer insights
BD2: Outsourcing of NPD efforts	• When it comes to understanding how people use the product then you can adopt a co-creation approach • When it comes to the design and the look of a product, you can co-create these on an online platform • Definitely involve consumers in developing product prototypes
BD3: Greater solution information	• Co-creation is vital in identifying new needs, new products • It is important to be close to consumers when starting new product development; Definitely involve consumers in developing product prototypes • It's always good to have dialogue with the consumers when it comes to the performance of the product • Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers • It's enlarging of our resource base (knowledge) • When you engage with people with completely different backgrounds or a different location or whatever might be different, they look at things in a different way • We co-create in the early phase of innovation so the ideation phase, to get to know unknown, or needs and insights from discussions from peers within the platform • The product used a holistic co-creation approach with users in the fuzzy front end of innovation • Consumers are valuable resources for innovation; Co-creation helps R&D to immerse and orientate itself in the consumers' world • Co-creation helps draw a landscape of needs, wishes, concerns, consumer language and potential product solutions by users, which are explicitly and implicitly expressed in online communities and social media • You can enrich and evaluate existing ideas, incorporate the consumers' voice and select the best ideas • Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop • Obtain innovative products and marketing
BD 4: Reduced risk of product failure	• When it comes to a response to the product itself, we need some personal interaction with our consumers • Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers • Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop
BD 10: Strengthening of brand-consumer relationship	• It's always a good point to have a dialogue with the consumers to see which of our products are most beneficial • The main purpose of co-creation is to be close to our consumer
BD 13: Closer market fit	• It is important in the early stages to engage with consumers so that they can feed us with their thoughts about products they wish to find on shelf • Certain needs, concerns or suggestions for product improvements repeatedly occurred in consumers' online conversations • Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers • Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop
BD 17: Internal Empowerment	• The R&D department drew on the evaluation of ideas and insights to develop the most promising solutions and apply the right technologies to meet consumer needs; The consumer input was aligned with the R&D and Marketing • Co-creation helps R&D to immerse and orientate itself in the consumers' world
BD 18: User Experience	• Consumers perceive value by recognising the brand
BD 19: Limitations of Traditional Methods	• Within the organisation, we are always thinking within our border or our limitations

Brand Participant K:

Brand Driving Factor	Factor mentioned in Data
BD2: Outsourcing of NPD efforts	• We work with consumers (through co-creation workshops) to see how we can take raw ideas and actually polish them and validate them • If you give consumers a specific brief (for posters and visuals) they will come up with posters and visual ideas for a brand campaign • Consumers come up with high quality output in video contests • Consumer submissions (video content) needed no retouching • Consumers come up with visual designs of the packaging • Consumers look at marketing problems in different ways and come up with very creative solutions • An ad agency might come up with three or four ideas, we would come up with 100. The pool of ideas you have is much more than an agency would give you. So it's quantity and quality as well • The idea came from a creator and was delivered by the creator himself which went straight into their social media platform • Creators reinvented the next generation of project, 17 idea clusters were identified as potential game changers. Immediately translated into research-ready concepts
BD3: Greater solution information	• A lot of times creativity comes from unexpected places (consumers) • Your idea is looked at by 370,000 people and everybody has different interpretations • Consumers have different creative mind-sets, and that's why the output we get leads to a lot of possibilities • Consumers have a lot of points of view, and give a lot of rich insights • Consumers came up with product ideas based on a problem state which is very raw idea generation • Giving consumers an idea or solution through augmented reality, lets them talk about possibilities • Great ideas can come from anywhere, you can't restrict yourself to get great ideas • As you increase the quantity of your co-creation community you also increase the quality because you have access to more skills from different kinds of people • It's like a creative playground, there are so many possibilities and ideas. This encapsulates the value that co-creation delivers • You gain insights and different cultural nuances. You interact with co-creators from different countries and different creators which have very different mind-sets; cultural insights and cultural ideas can come from anywhere • Some entries from the contest, although they were off brief the brand were really surprised. Their R&D teams couldn't think of these ideas • In addition to addressing the initial brief, creators ideas inspired the brand to change packaging and promotion • In 3 weeks the community delivered 138 ideas from over 40 countries
BD 4: Reduced risk of product failure	• The entries represent the consumer's point of view in a lot of ways, in terms of the product this means is it going to work or not going to work • Co-creation lets you test whether the direction of your new product works or not or whether you can push it a bit more • Co-creation provides qualitative data on feasibility • Consumer led co-created concepts made it to test phases across markets
BD 6: Faster speed-to-market	• From brief to contest launch is less than a week • In a time frame of 15 days, we basically go from a marketing challenge to ideas, which is very efficient (Typically if you go to an advertising agency for a campaign, it would take months) • For video submissions (from consumers) it would take about a month and a half, but for typical advertising agencies it would take around three months. So its cutting it short by half and the added benefit is that you are getting more ideas • The idea came from a creator and was delivered by the creator himself which went straight into their social media platform
BD 7: Greater consumer understanding of NPD Process	• For a consumer to work so closely with a brand which they use everyday is amazing. You don't just use the brand but you have a say in what type of products they come up with
BD 10: Strengthening of brand-consumer relationship	• For a consumer to work so closely with a brand which they use everyday is amazing. You don't just use the brand but you have a say in what type of products they come up with • Consumers have a say in what kind of communications they (the brand) come up with. That is really the future, which we are living in • Consumers are so close with brands and they are actually dictating to brands what they should or should not be doing and how they are communicating to them
BD 13: Closer market fit	• The idea came from a creator and was delivered by the creator himself which went straight into their social media platform • Some entries from the contest, although they were off brief the brand were really surprised. Their R&D teams couldn't think of these ideas • The results of the contest (based on social content views) were 60-70% higher than the previous videos they had done (internally)
BD 14: Higher commercial potential	• If companies are looking for social media content for example, social content videos then they would look for high quality content from consumers (no need to refine)
BD 16: Resource Impact	• In terms of that the costs being incurred are still lesser compared to an advertising agency
BD 17: Internal Empowerment	• I think in a lot of ways it (co-creation) helps us become better, it helps us in making ways tighter, better or more interesting • The brand is now considering using a co-creation profile across its product portfolio
BD 19: Limitations of Traditional Methods	• The reason co-creation adds a lot of value to organisations is if you look at the (traditional) marketing and advertising it's sort of a sea of sameness • Advertising agencies work on insights, they work with consumers, they work with a very small set of consumers. It doesn't necessarily represent the point of view of most people • The creativity and the work being very insightful is something which is the benefits over typical advertising agencies

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Brand Participant L:

Brand Driving Factor	Factor mentioned in Data
BD1: Virtually costless acquisition of consumer ideas	• You don't have to pay for volume (in ideation), you only pay for winning ideas
BD2: Outsourcing of NPD efforts	• To get the volume and diversity in ideation, you have to engage with the crowd
BD3: Greater solution information	• The street knows something that we don't • Consumer's experience leads insights, they give a different perspective on product innovation (not as a professional) • Co-creation provides value on the creativity side, the dreamer side, identifying the consumer gaps, the frustrations and needs • Co-creation gives fresh creativity from the crowd at a global scale • Co-creation provides volume and diversity • Co-creating with consumers allows for more creativity because there's a less of a 'straight jacket' • Co-creation gives you fresh ideas from the outside world, the organisation can then leverage their internal expertise • Early stage co-creation lets consumers and organisations 'dream • Don't wait to gain consumer feedback, smart organisations co-create in the early stages of the NPD to gain early feedback
BD 4: Reduced risk of product failure	• Because ideas are coming from consumers, once they get to the screening stage, they pass through it easier. Ideas come from a consumer need instead of a product led technology or corporate led strategy
BD 5: Leagile manufacturing	• You can leverage internal resources and know-how if you are going to pursue a co-created concept from idea to launch state
BD 6: Faster speed-to-market	• Within four weeks the client can see the raw creativity from the community, even shorter depending on the contest model • Co-created concepts pass through the consumer validation stage better. This saves significant time and money • Co-creation is a cost and time efficient approach to NPD • You can get dozens of out of the box ideas in less than 2 weeks • Creative questions can prompt fast, creative answers
BD 16: Resource Impact	• Co-created concepts pass through the consumer validation stage better. This saves significant time and money • Co-creation has the advantage of speed and price. Our co-creation framework is very simple, it's one price it doesn't have a lot of significant extras like a lot of research does • You can leverage internal resources and know-how if you are going to pursue a co-created concept from idea to launch state • Co-creation is a cost and time efficient approach to NPD
BD 17: Internal Empowerment	• There is a frustration internally with people that year after year they have the same inputs to these project innovation workshops, and year after year they get the same output. Traditional methods are not pushing the boundaries
BD 19: Limitations of Traditional Methods	• The rate of product innovation that actually gets to market is very low (Traditional NPD)

Brand Participant M:

Brand Driving Factor	Factor mentioned in Data
BD3: Greater solution information	• Engage consumers to Co-create new products (radical innovation) • You can have insights coming from the market • Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs • Introduce consumer insights and suggestions in development • When you co-create with people you can ask them what they want, but you can also observe them in real situations in their daily life (sociology, anthropology, ethnography) and discover problem states • Living labs provide an ecosystem to connect brands and consumers (and other stakeholders) • The methodology of the living labs is close to design thinking • In the end, people in a community will share, interact and come up with new and disruptive ideas • Consumers in a community who share an interest can come up with very advanced concepts and suggestions
BD 4: Reduced risk of product failure	• When you co-create with consumers, you create products which fit with their needs • Involving consumers in the process of NPD makes sure new product fit consumers needs • If you involve the consumer very early in the process, you will produce products which fit with their explicit and implicit needs • Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs • Ask the consumer if prototypes are what they expected
BD 6: Faster speed-to-market	• Involving the consumers gets straight to the point, you don't lose time proposing products which in the end do not meet the needs • Overall you gain a lot of time and end up with a product that will be adopted by the market
BD 13: Closer market fit	• Involving consumers in the process of NPD makes sure new product fit consumers needs • If you involve the consumer very early in the process, you will produce products which fit with their explicit and implicit needs • Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs [• Ask the consumer if prototypes are what they expected • Introduce consumer insights and suggestions in development • Co-creation allows the flexibility through iteration to develop a product that fits perfectly with the needs of the market
BD 14: Higher commercial potential	• When you co-create with consumers, you create products which fit with their needs • Overall you gain a lot of time and end up with a product that will be adopted by the market
BD 16: Resource Impact	• The balance between costs and benefits is not a question. The benefits far outweigh the costs
BD 17: Internal Empowerment	• The organisation as a whole should be concerned by co-creation, not just specific brands
BD 19: Limitations of Traditional Methods	• Traditionally you would push products towards consumers, 9 out of 10 products are failures

Brand Participant N:

Brand Driving Factor	Factor mentioned in Data
BD3: Greater solution information	• It's about hypotheses, working with our customers to really understand hypotheses of what we are trying to solve for • Its some of the purest, unfiltered feedback that you can get
BD 4: Reduced risk of product failure	• We use co-creation as a way to validate, where there is no research, doing something that doesn't exist in the market its hard for me to get information on how its going to perform • We do a lot of iterative testing with consumers
BD 6: Faster speed-to-market	• It actually speeds it up, it creates a much more agile environment. • Whenever we approach customers, we find that they're highly engaged, to actually be involved. So their involvement is actually pretty important. Its faster
BD 13: Closer market fit	• It's about testing and validation, which means that we thought these things would be beneficial to your lives, and then we create it in some kind of conceptual format or NVP
BD 19: Limitations of Traditional Methods	• it's been proven that companies cannot innovate by themselves anymore

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Appendix II: Brand Inhibiting Factors, Interview reactions

Brand Participant B:

Brand Inhibiting Factor	Factor mentioned in Data
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• Co-creation can sometimes be a distraction and it can add more complexity and confusion
BI 5: Consumer heterogeneity	• The co-creation platform itself is only as good as the people who use it and the community that are attracted to it • Sometimes consumers are not even aware of their own biases and their own choices
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• Consumers sometimes say things they don't really mean, or they tell you what they think you want to hear • Sometimes consumers are not even aware of their own biases and their own choices • You need to know which bits of consumer feedback you should listen to and which to ignore
BI 12: Ownership of intellectual property	• The intellectual property framework can cause problems
BI 14: Culture	• A lot of organisations make the mistake of doing co-creation as a bit of an afterthought, or a bit of a buzz word, they don't do it authentically • There's a sort of arrogance (inherent), that the organisation should know their products better than the consumers (this isn't always true)
BI 15: Lack of co-creation methodologies	• Organisations may not know the right questions to ask or the best way to engage consumers at the right station or process • If you ask questions that are too broad this can be ineffective (what should our next product be) • Asking really boring, narrow questions which are not relevant for most people may hinder engagement/co-creation • You need some fundamental things, a process and a platform. You need a way to talk to people, its needs to work, you need a way of actually checking what they say and synthesising it and making some decisions relatively quickly.
BI 16: Resource Impact	• Co-creation can cause confusion and therefore more time and cost

Brand Participant C:

Brand Inhibiting Factor	Factor mentioned in Data
BI 3: Coordination requirements, constraints and other non-monetary costs	• It takes a lot of time, we had to employ somebody to help analyse the data • Co-creating with consumers can lead to contractual disputes (in regards to IP)
BI 4: Infeasibility of product ideas	• You still have 30 years of experience in a particular industry, and that is something which a co-creator has no knowledge of
BI 5: Consumer heterogeneity	• If you don't really target the right people (who will be consuming your products) then a lot of your research efforts come to nought • The problem you have is trying to get people who are the early adopters • I don't think you can ask an average consumer what they want to eat or drink in three years time (But you can certainly ask creative people) • Brands often co-create with people they like and you know. They don't necessarily end up co-creating with the right people, there is a risk of groupthink with the same sort of deficiency as you had before you were co-creating • There is a big issue around the recruitment of the co-creators to enable you to really and truly get under the skin of what the problem is
BI 9: Information overload	• There is no easy sort of filtering system (information) you're filtering, because you want to get to some core target insights, but are you looking for the right things? (It's quite expensive) • It takes a lot of time, in the end we had to employ somebody to help analyse the data • I think organisations forget that they've got to be able to process this data and handle this data • Really and truly it's still a huge body of data (but its worth it's weight in gold)
BI 11: Concerns about secrecy	• There is a risk of wholesale stealing • In prototype development, you are at the highest risk of intellectual property stealing, so organisations are very wary of letting products out
BI 12: Ownership of intellectual property	• There is a deep-seated fear or concern around intellectual property • Large organisations don't like sharing intellectual property and that's one of the biggest challenges • Even though you can create good contractual contracts to assign rights to mitigate risk, it's never enough • Co-creating with consumers can lead to contractual disputes (in regards to IP)
BI 13: Risk of retaliation and defection	• You have to shoot NDA's across to consumers or incentivise them to release all rights and get access
BI 14: Culture	• Companies persist with traditional methods because that's what they understand, senior management stick with what they understand
BI 15: Lack of co-creation methodologies	• You can still never get it right, sometimes you rely too much on co-creation and you almost put aside your own tacit, latent gut
BI 16: Resource Impact	• Filtering and making sense of the information from co-creation is expensive • There are cost concerns in prototype development because you're making prototype, you're making MVP's which are pretty expensive for manufacturers • You can co-create in prototype development but it's a very expensive part of the five-stage process
BI 17: Impact on Organizational Structure	• The benefit of co-creating as a start up is that you can be flexible, unlike big companies

Brand Participant D:

Brand Inhibiting Factor	Factor mentioned in Data
BI 1: Diminished control over brand's strategic management and planning	• A very large part of the population (organisations) are very controlling, and you know 'we can do it ourselves and we must manage every aspect of the production' (there are others that are really open to teaming and collaborating and bringing others in)
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• It's a hard thing to shift to that mind-set (closed), primarily because brands are organised poorly to do that, it's rare that marketing, distribution, and post service folks come together to design and end to end set of process for a particular persona or segmentation of their customer population
BI 5: Consumer heterogeneity	• Brands have to understand their consumer segment so they can design proper experiences in the first place
BI 9: Information overload	• Information overload is a risk (at the same time there are lots of tools and technologies that are helping with that)
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• I'm always reminded of Steve Job's around, the exact quote escaped me but it was essentially 'if you listen to your customers, they are unclear of what they want until you actually give them something new', even henry ford said 'faster horses quote' I think there is always going to be that population that believe they can out think, and out think the customer
BI 14: Culture	• More and more of the value is moving toward the experience, which is really a hard message for most R&D engineers • A very large part of the population (organisations) are very controlling, and you know 'we can do it ourselves and we must manage every aspect of the production' (there are others that are really open to teaming and collaborating and bringing others in) • So some companies will pay that lip service, and they'll do it (co-creation) in ideation and then that's the end of that until product launch

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Brand Participant E:

Brand Inhibiting Factor	Factor mentioned in Data
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• It can be hard to get people across the organisation to commit time and resources to a co-creation project
BI 3: Coordination requirements, constraints and other non-monetary costs	• Effective co-creation is very time-hungry for the internal team • Iterative co-creation requires a lot of time out of your business, in traditional research you just commission it and somebody comes back with the answer
BI 4: Infeasibility of product ideas	• Consumers rarely come up with new ideas, because they don't have the technical know-how • Consumers don't know where they are going or what's feasible and what's not feasible
BI 5: Consumer heterogeneity	• If you do not target the right people this will inhibit the success of your project • You need to target potential users; early adopters, people who are outgoing, who are eloquent and can articulate their needs. This can be very tough • An ineffective/wrong sample is a key inhibitor
BI 6: Asymmetrical effects	• Consumers may not have a vested interest in the project, there's a limit of how much time you can keep someone's attention • The minute co-creation becomes hard for a consumer, they lose interest and you're not going to get the value from them
BI 9: Information overload	• There's a limit to how many co-creators you can handle, you don't have that many people in a co-creation session
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• Consumers find it hard to articulate a solution because they don't have the technical knowledge • You can't give consumers a 'blank sheet of paper' to create solutions, this is very difficult without as technical background
BI 12: Ownership of intellectual property	• IP is harder to secure through online co-creation, your co-creation efforts are very visible
BI 14: Culture	• You can become so blinded within your own organisation that you make the assumptions that elements or attributes are really important and others are less important • It is important to have people high up in the organisation buy into co-creation, this will result in others below them buying in and getting involved • People within the organisation fear looking foolish or being exposed (if the co-creation project is not a success) they are afraid to put their neck on the line • It is vital to get people at a senior level to buy into the process, so you have access to the required resources • It can be tough to have people buy into the process (internally) In order to collaborate you need people from different strategic functions with different expertise to commit to the project
BI 15: Lack of co-creation methodologies	• If you've not co-created before, it's quite risky, internally • There are a lot of considerations to take into place, are their senior people involved? What is the resource impact? How do you know you have the right sample? If you don't know these, your co-creation efforts could really fail
BI 16: Resource Impact	• Traditionally you have to reward consumers financially • If you really want to get consumer involvement, and you want the right type of person, your sample selection is really important, you're going to have to incentivise them • Face-to-face (qualitative) co-creation is very resource heavy; Co-creation is very time hungry; Co-creation is more costly initially

Brand Participant F:

Brand Inhibiting Factor	Factor mentioned in Data
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• Co-creation is inhibited by how things are normally done within the brand- opening of the NPD process requires restructuring/ management of more stakeholder perspectives • Complete co-creation is the most complex way of doing any type of product development • To continuously involve people requires empathy, knowledge, experience with different ways of thinking, understanding of different tools • Effective co-creation requires a proper structure and project management
BI 3: Coordination requirements, constraints and other non-monetary costs	• it has to do with how things are normally done , it has to do with time, money, and other types of pressures • has to do with people not knowing how to actually do things properly, in the sense of how do we properly co-operate, how do I talk to people • Complete co-creation is the most complex way of doing any type of product development • To continuously involve people requires empathy, knowledge, experience with different ways of thinking, understanding of different tools • Effective co-creation requires a proper structure and project management
BI 5: Consumer heterogeneity	• There is uncertainty about where you get the data from and how can the brand interpret it
BI 9: Information overload	• Co-creation requires someone to manage the information that results • It requires a lot of dedication and commitment, often you have to put somebody on it full time to manage it • There is uncertainty about where you get the data from and how can the brand interpret it • How does the brand know it's the right data
BI 14: Culture	• people often have ego (rely on internal knowledge and capabilities) • Often there is a general wariness because people do it how they've always done • It is difficult to get people on board and making sure people support what you're doing
BI 15: Lack of co-creation methodologies	• Co-creation is very new, large organisations may find it hard to transition their IM approach • Co-creation is not something people are 'taught', they get the holistic things like unit centricity and put the customer first • Any literature/theory on co-creation is very generic and nobody really knows how to do it properly • People within the brand are uncertain on how to co-create properly, in the sense of how do we properly co-operate, how do I talk to people • Co-creation requires knowledge, experience with different ways of thinking, understanding of different tools • Effective co-creation requires a proper structure and project management
BI 16: Resource Impact	• Adopting a co-creation approach can impact in terms of resources- time, money, costs, and other types of pressures • Co-creation requires more time in the early (research) stages
BI 17: Impact on Organizational Structure	• Co-creation can cause a dramatic change in organisational processes

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Brand Participant G:

Brand Inhibiting Factor	Factor mentioned in Data
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• If you are trying to be nimble and agile and go straight from an idea to commercialisation, co-creation may slow down this process (but you may deliver an under optimised offering) • A tension exists between operational efficiency and proactive consumer sovereignty
BI 3: Coordination requirements, constraints and other non-monetary costs	• People see co-creation as another step in the process, and therefore another cost in the process, and adding more time to the process • In smaller organisations, the NPD process needs to be simplified because they don't have the arms and legs, the people, the headcount to manage so many stages of the process
BI 4: Infeasibility of product ideas	• Consumers may come up with ideas that the brand can't produce in their factory
BI 7: Conflicting preferred outcomes	• A tension exists between operational efficiency and proactive consumer sovereignty
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• As a marketer, you should you should never ask consumers what do they want. They can't express it, they don't know (They need a point of reference or some stimulus, something to react to)
BI 11: Concerns about secrecy	• Brands are fearful of letting good ideas that they are socialising getting into the hands of the competition, through social media or through consumer groups; There is a sort of commercial paranoia that exists
BI 13: Risk of retaliation and defection	• Brands are fearful of letting good ideas that they are socialising getting into the hands of the competition, through social media or through consumer groups • There is a sort of commercial paranoia that exists
BI 15: Lack of co-creation methodologies	• The co-creation dynamic or paradigm, needs to be fluid, flexible, built on springs. Because every situation, every brief, every requirement, every business opportunity is going to be unique, and therefore the co-creation experience needs to be unique
BI 16: Resource Impact	• There is a cost to leverage with co-creation (but it's not purely incremental, it could be incremental or it could be a substitute investment) • There is a set of consulting and professional fees that come with co-creation services. This is an incremental cost for the brand • People see co-creation as another step in the process, and therefore another cost in the process, and adding more time to the process
BI 17: Impact on Organizational Structure	• Some brands are ultimately being driven by their operations teams. They are companies that have big manufacturing facilities, they have significant sums of money tied up in plants and equipment, and it's really the plant efficiency that's driving the innovation agenda • Why would a brand want to talk to consumers about something the consumer may want, that they can't produce in their factory

Brand Participant H:

Brand Inhibiting Factor	Factor mentioned in Data
BI 1: Diminished control over brand's strategic management and planning	• If your co-creation is very open and exploratory in the early stages, it might trigger a change of strategy
BI 3: Coordination requirements, constraints and other non-monetary costs	• Co-creation can add costs through processing information
BI 4: Infeasibility of product ideas	• Typically brands keep feasibility inside their expertise area, consumers are not technical experts
BI 9: Information overload	• You need a way to digest all of the ideas, if not it's (co-creation) too much for the brand to implement
BI 12: Ownership of intellectual property	• You do have to address the IP transfer however it is not a significant barrier
BI 14: Culture	• If your early co-creation projects are not successful they are unlikely to be repeated. Co-creation will not be embedded in the organisational culture • You are looking to change the culture of the company and bring it closer to consumers and that takes time • The degree of co-creation is a question of personal culture and organisational culture, that you can see it in the process. • The challenge is to find managers willing to risk, mavericks who are not afraid to adopt this approach • Due to the failure of the co-creation effort, the approach was not embedded or not left as a legacy in the culture • The first co-creation effort should bring results very fast in order to prove the concept. If implementation is too difficult, then people forget it • I think usually that (NPD) is kept inside the companies because they think they are the experts
BI 15: Lack of co-creation methodologies	• It changes a lot, from company to company where co-creation adds value, because the products and projects are so different • Where co-creation is successful in one where it is successful in another one. After several projects with the same company you can understand where it adds value
BI 16: Resource Impact	• I would not have adopted a co-creation approach with these projects because at the end the results needed a modification of the production lines so that was very costly and took so much time that you cant prove the concept right away • Even with co-creation you would still need to pay someone to implement it

Brand Participant I:

Brand Inhibiting Factor	Factor mentioned in Data
BI 1: Diminished control over brand's strategic management and planning	• We made a mistake by going for two different audiences (Two different product strategies) • As you get bigger as a brand, they've got strategy which they cant share, which is three years down the line, there's no point talking to your customers about now because they wont be able to engage in it • Asking the consumer what we should do next, is too big of a question to ask • If you're asking everybody what we should do next, it can have a negative effect
BI 5: Consumer heterogeneity	• It's not even just asking people, it's asking the right people • So its about speaking to specific co-creators, rather than speaking to everyone that you can • You can get a lot more feedback and you kind of get too much. You cant take it all in, some things will make sense to your company, the problem is now even with co-creation, you're going to get an abundance of people telling you 10, 20, 30 different things and it is just to filter down to what you believe in and what that target person you're looking for believes in
BI 9: Information overload	• You can get a lot more feedback and you kind of get too much. You cant take it all in, some things will make sense to your company, the problem is now even with co-creation, you're going to get an abundance of people telling you 10, 20, 30 different things and it is just to filter down to what you believe in and what that target person you're looking for believes in
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• When your speaking to the consumers, even they are confused about what they want and what they don't want. Because they're not educated to know how to make a company brand success, but they're educated enough to say what they want, so its picking the things that underline what they are saying
BI 14: Culture	• Once you get to a certain age, any person, and you've been taught a specific way, its very difficult to change and accept, you'd be very special to do that, to accept that this is the way the world is going • Whilst sometimes the information from co-creation might have been quite useful, you cant ask the question because it just makes you look weaker, and it means your current offering becomes weaker because of it, you look like you don't know what your goals are
BI 15: Lack of co-creation methodologies	• It's about building your audience, the best way would be to have an audience ready to go, and ready to fire and tell you everything you want. I think co-creation can only happen properly over time

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Brand Participant K:

Brand Inhibiting Factor	Factor mentioned in Data
BI 4: Infeasibility of product ideas	• We don't have technical skills in our consumer community, we don't have engineering skills • I think that brands focus on co-creation in ideation and feasibility is consumers don't have the technical skills. The technical point of view would be from the R&D team (Testing-consumer feedback)
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• Consumers may not always deliver very polished ideas • We don't have technical skills in our consumer community, we don't have engineering skills
BI 11: Concerns about secrecy	• We discourage creators from copying other people's ideas. The down side of being transparent is a lot of the time people just copy each other's ideas and we don't know the source of the ideas. • Co-creation contests are open. Your brief is openly viewable to everyone. So that would act as a competitive threat for a lot of brands because your idea and your new product idea is out there on the platform and can be seen by everyone • A lot of transparency and your idea being out there in full public view is a threat in terms of secrecy
BI 15: Lack of co-creation methodologies	• Co-creation is still in a renaissance stage, its not been adopted by everyone

Brand Participant L:

Brand Inhibiting Factor	Factor mentioned in Data
BI 1: Diminished control over brand's strategic management and planning	• At the beginning of the NPD funnel there will be ideas that are off strategy (although these can be ignored)
BI 5: Consumer heterogeneity	• one of our challenges is to even it out a bit, to recruit from specific geographies where we are not so strong
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• What we do not know is what they know, so the feasibility, the technology, the science, the supply chain, costing's, all of that our guys have no idea
BI 11: Concerns about secrecy	• which is worried about confidentiality, the fact that it is open innovation and it is one the website for all to see.
BI 14: Culture	• some people are just slow to take on new methodologies. And until I can say that co-creation makes for a more time and cost efficient and better launch of a new product, a lot of people will resist it.

Brand Participant M:

Brand Inhibiting Factor	Factor mentioned in Data
BI 1: Diminished control over brand's strategic management and planning	• You can in a sense lose some power if you use the consumers in the process (psychological)
BI 2: Complexity of managing brand's objectives and interests of diverse stakeholders	• Co-creation may require some internal reorganisation (recruiting specific people it interact with consumers) • Co-creation is easier in the early stages of the NPD process, you just solicit consumers to give ideas and suggestions and insights, when it comes to development it is more difficult
BI 3: Coordination requirements, constraints and other non-monetary costs	• It can take more time when you meet consumers (face to face co-creation)
BI 10: Product preference fit is highly susceptible to consumers' ability to clearly articulate their preferences and future needs	• People don't always know what they want, they don't always have the capacity to imagine what a future product can be.
BI 12: Ownership of intellectual property	• IP is always at the centre of the problem (you have to inform the consumer that the IP resides with the organisation) • The IP framework must be clear from the beginning
BI 14: Culture	• Organisations like to decide what they want to do by themselves, they think they know their customers so they are reluctant to involve them • The difficulty is not about tools or methods to co-create its more psychological

Brand Participant N:

Brand Inhibiting Factor	Factor mentioned in Data
BI 5: Consumer heterogeneity	• We've also seen clients that co-create and they bring in the wrong segments, they're trying to reach one audience and they make mistakes on the voice of the customer, they get feedback from somebody who isn't even their customer.
BI 15: Lack of co-creation methodologies	• Some business are not as mature on co-creation, so they rely on feedback, in a way that isn't always valuable for product development. A lot of it has to do with trial and error and maturing.

Appendix III: Brand co-creation factors across the NPD lifecycle, interview reactions:

Brand Participant B, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD1		- Ideas are cheap and worthless, there are an infinite number of them - If you're asking people for their ideas you don't necessarily need to pay them				
BD2		- Consumers can give mock-ups of new products - Consumers can invent new products - Ideation is all about quantity and then clustering and prioritising, and your community can help you do all three of those things in that stage		- Consumers can invent new products		
BD3	- Co-creation is market research and insight gathering - Co-creation is vital in problem definition and identifying unmet - Sometimes when you just ask people to talk about, they can either inadvertently or sometimes deliberately share something that is really quite revealing or interesting - You can squeeze out a lot of interesting problems to solve which perhaps you weren't overtly aware of (with a bigger community)	- You can never discount the possibility that consumers can come up with a radical/startlingly new idea - Co-creation gives you access to more ideas, better ideas - Access to more diverse perspectives - Access to real time feedback				
BD4			- It gives you real market data on what people want to buy		- Brands can do online concept testing	
BD6	- Our client said they got a years worth of consumer insight data in a three week project	- Access to real time feedback				
BD9				- Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector)		
BD 10				- Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector)		
BD11						- It's all about marketing, word of mouth, more brand loyalty and customer loyalty
BD12				- Co-creation in development creates loyalty, engagement and willingness to buy (low default rates in the automotive sector)		It's all about marketing, word of mouth, more brand loyalty and customer loyalty
BD13					- You can get really quantitative data on what customers want	
BD14						- Co-creation can deliver improvement in terms of the success of new product launches - If you give consumers an experience or the opportunity to tell stories that's really powerful marketing - It's all about marketing, word of mouth, more brand loyalty and customer loyalty - Every single co-created product launched (by a specific brand) has sold out -Because consumers are involved in the process, you've got a target community that you can then sell to and that are more likely to buy from you
BD15						- Co-create the marketing campaign that goes with the product and other aspects of the business, generally more outward facing aspects - Every single co-created product launched (by a specific brand) has sold out
BD 18				- The brand forces consumers to be hands on in development because that's all part of the experience		

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Brand Participant B, Inhibiting Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI 5			- Sometimes consumers are not even aware of their own biases and their own choices			
BI 10			- Consumers sometimes say things they don't really mean, or they tell you what they think you want to hear - Sometimes consumers are not even aware of their own biases and their own choices			
BI 15	- There's a sort of arrogance (inherent), that the organisation should know their products better than the consumers (this isn't always true)					
BD 16	- Organisations may not know the right questions to ask or the best way to engage consumers at the right station or process - If you ask questions that are too broad this can be ineffective (what should our next product be?) - Asking really boring, narrow questions which are not relevant for most people may hinder engagement/co-creation	- Organisations may not know the right questions to ask or the best way to engage consumers at the right station or process				

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Brand Participant C, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD1				- You can now get much better impact by not necessarily spending a lot of money		
BD2		- Send consumers briefs and they come back with ideas or virtual prototypes - Bring some managers and marketers from within your organisation and run a workshop with consumers where to try and understand new product ideas - Co-creation is the only way forward in ideation, either bring people in or be part of the community		- Send consumers briefs and they come back with ideas or virtual prototypes		
BD3	- The whole construct of insight development or insights building has changed fundamentally - Get consumers into the process as early as possible to help deliver the kind of products that they really and truly need and want - Co-creation gives you the ability to learn and gather consumer insights; Co-creation helps develop insight and provides databanks	- Consumers with a genuine cultural appreciation of the category are much more creative and can come up with ideas	- You can tap into people and they give you ideas in response to a brief. This can spawn the next stage which is feasibility and refining the ideas converting those into concepts	- Co-creation informed both product development, future packaging, structural development and also communication -Consumers give you feedback on the products in a fairly safe environment	- Co-creation lets you track people's adoption, challenges in respect to using the product and also understand some of the emotional issues going on - Consumers give you feedback on the products in a fairly safe environment (validating prototypes)	- Co-creation informed both product development, future packaging, structural development and also communication
BD4				- Co-creators provide feedback when the early bundles are being created -Co-creation through social media helps validate some of the prelaunch bundles - The test and learnt approach is vital in prototype development	-Co-creation through social media helps validate some of the prelaunch bundles (D2C; You can get feedback around the product functionality -Co-creation is the most efficient way of assessing failure (test and learn) you can get feedback right away	
BD5	- Co-creation gives you helps develop insight and provides databanks, when you want to dive into an adjacent project, it allows you to look at some of the insights and see how you can collide them with other categories					
BD 6			- The test and learn approach gives you feedback right away			
BD7				- Consumers give you ideas in response to a brief - Test prototypes with consumers	- Once your product is at a prototype stage you can use a platform to allow consumers to buy it, the product becomes accessible to a lot of people but they have accept that its not in its fully finished form (early adopters, feedback on functionality and marketing)	
BD8					-We used groups of product dissenters, so people who weren't really into the product but liked certain characteristics in NPD	
BD10						- Advocacy reach is crucial especially in the early stages of the product launch
BD11						-Advocacy reach is crucial especially in the early stages of the product launch
BD 12						-Advocacy reach is crucial especially in the early stages of the product launch
BD13	-By developing a key insights, you'll be thinking much deeper in terms of how can our products better fit consumers' lives			- Test prototypes with consumers - Get consumers into the process as early as possible to help deliver the kind of products that they really and truly need and want (testing the product, testing the packaging in prototype development)	- Co-create with people who use the product, this allows you to understand how people use the product, how to fix packaging, fix some of the flavours, or fix y the messaging on the pack of how you would use it -Take co-created prototypes put them into quantitative testing	- Ask consumer groups to give you feedback in product launch -During launch, co-creation (consumer feedback) allows you to make slight changes to product characteristics
BD15						- The advocacy reach you can gain from co-creation is something you would never get if you pay for it, or you would get but you would pay a lot for it
BD 16				- Co-creating with a group of consumers can reduce the costs of having to create prototypes over and over again - Co-created products are cost-effective (look and feel of the product)		
BD 19					- The last thing that you would want to do is to ask people within your organisation what new ideas they want to develop, they give you the things that they have thought, which do not have any relevance to the real-world	

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Brand Participant C, Inhibiting Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI 3				- It takes a lot of time, in the end we had to employ somebody to help analyse the data	- It takes a lot of time, in the end we had to employ somebody to help analyse the data	
BI 5	- If you don't really target the right people (who will be consuming your products) then a lot of your research efforts come to nought	- You can't ask an average consumer what they want to eat or drink in three years time (But you can certainly ask creative people) There is a big issue around the recruitment of the co-creators to enable you to really and truly get under the skin of what the problem is				
BI 9	- There is no easy sort of filtering system (information) you're filtering, because you want to get to some core target insights, but you looking for the right things? (it's quite expensive)			- Really and truly it's still a huge body of data (but its worth it's weight in gold)	- Really and truly it's still a huge body of data (but its worth it's weight in gold)	
BI 1				- In prototype development, you are at the highest risk of intellectual property stealing, so organisations are very wary of letting products out of the hands		
BI 12		-Co-creating with consumers can lead to contractual disputes (in regards to IP)		- There is a deep-seated fear or concern around intellectual property		
BI 14				- You have to shoot NDA's across to consumers or incentivise them to release all rights and get access		
BI 17				- There are cost concerns in prototype development because you're making prototype, you're making MVP's which are pretty expensive for manufacturers - You can co-create in prototype development but it's a very expensive part of the five-stage process		

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Brand Participant D, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD2					- Consumers can test it (a product) live in production	
BD3	- Your customers will tell you what they need, if you both watch them and listen to them - Experience has to be designed really have to understand what your consumers experience expectations are - Online communities are important resources for brands, create those communities and then do the research inside one	- Your customers will tell you what they need, if you both watch them and listen to them		- Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product	- Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product	
				- Co-creation gives insight into how consumers are going to experience the product through marketing, or whether it's through packaging, or all the way through consumption and post consumption - Consumer input allows brands to identify issues and challenges (functional and feature issues)		
BD4					- Failing fast is really important, consumer feedback allows you to embrace that culture - Consumers can give feedback on whether a product is going to fly	
				- Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product		
BD5				- Customisation issue is the next stage of co-creation, you have to create products that are entirely customisable		
BD6		- In about two or three months they (consumers) came up with a solution that researchers had been working at for years (they gamified it and co-created with consumers)	- Social media platforms allow tons of input, allow things like sorting and voting and really rapid production of lists (of requirements) as well as the ranking and the trade off of those requirements, being able to get that very quickly and being able to understand that is a huge advantage			
BD8						- The set of expectations is going to change for every organisation that serves some type of product
BD11						- WOM has gone from your closest 30 relatives and friends, to your 3000 person network
BD13				- To be able to customise the experience is going to require you to really understand your consumers expectations, and having them in the loop is really going to help understanding the prototypes		
BD 18	- Experience has to be designed really have to understand what your consumers experience expectations are			- Customisation issue is the next stage of co-creation, you have to create products that are entirely customisable - To be able to customise the experience is going to require you to really understand your consumers expectations, and having them in the loop is really going to help understanding the prototypes	- Being able to test through co-creation helps organisations understand just how important it is to get both the experience and the functions and features right in the product	
				- The experience matters so much, this integration of product and experience development and delivery at the same time becomes really fundamental - You have to understand that experience, and that requires you to really understand and co-create with the customer all the way through development and launch - Co-creation gives insight into how consumers are going to experience the product through marketing, or whether it's through packaging, or all the way through consumption and post consumption - The set of expectations is going to change for every organisation that serves some type of product (why will you ever stand in the line again when you can pre order it and walk in and pick it up, and its completely customised to exactly what you need)		
BD19	-The product and experience have to be built in parallel, organisations have to figure out how to align a much closer relationship between R&D and the experience delivery aspects of product launch going forward					

Brand Participant E, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2		- Consumers can build on ideas				- Co-creation adds value in advertising and promotion
BD 3	- Insights developed through co-creation reveal a problem You can build deeper insights and find new angles, it's much easier	- The hypotheses developed through insights (co-creation) feed ideation - Co-creation gives you more perspective, you get more feedback, and you can come up with a greater amount of concepts - Co-creation adds value in ideation through the diversity and volume of potential solutions	- Co-creation is much more interactive, feedback is immediate and more constructive than traditional research	- It's very valuable to get as much feedback as you can at an early stage		
BD 4		- Co-creation negates the need for pivots (shuts down concepts that are a complete waste of time)	- Co-creation is vital to validate whether the results of ideation and the insights are correct		- The test and learn approach is very effective in testing prototypes	
BD 6		- Ideation can be done quickly	- You get feedback immediately	- You can immediately get consumers to test product offerings, you can make a difference very quickly		
BD 10			- Co-creation is vital in feasibility and concept selection to ensure solutions meet the needs of the market	- Co-creation adds value in development by helping develop a clear project direction and avoid wasted resources	- Co-creation adds value in prototype testing and feedback. Consumers give you instant feedback and you can make product adjustments	
BD 14		- It can reveal other routes that might be more lucrative				- Its quick, easy and cost effective approach to marketing
BD 16		- In the long run co-creation saves money		- It becomes very costly to go too far down an innovation route without having tested something. It would be an ineffective use of you resources to wait until the end when its put all together to test it - You might have to make a lot of investment in terms of line investment. It would be very valuable to get as much feedback as you can at an early stage (reduce investment in plant etc.)		
BD 17			- You have a more empowered team. Co-creation avoids the waste of resources and allows people within the organisation to make a difference immediately			

Brand Participant E, Inhibiting Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI 2				- It can be hard to get people across the organisation to commit time and resources to a co-creation project		
BI3		- Effective co-creation is very time-hungry for the internal team - Iterative co-creation requires a lot of time out of your business, in traditional research you just commission it and somebody comes back with the answer				
BI 4		- Consumers rarely come up with new ideas, because they don't have the technical know-how - Consumers don't know where they are going or what's feasible and what's not feasible				
BI 5		- You need to target potential users; early adopters, people who are outgoing, people who are eloquent and can articulate their needs. This can be very tough	An ineffective/wrong sample is a key inhibitor			
BI 9		There's a limit to how many co-creators you can handle, you don't have that many people in a co-creation session				
BI 15				- It is vital to get people at a senior level to buy into the process, so you have access to the required - It can be tough to have people buy into the process (internally) In order to collaborate you need people from different strategic functions with different expertise to commit to the project		
BI 17		- Face-to-face (qualitative) co-creation is very resource heavy	- Co-creation is very time hungry			

Brand Participant F, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 1		- Consumer is an information/idea provider				
BD 2		- Co-create with consumers to develop concepts and ideas with them - Consumer is an information/idea provider			- Consumer co-creation is useful for verification and validation concepts/bundles	
BD 3	- Brands benefit from the information and ideas that the customer can add from his/her own unique perspective - Co-creation allows a profound understanding of the end-user, this is vital in creating winning concepts	- Benefits from involving the people who are going to use the product - Consumer is an information/idea provider, the product then links to their perception, their expectations	- Consumers are used to verify and to give feedback		- Consumers are used to verify and to give feedback	
BD 4				- Co-creation negates the need for pivots in NPD		
	-Co-created products are highly relevant for the consumer, as they have worked to get the results and have been involved in every major decision					
BD 6	- Co-creation requires more time in the early (research) stages, the overall effect is a quicker NPD lifecycle			- Less loops are required in development	- Co-creation allows you to reach a lot of people quickly	
BD 9		- Co-created products link to the consumers perception and expectations				- Co-created products are more credible to potential end-users, because consumer have co-developed them
	- Complete co-creation guarantees a broad support among the stakeholders, since they are directly involved - Co-created products are highly relevant for the consumer as they have worked to get the results and have been involved in every major decision					
BD 10	- Co-creation throughout the product lifecycle allows the brand to stay close with consumers and understand what's going on - The brand and consumer get to really know and trust one another - Co-creation allows organisations to develop a better brand that is relevant for your customers and creates more loyalty					
BD 11						- As words spreads (WOM) the brand will experience a 'boost' when introducing the âoffering to the market - Co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics
BD 12	- Co-creation throughout the product lifecycle allows the brand to stay close with consumers and understand what's going on, even when the product goes 'live'					
BD 13	Co-creation develops key insights, these are vital to provide direction to come up with concepts/ideas	- Consumer is an information/idea provider because then it links to their perception, their expectations. - Consumer co-creation is useful for verification and validation concepts/bundles			- Consumers are used to verify and to give feedback	- The products relevance is more credible to potential end-users
BD 14						- Complete co-creation yields products that customers want to use, without having to be persuaded by aggressive sales tactics - As words spreads (WOM) the brand will experience a 'boost' when introducing the offering to the market
	- Co-created products are highly attractive for the consumer as they have worked to get the results and have been involved in every major decision - Co-creation creates a marketing and resonance advantage					
BD 15	- User groups and other stakeholders will be aware of the value proposition, before the results are even tangible					

Brand Participant G, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2	- You can get a significant volume of feedback, ideas, and co-creation very quickly. So instead of taking 6-8 weeks in field to do a research project, we can effectively be complete in 7 days, and have reached thousands					
BD 3	- Bring the consumer in at the front end, at the pointy end, at the embryonic stage to tap into insights, to tap into those 'aha' moments of opportunity - Co-creation delivers value through tapping in to user behaviour and user insights, tapping into influencer insights and influencer behaviours	- Bring the consumer in at the front end, at the pointy end, at the embryonic stage to tap into insights, to tap into those 'aha' moments of opportunity		- Co-creation should be used to influence supply chain, procurement and engineering and technical etc.	- Co-creation should be used to influence supply chain, procurement and engineering and technical etc.	- Co-creation should be used to influence supply chain, procurement and engineering and technical etc.
	- The involvement of the consumers should be throughout the cycle. From ideation, to validation, to chartering, to testing, to prototyping, post launch reviews, post launch improvements and so on					
BD 4	- You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage					
BD 5	- You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage					
BD 6				- The speed of execution, quality of entries and attention to detail helped the brand visualize potential solutions and arrive at an agreement on which direction to follow quicker than traditional design processes		
	- Instead of taking 6-8 weeks in field to do a research project, we can effectively for some projects be complete in 7 days, and have reached thousands					
	Co-creation a highly efficient means to get to the next point in the NPD process or cycle (ideation, validation or refinement). With co-creation you move fast, you're going deep, with a volume of consumers - You actually derive the hypothesis or your proposition from the co-creation source, then its self-validated. You can remove a validation gating stage					
BD 10				- Consumer entries uncovered several secondary unique attributes of the brand, building the project scope with additional redesign proposals and brand positioning ideas		
BD 13	- Involving consumers in co-creation is powerful because you get to identify and make strategic choices about which insights you lean in on, which insights you tap into to address or support					
BD 17				- The speed of execution, quality of entries and attention to detail helped the brand visualize potential solutions and arrive at an agreement on which direction to follow quicker than traditional design processes		

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Brand Participant H, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2	- The more and better routes you give the consumers to express and propose their value, the more you can build on afterwards and implement					- Consumers can add significant value in developing POS implementations and digital content
BD 3	- In order to gain consumer insights, the brand needs to interact with the community - Co-creation develops key insights, benefits spaces which is extremely valuable - With co-creation you get the answer to your problem, but you also get a lot of other answers. You can develop separate insights for future projects	- Internally the brand came up with 6 concepts, the crowd came up with 100 concepts, 26 of which passed through to validation On a specific project, consumers proposed a lot of technical ideas/expertise. They were really break through ideas, not even close to what the category was doing		- Even though consumers are not experts, they are able to translate technology from very different categories and show in a creative way how they could be linked to that category - Consumers give valuable proposals of technical solutions - The community helped to anticipate problems and questions throughout the NPD lifecycle		
	- Co-creation really strengthens the NPD process and gives you the opportunity to look with consumer glasses at all the ideas, and really add great diversity. Consumer research can bring you some new ways of looking at things - Co-creating at the early stage is really powerful since its at the core of the complete strategy (greatest added value)					
BD 5					Co-created concepts were evaluated 20% better quantitatively and qualitatively Consumers evaluate products prior to launch to ensure they are the best solutions	
BD 5				The quality of consumer contributions was so high that the brand was able to 3D print the idea and bring it right away to evaluation		
BD 6	- New product co-creation has helped to understand and explore the benefit spaces in a category, faster than if you would do a six month research project - We developed key insights in one three-week contest	You can get dozens of out of the box ideas in less than 2 weeks		The quality of consumer contributions was so high that the brand was able to 3D print the idea and bring it right away to evaluation		
BD 13					- Co-created concepts were evaluated 20% better quantitatively and qualitatively - Consumers evaluate products prior to launch to ensure they are the best solutions	
BD 14						- The response to the co-created product was exceptionally good - Late stage co-creation adds tactical value
BD 16				- High quality consumer contributions were used as prototypes, that was a lot faster, cheaper and powerful, it was very different to what the internal team was able to prototype in the past		
BD 17	-It's key to co-create in the early stages so internally you can understand who is involved in the process, how it can add value and how we can repeat on future projects					

Brand Participant H, Inhibiting Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI 1	- If your co-creation is very open and exploratory in the early stages, it might trigger a change of strategy					
BI 4			- Typically brands keep feasibility inside their expertise area, consumers are not technical experts			
BI 9		- You need a way to digest all of the ideas, if not it's (co-creation) too much for the brand to implement				
BI17				- I would not have adopted a co-creation approach with these projects because at the end the results needed a modification of the production lines so that was very costly and took so much time that you cant prove the concept right away		

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Brand Participant I, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2					- We do product testing with consumers	
BD 3	- We speak and engage with online bloggers and forums to develop insights and se their behaviours			- We've learnt a number of product tweaks we have had to make Based on the insight from co-creation, we can get changes we need to be making, tweaking product characteristics and packaging		
		- Co-creation is vital to improve what you're doing, in the initial stages you're monitoring and watching what people are saying, the next stage once you've actually got a product is to engage with them a lot more and say how can we make this offering better				
BD 4		- We engage with consumers to gain feedback on product concepts and innovate new offerings		- By gaining consumer feedback, we can immediately go to our design team and tweak the product	- We give our products out to around 10,000 people and they give us their feedback on the product, what their likes are, what their dislikes are, what they thought of the product, what was their first impression, what they thought about it - Online co-creation is vital for consumer feedback	
BD 5				- Consumer feedback allows us to address issues immediately		
BD 6		- When you have that kind of power and platform (social media), it is much easier to co-create new ideas, whenever something has to be changed or adjusted it could be done in a click				
BD 8		- Consumers are quite confused, as we educate them about our products they understand quickly and adjust their preferences				
BD 10	- By co-creating and speaking directly to the consumer, brands are able to understand what consumers want, deliver better products and gain market share					
BD 12						- When you speak to the consumer directly, it reaffirms what you are trying to sell to them
BD 13		- Co-creation is integral for innovation, its having the right idea in you head straight of what you want to do and just reaffirming that with your audience				
BD 14						- When we speak to consumers directly, it gives an advantage, getting our message across directly and through the power of them telling others (WOM)
BD 16						- One of the things you can't do is spend big budgets to try and influence people to buy your products

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Brand Participant J, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2				- When it comes to the design and the look of a product, you can co-create these on an online platform - Definitely involve consumers in developing product prototypes		
BD 3		- You can enrich and evaluate existing ideas, incorporate the consumers' voice and select the best ideas	- The product used a holistic co-creation approach with users in the fuzzy front end of innovation You can enrich and evaluate existing ideas, incorporate the consumers' voice and select the best ideas - Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop	- Definitely involve consumers in developing product prototypes	- Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers	
BD 4		- Co-creation is vital in identifying new needs, new products - The product used a holistic co-creation approach with users in the fuzzy front end of innovation - Co-creation helps draw a landscape of needs, wishes, concerns, consumer language and potential product solutions by users, which are explicitly and implicitly expressed in online communities and social media	- Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop	- When it comes to a response to the product itself, we need some personal interaction with our consumers	- Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers	
BD 13		- It is important in the early stages to engage with consumers so that they can feed us with their thoughts about products they wish to find on shelf	- Consumers were asked to take on the role of developer and gate-keeper deciding which ideas to further develop and which to drop	- When it comes to a response to the product itself, we need some personal interaction with our consumers	- Co-creation allows feedback on which of the co-created products developed are beneficial for the consumers	
BD 17				- The R&D department drew on the evaluation of ideas and insights to develop the most promising solutions and apply the right technologies to meet consumer needs		
				- The consumer input was aligned with the R&D and Marketing		

Brand Participant K, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 2	- We work with consumers (through co-creation workshops) to see how we can take raw ideas and actually polish them and validate them - Creators reinvented the next generation of project, 17 idea clusters were identified as potential game changers. Immediately translated into research-ready concepts					- If you give consumers a specific brief (for posters and visuals) they will come up with posters and visual ideas for a brand campaign - Consumers come up with high quality output in video - Consumer submissions (video content) needed no retouching - The idea came from a creator and was delivered by the creator himself which went straight into their social media platform
BD 3	- Consumers have a lot of points of view, and give a lot of rich insights - I think cultural insights and cultural ideas can come from anywhere - You gain insights and different cultural nuances. You interact with co-creators from different countries and different creators which have very different mind-sets	- Consumers came up with product ideas based on a problem state which is very raw idea generation - Giving consumers an idea or solution through augmented reality, lets them talk about possibilities - Organisations tend to co-create in ideation - Great ideas can come from anywhere, you can't restrict yourself to get great ideas - Some entries from the contest, although they were off brief the brand were really surprised. Their R&D teams couldn't think of these ideas - In 3 weeks the community delivered 138 ideas from over 40 countries	- Giving consumers an idea or solution through augmented reality, lets them talk about possibilities			- In addition to addressing the initial brief, creators ideas inspired the brand to change packaging and promotion
BD 4		- Co-creation provides qualitative data on feasibility - Consumer led co-created concepts made it to test phases across markets	- Consumer led co-created concepts made it to test phases across markets		- The entries represent the consumer's point of view in a lot of ways, in terms of the product this means is it going to work or not going to work - Co-creation lets you test whether the direction of your new product works or not or whether you can push it a bit more	
BD 6		- From brief to contest launch is less than a week [NPD 1]				- The idea came from a creator and was delivered by the creator himself which went straight into their social media platform - In a time frame of 15 days, we basically go from a marketing challenge to ideas, which is very efficient (Typically if you go to an advertising agency for a campaign, it would take months)
BD 10						- Consumers have a say in what kind of communications they (the brand) come up with. That is really the future, which we are living in
BD 13	- Some entries from the contest, although they were off brief the brand were really surprised. Their R&D teams couldn't think of these ideas					- The idea came from a creator and was delivered by the creator himself which went straight into their social media platform - The results of the contest (based on social content views) were 60-70% higher than the previous videos they had done (internally)

Brand Participant K, Inhibiting Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BI4				- We don't have technical skills in our consumer community, we don't have engineering skills		
BI10		- Consumers may not always deliver very polished ideas		- We don't have technical skills in our consumer community, we don't have engineering skills		
BI 16	- Co-creation is still in a renaissance stage, its not been adopted by everyone					

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Brand Participant L, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 1		- You don't have to pay for volume (in ideation), you only pay for winning ideas				
BD 2		To get the volume and diversity in ideation, you have to engage with the crowd				
BD 3	- Consumer experience leads insights, they give a different perspective on product innovation (not as a professional) - Co-creation provides value on the creativity side, the dreamer side, identifying the consumer gaps, the frustrations and needs					
BD 3	- Co-creation gives you fresh ideas from the outside world, the organisation can then leverage their internal expertise - Early stage co-creation lets consumers and organisations 'dream'					
BD 3		- Don't wait to gain consumer feedback, smart organisations co-create in the early stages of the NPD to gain early feedback				
BD 4		- Because ideas are coming from consumers, once they get to the screening stage, they pass through it easier - Ideas come from a consumer need instead of a product led technology or corporate led strategy				
BD 5	- You can leverage internal resources and know-how if you are going to pursue a co-created concept from idea to launch state					
BD 6		- Within four weeks the client can see the raw creativity from the community, even shorter depending on the contest model			- Co-created concepts pass through the consumer validation stage better. This saves significant time and money	
BD 6	- Co-creation is a cost and time efficient approach to NPD					
BD 16		- Co-creation has the advantage of speed and price. Our co- framework is very simple, it's one price it doesn't have a lot of significant extras like a lot of research does			- Co-created concepts pass through the consumer validation stage better. This saves significant time and money	
BD 16	- Co-creation is a cost and time efficient approach to NPD - You can leverage internal resources and know-how					

Brand Participant M, Driving Factors:

	Upfront Homework	Ideation	Feasibility	Development	Testing	Launch
BD 3	- You can have insights coming from the market - When you co-create with people you can ask them what they want, but you can also observe them in real situations in their daily life (sociology, anthropology, ethnography) and discover problem states			- Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs		
BD 4	- If you involve the consumer very early in the process, you will produce products which fit with their explicit and implicit needs			- Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs - Ask the consumer if prototypes are what they expected	- Ask the consumer if prototypes are what they expected	
BD 6	- Involving the consumers gets straight to the point, you don't lose time proposing products which in the end do not meet the needs	- Involving the consumers gets straight to the point, you don't lose time proposing products which in the end do not meet the needs				
BD 6	- Overall you gain a lot of time and end up with a product that will be adopted by the market					
BD 13	- If you involve the consumer very early in the process, you will produce products which fit with their explicit and implicit needs			- Co-creation is an iterative process. When building prototypes, it is important to iterate with consumers to make sure the product fits their needs - Ask the consumer if prototypes are what they expected - Introduce consumer insights and suggestions in development	- Ask the consumer if prototypes are what they expected	
BD 16	- The balance between costs and benefits is not a question. The benefits far outweigh the costs					
BD 17	- The organisation as a whole should be concerned by co-creation, not just specific brands					

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Appendix IV: Social media characteristics, Brand participant interview reactions:

Brand Participant A:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• Social media allows you to reach people across borders (but in your target audience) • It's much richer you can get to more people faster
SM 2: Diversity of information	• Social media provide access to lots of consumers although it is skewed to a certain profile of consumer ('skewed to the right type')
SM 4: Roles	• Social media is skewed to the right type of consumers, the extroverts and the influencers • Social media provides access to an audience who are more willing to express themselves
SM 5: Ease of Ties	• Social media provides a platform to be able to get out there and ask everyone, without having to say do phone calls • Once ideas are out there, you can get broader groups of consumers even though they're not exactly in your core audience to discuss the ideas
SM 6: Strength of weak ties	• Social media provides a platform to be able to get out there and ask everyone, without having to say do phone calls • The benefit of social media is that you get more people involved, they can discuss it in a broader form
SM 7: Overcoming geographical and temporal boundaries	• Social media allows you to reach people across borders (but in your target audience)
SM 8: Knowledge Sharing & Creation	• Social media in a sense of your own brands format or your own lab is absolutely critical, you can't go out and get the same results format traditional market research methods • It is good to have a creative force (consumers) who are basically an extension of your marketing team, who are consumers, who are influencers • It's much richer you can get to more people faster • Social media provides access to an audience who are more willing to express themselves • The benefit of social media is that you get more people involved, they can discuss it in a broader form
SM 9: Ease of Knowledge conversion (capture)	• The digital revolution has enabled co-creation, if it hadn't have been for the digital revolution, we wouldn't be talking about co-creation probably. • Social media is it's the enabler for co-creation, digital as the enabler • It's much better then traditional research you know all the ideas come from within the company • Social media allows you to get quantitative representative samples from the consumer to see whether to go this way or that way, in terms of how you launch a product and which final product to go for
SM 10: Community Effects (Consumer Motivation)	• The mind-set in terms of wanting to express yourself has changed over time, social media users are skewed towards the right type of people in terms of co-creation • Social media provides access to an audience who are more willing to express themselves
SM 11: Unlocking Social Relations	• Consumers have got massive control and power to absolutely kill brands or make them, and I think they are aware of that power • Social media provides a platform for consumers to actually take part and do the co-creation, it's in enabling conduit • It's an access point for the consumers to have the dialogue and actual platform itself (with the brand) and the actual co-creation itself
SM 12: Pervasiveness of social media	• There's really no one who is not on social media • I mean it is a key touch point, it has revolutionised the marketing strategy • The benefit of social media is that you get more people involved, they can discuss it in a broader form • We had an online platform, we had a huge website with a 45,000 unique visitors per month • It's much richer you can get to more people faster
SM 13: Low Degrees of Separation	• The benefit of social media is that you get more people involved, they can discuss it in a broader form • Social media allows you to reach people across borders (but in your target audience)
SM 14: Ease of Search	• Social media helps recruit the right people, you can get your target consumer if you get the questions right (even if it's really complex definition)
SM 15: Empowerment of consumers	• Consumers have got massive control and power to absolutely kill brands or make them, and I think they are aware of that power • Consumers feel empowered, they see that anything is possible, so it has disrupted the whole former method of marketing. I think they see it is their right to get involved if they want to
SM 16: Intensity of interactions	• Co-creation requires discussions between the brand and consumer, these interactive sessions can occur online • You have to involve consumers in a way that they can really express themselves, so just sending an email wouldn't work • Social media allows you to get quantitative representative samples from the consumer to see whether to go this way or that way, in terms of how you launch a product and which final product to go for
SM 17: E-WOM	• Co-creating through social media allows consumers to be passionate about what they were doing and advocate it even more • They can be involved in bringing the product to life (through social media) and then you can make a massive story out of that • Consumer co-creators produce short films and they distribute those on social media themselves
SM 18: Visibility of Preferences/Interactions	• Social media helps recruit the right people, you can get your target consumer if you get the questions right (even if it's really complex definition) • Consumers see examples of co-creation which they wouldn't see if they weren't on a social network

Brand Participant B:

Social Media Characteristics	Factor mentioned in Data
SM 2: Diversity of information	• Co-creation through social media gives more diverse perspectives
SM 7: Overcoming geographical and temporal boundaries	• Social media allows us to co-create in different markets and in different geographies and get some real time data
SM 8: Knowledge Sharing & Creation	• Access to more ideas and better ideas • Sometimes when you just ask people to talk about, they can either inadvertently or sometimes deliberately share something that is really quite revealing or interesting
SM 9: Ease of Knowledge conversion (capture)	• Functionality wise, social media is more geared towards innovation and product development • Online concept testing • You can get really quantitative data what customers want • Ideation is all about quantity and then clustering and prioritising
SM 10: Community Effects (Consumer Motivation)	• Social media is a great tool to drive engagement; You can get people excited or interested in what you are doing • The ethos that goes with social media promotes knowledge sharing (Zuckerberg's law of information sharing) • Social media absolutely is core to co-creation and the mind-set that goes with social media is part and parcel of what co-creation is all about
SM 11: Unlocking Social Relations	• Consumers are becoming more savvy when it comes to brands • It's about being an enquiring and curios mind

SM 15: Empowerment of consumers	• Consumers are becoming more savvy when it comes to brands • Consumers understand there should be something in it for them, some kind of exclusivity, some kind of first access (pre-product)
SM 16: Intensity of interactions	• Brands have access to more real time feedback • Social media allows you to host that conversation, channel it in the right way and probe
SM 17: E-WOM	• It's all about marketing, word of mouth, brand loyalty and customer loyalty
SM 18: Visibility of Preferences/Interactions	• People online can either inadvertently or sometimes deliberately share something that is really quite revealing or interesting

Brand Participant C:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• Social media gets to more consumers then would have without social media • It delivers a far better reach than ever before
SM 2: Diversity of information	• It allows you to really get deep into regions of the country where you can't normally (through traditional market research) • Social media groups were used (1200 people) as a way of getting initial feedback for the concept • Online co-creation platform provides access to over 300,000 people, you can tap into these people and they give you ideas in response to a brief • It's giving you insight into what is even a very broad culture swathe even within your own country
SM 6: Strength of weak ties	• It allows you to get access to people quickly • You are no longer seen as an intrusive force trying to extract something artificial, but actually almost a curious friend (relationship building) • It connects you with the millennial generation which is one of the soft objectives
SM 7: Overcoming geographical and temporal boundaries	• It delivers a far better reach than ever before, for geography and age • You get into much more deeper connection, you understand more, you overcome barriers • It allows you to really get deep into regions of the country where you can't normally (through traditional market research) • You get away from any sort of language constraints
SM 8: Knowledge Sharing & Creation	• Social media is crucial to be able to both understand, and put some language to some of the behavioural trends, and also to provide feedback when some of the early bundles are being created • You can have what's called online group discussions • You get into much more deeper connection, you understand more, you overcome barriers
SM 9: Ease of Knowledge conversion (capture)	• Social media can be use to track people's adoption and challenges in respect to using the product (longitudinal studies) • You can understand the emotional issues consumers face • Social media is good to collect issues around the product functionality • Social media tools e.g. quizzes, queries and tables are useful to gain quantitative data to see how relevant the concept is (converting an idea to a prototype)
SM 10: Community Effects (Consumer Motivation)	• Using social media is a way of encouraging people to stick with it (the product) • You don't have to pay co-creators or do anything beyond being authentic (sense of satisfaction of being involved in the development) • Co-creators look on with pride with co-created products • Interacting through social media means people don't feel that they're coming out of their natural habitat, they are more likely to give you an honest answer • Communicating through social media promotes engagement and openness in interactions • You can have what's called online group discussions
SM 11: Unlocking Social Relations	• It reduces the traditional barriers of people having to fill out forms, answer telephone calls and so on • 'Intruding' via social media is less intrusive, if the product is of interest to you or the idea is of interest to you (the consumer) then people are much more comfortable in that medium • You are no longer seen as an intrusive force trying to extract something artificial, but actually almost a curious friend (relationship building)
SM 12: Pervasiveness of social media	• Social media groups were used (1200 people) as a way of getting initial feedback for the concept • Online co-creation platform provides access to over 300,000 people, you can tap into these people and they give you ideas in response to a brief
SM 14: Ease of Search	• You can now target it millennial's and Gen Z's (appealing generations in regards to co-creation) • You are able to connect to the right generation, the younger generation, who are going shape the attitudes and the product segment way evolves • It allows you to really get deep into regions of the country where you can't normally (through traditional market research)
SM 15: Empowerment of consumers	• Social media groups give consumers the power and to give you feedback
SM 16: Intensity of interactions	• Product advocates can give feedback and also validate prototypes • People can upload photos and videos so you can see virtually real-time • Videos and photos give you richer insight • Social media allows insight into consumer's lives, and it allows real-time insight and real-time feedback • You get far more targeted insights not just around whatever the question is that you want to answer • Social media tells the visual and audio and video, rich insight, it's less wordy so if you think a picture is worth 1000 words, you know there's so much you can capture and store and understand, and comprehend, • Feedback for product changes and tweaks are gained through social media • Video is powerful in helping people to understand functionality, and how the product performs, and where the product performs best in real-life in situ. • Social media tools (particularly video) give you a better impact by not necessary spending a lot of money
SM 17: E-WOM	• Consumers can share positive experiences • Co-creators are the ones who have written blogs about how great the products are, they are the ones who have become huge advocates for the product
SM 18: Visibility of Preferences/Interactions	• The consumer target has become much more diffuse, it's no longer structured by simple demographics, there is a lot more fragmentation and personalisation going on • It connects you with the millennial generation which is one of the soft objectives • If you leave people alone, and let people do what they want, upload when they feel, you get far more insight • Social media profiles provide you with databanks which are very useful • Social media can be used to track people's adoption and challenges in respect to using the product (longitudinal studies) • You can understand the emotional issues consumers face
SM 19: Centrality/Connectivity	• Social media has fundamentally changed NPD, you can sit at your desk talk to people, run groups or a portal

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Brand Participant D:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• Online platforms built on the cloud, with almost unlimited server elasticity and storage capacity, are able to go from 1-50 million users almost overnight • WOM has gone from your closest 30 relatives and friends to your 3000 person network
SM 3: Density	• WOM has gone from your closest 30 relatives and friends to your 3000 person network
SM 4: Roles	• Social media influencers (with millions of followers and making millions of dollars every year as a teenager) influence so much • There's whole new realm of influencers that from a Gen Z and Millennial perspective (we're just starting to understand the implications of that) • Social media allows brands to see their leads, and connect with their leads, and they can get their reach out there
SM 5: Ease of Ties	• Brands now have the ability to create online communities very rapidly, and to be able to get feedback from those communities • they're finding that they are getting as many hits through that delivery system than they would driving that down through more of a mass media channel. And so, they're spend on mass media, they think they are going to be able to flex some of that spend on mass media to more of this personalised marketing, it's extremely personalised and you're reaching the audience that you want to reach because these people are connected to the people they want to interact with from a sales perspective
SM 6: Strength of weak ties	• they're finding that they are getting as many hits through that delivery system than they would driving that down through more of a mass media channel. And so, they're spend on mass media, they think they are going to be able to flex some of that spend on mass media to more of this personalised marketing, it's extremely personalised and you're reaching the audience that you want to reach because these people are connected to the people they want to interact with from a sales perspective • WOM has gone from your closest 30 relatives and friends to your 3000 person network
SM 8: Knowledge Sharing & Creation	• Social media play a role in post sales support, if they have questions or comments or feedback or other things • The voice of the consumer is much easier to understand and to get now, you can do through social media • Consumers give you unadulterated feedback, they're just complaining online, or they're enthusiastic online, they're being brand ambassadors • Brands are able to get feedback from online communities
SM 9: Ease of Knowledge conversion (capture)	• The brand built an application, 240,000 people were on the application and the gamers figured the solution • Social media platforms allow tons of input, allow things like sorting and voting and really rapid production of lists (of requirements) as well as the ranking and the trade off of those requirements, being able to get that very quickly and being able to understand that is a huge advantage
SM 11: Unlocking Social Relations	• They're encouraging people to blog about their products and services; functions, features, experiences etc. • They're finding that they are getting as many hits through that delivery system than they would driving that down through more of a mass media channel. And so, they're spend on mass media, they think they are going to be able to flex some of that spend on mass media to more of this personalised marketing, it's extremely personalised and you're reaching the audience that you want to reach because these people are connected to the people they want to interact with from a sales perspective • For me, this customisation issue is the next stage of co-creation, you have to create products that are entirely customisable, customisable online before you actually get it, customisable when you actually get it, and so the trend of customisation is really driving the trend for co-creation
SM 12: Pervasiveness of social media	• They actually built an application and but 240,000 people on the application and the gamers figured out how to fold proteins • the one company that I was talking to have several thousand people on Linkedin sales navigator
SM 14: Ease of Search	• Instead of spending millions of dollars on traditional research, go out and really research all of your customers (through co-creation with online communities)
SM 15: Empowerment of consumers	• How the experience that the customer is going to have, from experiencing the branding all the way through experiencing how they make decisions around the product and service which is happening more and more online as we all know, • The voice of the customer is much easier to understand and to get now, you can do it with a web search around social media • Technology and digital technologies are coming on the scene so fast that you see a real compression in the time that a product has a competitive advantage, so you've really got to get it right form the beginning • and the power of what your customers are willing to do on your behalf is a really powerful tool. • The whole model is shifting instead of looking at efficiency form the inside out • And the challenge is that consumers expectations of experiences are changing so fast, (hotel example-fast check in, no check out in the US/ contrasted with Europe).
SM 16: Intensity of interactions	• Social media play a role in post sales support, if they have questions or comments or feedback or other things • Social media platforms allow tons of input, allow things like sorting and voting and really rapid production of lists (of requirements) as well as the ranking and the trade off of those requirements, being able to get that very quickly and being able to understand that is a huge advantage
SM 17: E-WOM	• WOM has gone from your closest 30 relatives and friends to your 3000 person network,
SM 18: Visibility of Preferences/Interactions	• It's so much easier to listen to them through social media and get that information • The blogging that you can do, and the personal brand you can create, as a salesperson in today's environment, its almost becoming mandatory that you create a personal brand and that you're out there blogging about your new products and services • It's less about them articulating what the next, exact product looks like, but they will certainly give you the parameters of what it needs to do • Your customers will tell you what they need, if you both watch them and listen to them • Social media allows brands to see their leads, and connect with their leads, and they can get their reach out there
SM 19: Centrality/Connectivity	• Social media influencers (with millions of followers and making millions of dollars every year as a teenager) influence so much • There's whole new realm of influencers that from a Gen Z and Millennial perspective (we're just starting to understand the implications of that) • Social media allows brands to see their leads, and connect with their leads, and they can get their reach out there

Brand Participant E:

Social Media Characteristics	Factor mentioned in Data
SM 15: Empowerment of consumers	• If you're worried about intellectual property. You might have closed forums online, in which case your competition can't get access to that. • If your audience are very tech savvy, sort of Gen Z than maybe social media can be used to involve them in marketing and promotions
SM 16: Intensity of interactions	• Its very, quick and easy and cost effective to change marketing, and you can get feedback very easily. It's certainly easy now because of the technology that we have access to
SM 17: E-WOM	• If your audience are very tech savvy, sort of Gen Z than maybe social media can be used to involve them in marketing and promotions

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Brand Participant F:

Social Media Characteristics	Factor mentioned in Data
SM 4: Roles	• Co-creation is about targeting the consumers who are using the information at their disposable • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions
SM 6: Strength of weak ties	• Social media platforms are used to share experiences and influence decisions • Consumers verdicts can have immense consequences
SM 8: Knowledge Sharing & Creation	• Never before was the access to knowledge, networks, and resources to develop new ideas as open and non-discriminatory as it is today
SM 9: Ease of Knowledge conversion (capture)	• Never before was the access to knowledge, networks, and resources to develop new ideas as open and non-discriminatory as it is today
SM 10: Community Effects (Consumer Motivation)	• Social media platforms are used to share experiences and influence decisions
SM 11: Unlocking Social Relations	• Social media is a tool that opens and changes paradigms to some extent • Consumers are now able to go around the traditional distribution channels • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions • Consumers verdicts can have immense consequences
SM 15: Empowerment of consumers	• Concerned consumers delve deep into the wondrous world of production behind their everyday products and services • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions • Social media is a tool that opens and changes paradigms to some extent • Consumers are now able to go around the traditional distribution channels • Consumers now have unlimited access to the information and resources needed to co-create their own world • Social media can fuel so much social pressure that companies have found themselves forced to change their production processes for the better • Consumers verdicts can have immense consequences
SM 16: Intensity of interactions	• Social media platforms are used to share experiences and influence decisions • Organisations can't control the 'people-powered' information channels that consumers now use to make their decisions
SM 17: E-WOM	• Social media can fuel so much social pressure that companies have found themselves forced to change their production processes for the better • Word-of-mouth was always the strongest form of communication; in the co-creation paradigm it has become even more powerful • Organizations can't control the 'people-powered' information channels that customers now use to make their decisions • Social media platforms are used to share experiences and influence decisions • Consumers verdicts can have immense consequences
SM 18: Visibility of Preferences/Interactions	• Social media can fuel so much social pressure that companies have found themselves forced to change their production processes for the better • Social media platforms are used to share experiences and influence decisions • Consumers verdicts can have immense consequences • Organizations can't control the 'people-powered' information channels that customers now use to make their decisions

Brand Participant G:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• You can get a significant volume of feedback, ideas, and co-creation very quickly. So instead of taking 6-8 weeks in field to do a research project, we can effectively be complete in 7 days, and have reached thousand
SM 8: Knowledge Sharing & Creation	• Social media has opened up the transportability of ideas, and the transportability of the consumer voice to the brand • If you put to them (consumers) some stimulus, even as a crude as a basic prototype or a crude idea and ask them to respond to that with what they like, dislike, how they may or may not use it and then you engage the conversation and get the dialogue happening and the interactions, away you go, you start a wildfire • Feedback is instantaneous, you can post a question, a challenge, a statement on a platform and within moments have engagement
SM 9: Ease of Knowledge conversion (capture)	• It's opened up the transportability of ideas, and the transportability of the consumer voice to the brand • Online platforms facilitate the diffusion of ideas and implementation within the organisation
SM 10: Community Effects (Consumer Motivation)	• Social media creates healthy debate amongst the community. • If you invite conversations, and you invite debate, you invite interactive comments amongst the community members then you're going to get to richer collaboration, richer ideas and richer concepts
SM 11: Unlocking Social Relations	• The poster of the idea, of the comment, of the feedback can have their say and be anonymous • They can have their piece and feel good that they've had an influence • Social media provides accessibility, anonymity for many, and also creates healthy debates amongst the community. • Social media has opened up the transportability of ideas, and the transportability of the consumer voice to the brand
SM 15: Empowerment of consumers	• Brands have had to cancel their re-launch and revert to the original format because the power of the consumer vote through social media • Big brands are heavily influenced by the consumer sovereignty, not just through what is happening at the cash register, but through the power of social media. It gives you that instant trigger • They can have their piece and feel good that they've had an influence • Consumers now have inexhaustible creative power • Social media has opened up the transportability of ideas, and the transportability of the consumer voice to the brand
SM 16: Intensity of interactions	• Consumer engagement is instantaneous, you can post a question, a challenge, a statement on a platform and within moments have engagement • It's opened up the transportability of ideas, and the transportability of the consumer voice to the brand

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Brand Participant H:

Social Media Characteristics	Factor mentioned in Data
SM 2: Diversity of information	• The best ideas can come from wherever, and not form the segment you are targeting • Online co-creation provides volume and diversity, and richness in graphical assets • The quality and volume of ideas from the community is extremely high
SM 5: Ease of Ties	• We behave as other efficient media generations within the social network, and that's the way to lure the consumers to participate • Interacting through social media is familiar to consumers, co-creation companies or brands can approach consumers because it is what they are used to
SM 7: Overcoming geographical and temporal boundaries	• We co-create with consumers in over 170 countries • We view co-creation on a global scale, we have this premises that people that are used to using social media and sharing content
SM 8: Knowledge Sharing & Creation	• Online co-creation is easier as both consumers and brands are used to certain formats and ways of sending and sharing content • Social media platforms allow you to create and display content, and hence this period of a creative generation and expression
SM 9: Ease of Knowledge conversion (capture)	• The online format provides a platform and format to easily internalise knowledge and input it for qualitative research, concept screening and ideation • Online platforms facilitate the diffusion of ideas and implementation within the organisation
SM 10: Community Effects (Consumer Motivation)	• We behave as other efficient media generations within the social network, and that's the way to lure the consumers to participate
SM 11: Unlocking Social Relations	• Consumers are very efficient in managing social technologies • Interacting through social media is familiar to consumers, co-creation companies or brands can approach consumers because it is what they are used to
SM 12: Pervasiveness of social media	• Interacting through social media is familiar to consumers, co-creation companies or brands can approach consumers because it is what they are used to
SM 15: Empowerment of consumers	• Consumers now cultivate the roots of co-creation • Consumers now have inexhaustible creative power • Social media platforms allow you to create and display content, and hence this period of a creative generation and expression
SM 16: Intensity of interactions	• Online gives more ways of expression to the consumer, not only in a verbal form
SM 18: Visibility of Preferences/Interactions	• Social media platforms allow you to create and display content, and hence this period of a creative generation and expression

Brand Participant I:

Social Media Characteristics	Factor mentioned in Data
SM 4: Roles	• We target forums because the participants discuss relevant topics, it is our customers we want to target • That's one thing about social media, you can't control when the fire starts, if you get a number of influencers who say negative things, you cant prevent the downward spiral
SM 6: Strength of weak ties	• We speak and engage with online bloggers and forums to develop insights and se their behaviours • We can actively listen, create forums, create experiences with people, and from that you can change as an when needed quicker
SM 8: Knowledge Sharing & Creation	• When you have that kind of power and platform (social media), it is much easier to co-create new ideas, whenever something has to be changed or adjusted it could be done in a click • Online consumer feedback is unfiltered • If you wait for market research data, it can take 3-5 months, whereas you fire of one tweet to your consumer group and you can get an answer within 24 hours and you know more or less what your demographic wants
SM 9: Ease of Knowledge conversion (capture)	• Online co-creation is vital for consumer feedback
SM 10: Community Effects (Consumer Motivation)	• People (consumers) want to be part of something, a bigger community • Technology makes us more open to everything else • Consumers believe they think they can make a difference
SM 11: Unlocking Social Relations	• We use online platforms to gain feedback on product prototypes • Social media lets us ease consumers into talking about us as a brand and what they think about us
SM 12: Pervasiveness of social media	• There are a big share of people who really want to engage with the smaller brands and tell them what their concerns are
SM 13: Low Degrees of Separation	• Marketing the products is usually done on social media
SM 14: Ease of Search	• We target forums because the participants discuss relevant topics, it is our customers we want to target
SM 15: Empowerment of consumers	• Consumers know now they have the power to influence brands • They are more aware of the issues and there are enough brands speaking directly to consumers • There are a big share of people who really want to engage with the smaller brands and tell them what their concerns are When they are part of something they can make an influence on, they are more eager to. • That's one thing about social media, you can't control when the fire starts, if you get a number of influencers who say negative things, you cant prevent the downward spiral • The consumer will tell you what is wrong, fix it or I don't buy it • When consumers are part of something they can make an influence on, they are more eager to. That gives brands more opportunity to speak directly to the consumers
SM 16: Intensity of interactions	• Social media let brands speak directly to consumers bloggers, online forums • When consumers are part of something they can make an influence on, they are more eager to. That gives brands more opportunity to speak directly to the consumers
SM 17: E-WOM	• When we speak to them directly, it gives an advantage, getting our message across directly and through the power of them telling others • So it's just communicating that message to everybody through social media is much easier, than having posters, languages, billboards that sort of thing, rather than trying to influence them with tons of different material • Marketing the products is usually done on social media
SM 18: Visibility of Preferences/Interactions	• Social media is a great tool to research online forums and bloggers where communities of the target audience gather online usually, and then we can see what their concerns are and their feedback

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Brand Participant J:

Social Media Characteristics	Factor mentioned in Data
SM 2: Diversity of information	• When you invite people with completely different backgrounds or a different location or whatever might be different, they look at things in a different way
SM 7: Overcoming geographical and temporal boundaries	• When you invite people with completely different backgrounds or a different location or whatever might be different, they look at things in a different way • Or when it comes to consumer behaviour its more interesting to talk and share with those guys coming from that region for example
SM 8: Knowledge Sharing & Creation	• Certain needs, concerns or suggestions for product improvements repeatedly occurred in consumers' online conversations • We co-create in the early phase of innovation so the ideation phase, to get to know unknown, or needs and insights from discussions from peers within the platform
SM 9: Ease of Knowledge conversion (capture)	• Data from online platforms is easy to handle • Online data can be easily analysed and clustered in different topics • Co-creation helps draw a landscape of needs, concerns, consumer language and potential product solutions by users, which are explicitly and implicitly expressed in online communities and social media
SM 11: Unlocking Social Relations	• We created a platform ourselves to get close to the consumer • The Co-creation helps draw a landscape of needs, wishes, concerns, consumer language and potential product solutions by users, which are explicitly and implicitly expressed in online communities and social media
SM 12: Pervasiveness of social media	• In more than 500 comments per idea users approved the ideas • Starting out with a broad search, more than 200 social media sites were screened
SM 14: Ease of Search	• We target co-creators per several parameters which we found relevant, mainly age, gender and all these things. • We have the possibility to get in contact with everyone who might be interesting for us • Social media platforms allow you to apply qualitative as well as quantitative selection criteria, e.g. the size and activity of communities or the quality of the conversations
SM 16: Intensity of interactions	• When it comes to design and the look of a product, these are things you can deal on a platform and also in an online version • Drag & drop tools are used to were offer a compelling co-creation experience • Consumers are introduced to product concepts through verbal concepts and visualizations
SM 18: Visibility of Preferences/Interactions	• Starting out with a broad search, more than 200 social media sites were screened • Co-creation helps draw a landscape of needs, concerns, consumer language and potential product solutions by users, which are explicitly and implicitly expressed in online communities and social media • Certain needs, concerns or suggestions for product improvements repeatedly occurred in consumers' online conversations

Brand Participant K:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• Social media platforms provide reachability and talk ability of contests. It's how you can leverage these contests on social media and how creators can participate in them • In 3 weeks the community delivered 138 ideas from over 40 countries
SM 2: Diversity of information	• Co-creators have different creative mind-sets, and that's why the output we get leads to a lot of possibilities • If you look at the kind of the diversity in the entries as well, they're from all over the world. The quality of the consumer input is very diverse
SM 6: Strength of weak ties	• We get a lot of feedback through online platforms
SM 7: Overcoming geographical and temporal boundaries	• We co-create with people from over 170 countries • The world digital and connected, you can't be physically in touch with everyone, because we have creators is all over the world and we are a platform to connect them • Consumers look at briefs and marketing objectives in very different ways, because each country has their own cultural input as well. That adds a lots of rich data and a lot of raw entries • In 3 weeks the community delivered 138 ideas from over 40 countries
SM 9: Ease of Knowledge conversion (capture)	• In 3 weeks the community delivered 138 ideas from over 40 countries
SM 10: Community Effects (Consumer Motivation)	• Online, you can talk about the possibilities of entering these competitions, you can also share your work
SM 11: Unlocking Social Relations	• Social media is also a great way to get in touch with brands
SM 12: Pervasiveness of social media	• Your idea is looked at by 370,000 people and everybody has different interpretations • But having bigger numbers (of co-creators) and having more diverse numbers really helps in contests because you're creative participation goes up in a lot of ways and, also what happens is if you grow your community, everybody has different specialised skills
SM 15: Empowerment of consumers	• Social media is also a great way to get in touch with brands • Consumers the gods here, I think consumers have the biggest say in what works and what doesn't work • Consumers are so close with brands and they are actually dictating to brands what they should or should not be doing and how they are communicating to them
SM 16: Intensity of interactions	• Social media opens up communication. A lot of these creators may have some questions, maybe some part of the brief is not clear or maybe they want some more information so that's the best way to get in touch • You can keep a track of what you have done, improvements in entries, comments etc. • Social media platforms help us with getting a lot of feedback from the community. And working with them to deliver better contests and more interesting contest for them
SM 18: Visibility of Preferences/Interactions	• The openness and reachability of social media and the ability to share ideas is and opportunity for fame

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Brand Participant L:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• On a base level social media is a great way to advertise, gather awareness and recruit
SM 2: Diversity of information	• Social media provides access to fresh creativity from the crowd at a global scale • Co-creation is global in scope, so there is a huge difference in terms of consumer behaviour, attitudes, usages and tastes all across the world. • Co-creation provides volume and the diversity to every project
SM 6: Strength of weak ties	• Social media is a vital recruitment tool
SM 7: Overcoming geographical and temporal boundaries	• Social media is used to recruit from specific geographies
SM 8: Knowledge Sharing & Creation	• Social media provides a free-chat situation, this is useful for NPD • People are very chatty if they get to discuss a topic in a community pic
SM 9: Ease of Knowledge conversion (capture)	• The online format provides a platform and format to easily internalise knowledge and input it for qualitative research, concept screening and ideation • Online platforms facilitate the diffusion of ideas and implementation within the organisation
SM 15: Empowerment of consumers	• Consumers now have inexhaustible creative power
SM 16: Intensity of interactions	• Social media platforms allow the community to articulate their idea, visualise their idea and produce something that is tangible • Consumer contributions can be through the form of rich visual ideas

Brand Participant M:

Social Media Characteristics	Factor mentioned in Data
SM 1: Range	• There is a huge network of over 400 living labs (globally)
SM 2: Diversity of information	• Diversity in online communities is valuable
SM 7: Overcoming geographical and temporal boundaries	• There is a huge network of over 400 living labs (globally) • Social media is vital to connect people all over the world in online communities
SM 8: Knowledge Sharing & Creation	• Digital technologies can be sued to interact with the consumer, its not always easy to get insights or information from the consumer • Web platforms can be used to solicit consumers for suggestions and ideas • Consumers in communities are very knowledgeable about their shared interests and have valuable information
SM 10: Community Effects (Consumer Motivation)	• People in a community who share the same interests are more open to be creative and share information • In the end, people in a community will share, interact and come up with new and disruptive ideas
SM 11: Unlocking Social Relations	• Living labs connect numerous stakeholders in the goal of developing NPD • People in a community who share the same interests are more open to be creative and share information
SM 12: Pervasiveness of social media	• There is a huge network of over 400 living labs (globally)
SM 16: Intensity of interactions	• Web platforms, 3-D technology and augmented reality are useful in helping imagine new products
SM 18: Visibility of Preferences/Interactions	• Living labs allow you to observe consumers in a natural context • It's important to observe consumers in online communities as they interact and share ideas and information

Brand Participant N:

Social Media Characteristics	Factor mentioned in Data
SM 2: Diversity of information	• You can gather a lot of information very quickly
SM 8: Knowledge Sharing & Creation	• If it's used right, its some of the purest, unfiltered feedback that you can get
SM 9: Ease of Knowledge conversion (capture)	• There's so many different ways to source information, and social is significantly the fastest
SM 10: Community Effects (Consumer Motivation)	• I think people are a lot more open minded to iterations in their experiences
SM 12: Pervasiveness of social media	• I think the openly viewable stuff, is very valuable as long as its real people, making real comments for the right reasons
SM 16: Intensity of interactions	• You can make changes within minutes and get more and more feedback

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Appendix V: Consumer Driving Factors, Interview reactions:

Consumer Participant A:

Driving Factors	Supporting Data	Contrasting Data
Financial	• They gave $500 worth of projects in compensation (for reaching 10,000) votes, I appreciated that, I felt my contribution had been valued and honoured • It makes sense to sign over the IP, it didn't feel unexpected, I was well award that I would have to do that. As a consumer dedicated enough to submit an idea (I'm a hardcore consumer) it made sense to sign an NDA • With a brand that I have a love for, a financial reward is not as important as the involvement/interaction	
Social	• The prestige and the honour of having an idea of mine produced is a sizeable reward in itself • It makes me feel like I am more credible consumer • I create designs for my own perspective and also for the greater community (I was lucky enough to be the person creating the project but I felt I represented the interests for many) • Formal recognition means a lot, at certain milestones the brand leaves a comment/feedback, those sorts of things are like a badge of honour • Peer support is essential in the sense that it gets my idea in front of the brand, it does feel good to know people are behind your ideas (it empowers the idea)	• I haven't made many ties- there's a large ecosystem of creative and the platform is the best to share, network and talk to people compared to other platforms
Technological	• Information on the internal processes would be nice • I'm motivated by gaining knowledge about the brand – the company does a good job on defining itself for its fan base, having a presence and explaining certain things- The brand does a good job of maintaining its presence and making their intentions known	
Psychological	• The product itself promotes creativity, building whatever you like etc. • From an early age I enjoyed exploring the possibilities of the product (its an artistic media) • I am driven by exploring and creating my own things • I saw a hole in the brands's offering/ a gap, this drove me to submit a design • Definitely fuelled by creative desire • I am driven by the excitement by enhancing something that I think is already very good • Definitely feel more empowered	
Consumer-Brand Relationship	• I am a hardcore consumer, I have love for the brand involvement and interaction with the brand is most important • The company recognises there is a wealth of consumer ideas- the platform/infrastructure promotes submission- as I consumer I feel hard and appreciated	

Consumer Participant B:

Driving Factors	Supporting Data	Contrasting Data
Financial		• For us in the online community it isn't so important. I'm always building for fun, and share my passion. Some financial reward is welcome, but not much for motivating
Social	• Yes, a lot. The brand is a multinational company with tradition. To be part of this, it was my dream. Now, I'm proud to be a collaborator. • In our community we are admiring each others works, inspiring each others, and sometimes we collaborate in some builds. In my case there are two builds, that will be produced by Tthe brand, and I inspired them • It is rather important, they are the top of the builders, so their opinions can help me to getting better • Really important, I think every builder pays attention to their projects: how many supporters, how many like was the project getting. To inspiring others is a goal too, and sure we feel honored when many peers praise our works • Oh yes, online community helepd a lot of being recognized. In fact in my case it is more important to having ties and networks as the build itself	
Technological		• Typically no. I know about the brand, and I don't feel any connection in that direction.
Psychological	• I had personal motivation to be a collaborator in with the brand, it was a dream from my childhood: creating porudcts that are reflecting my personality, my creativity was a strong inspiration • Sure, my Ars Poetcia is the product, it is not just a game, it is a form of self expression • My primary drive is joy of creation, contribution is the second most important.	• (Dissatisfaction) No not much. Sure there are some sets out there, that aren't my favorite, but I agree with the idea that the brand produces sets, which can make some profit • More I was driven by expressing myself
Consumer-Brand Relationship	• It was my dream to work with the brand (from childhood)	

Consumer Participant C:

Driving Factors	Supporting Data	Contrasting Data
Financial	• The financial reward is very important, because I spend a lot of my time on this, the financial reward outweighs the altruistic motive	• In my case, my strength is in ideas (somebody somewhere in the world would have had this idea), so don't feel like I should be financially rewarded for these ideas
Social	• My focus is on providing value to the brand • If the platform is focused on social change (open idea), I take pleasure in thinking the idea will benefit people (non-profit focused platforms) • Winning contests boosts self-esteem • It feels good to have peer recognition, but it doesn't guarantee that you are going to make a difference in a product • I always think about the wider aspect, and how this would benefit the crowd (altruism and it is also a more practical approach) • A few ties, some platforms are more geared to the community aspect	• If there is not an altruistic motive on the platform, I am less happy to socialise my ideas (commercial profit-making) • Formal recognition rarely happens
Technological	• Understanding the product is an integral part of the process of creativity, in some cases I find this knowledge interesting	• Sometimes I just forget the information so I'm not adhered to the brand
Psychological	• I seem to have ideas about doing things and improving things in a different way- most of my ideas would go to waste if they didn't go out to companies • Absolutely driven by the enjoyment of contributing • Occasionally I am drive by a dissatisfaction with existing products • This whole process makes me feel more empowered • For me its not that easy to move on- I sign up after I feel I have something to contribute	

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Consumer Participant D:

Driving Factors	Supporting Data	Contrasting Data
Financial	• It is certainly a bonus to receive monthly royalty payments for the designs. I, like most designers on the online platform have a day job and the work we submit to the brand functions more as a bonus income rather than a livelihood	
Social	• A major motivating factor is that the brand has a very large and active audience and my work will be visible on a large scale. This system is much more effective than trying to promote my own work by myself • Art in general is quite a solitary pursuit so sharing designs with the community is a great way of feeling part of something bigger and is key to growing and striving to achieve more as an artist. Positive comments on submitted designs are certainly an ego boost • I think the drive stems from wondering how the community will respond to a new design. Will it score well? Will the brand select it? Will it earn me royalties? • The community is a big part of what makes the brand work. There is definitely a sense that people follow your work and are genuinely interested in seeing what you will submit next. • Yes, the core idea of the brand is that the community is responsible for the products that the brand creates. The brand is directly responding to what their audience is requesting • I self promote on social media - partly to drive sales of my products but partly for validation amongst peers • The fact that the brand have been positive to my designs have kept me submitting time and time again • Many of my Instagram followers are members of the consumer community. I also participate in the brand's forums from time to time - promoting myself and discussing different matters, such as frustrations or feedback to improve the experience	
Technological	• Yes, the more I can understand the various products that the brand produces, the better I will be at designing for those particular products	
Psychological	• Definitely. Creating art is something I need to do in order to feel like myself. When I have long periods where I am not creating art, I can start to feel depressed or anxious • I feel the need to only submit my best work mainly for myself. At the end of the day, this is my art and a reflection of me, not the brand that may sell it. • When I have an idea that I consider strong enough to execute, I don't really rest until it is finished and submitted - even if once it is finished, I realise the idea wasn't that great to begin with.	
Consumer-Brand Relationship	• The fact that the brand have been positive to my designs have kept me submitting time and time again	

Consumer Participant E:

Driving Factors	Supporting Data	Contrasting Data
Financial	• My main motivation is the money- it's a great opportunity to have money, work on my time, in my own place and support me through my studies • I have a lot to be grateful for the prizes, I have been able to afford to study and be in new york • I am not able to have a legal job because I'm on a visa • A lack of prized would mean lower quality submissions	• I have co-created for free but the quality was much lower
Social	• I like the idea of linking achievements to linked in and building a portfolio • I focus just on the brand, not the consumers- I focus on what the brands want • I feel satisfied when the brands take part in my life (recognition) • I feel more empowered, I can connect with the brands, having the power to submit ideas with no politics is a great relief • Its very important for formal recognition, its rewarding, and you feel appreciated- if there was no recognition I don't think I would continue • The feeling of being helpful to a multinational company is great- these are brands that I admire • I have increased my network, I have contact with other 'pals'- we discuss wider things than just the contests • You are helping people in a deeper way than just selling a product, you can focus on the human element, a global vision etc.- certain contests address social issues • I feel I have the power to make a big submission and put me in the position to go to the cannes film festival- as a consumer, we have the power to impact the world on a wider scale	• I don't share my submissions because I take the confidentiality agreement seriously (community support)
Technological	• I'm learning a lot and winning in my own way, I wasn't aware of certain brands, I did research and found out a lot if interesting things- I link the knowledge I have gained to things I see in everyday life • I have expanded my work in terms of brands, knowledge and culture (a lot of winnings that aren't money)	
Psychological	• I have a degree in advertising, I have worked as a copywriter so I can use a lot of my skills & experience • My background gives me an advantage over others in the community • I enjoy contributing • You are able to express yourself with no concerns about anybody controlling/managing	• Creative desire is not important

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Consumer Participant F:

Driving Factors	Supporting Data	Contrasting Data
Financial	• Of course this is a motivating factor, the brand should pay for a successful design	
Social	• I am proud to work alongside a brand with such great history, one that my childhood was passed with • Its great for my designs to reach the wider world • The people inside the brands are global experts, if they like my ideas I'm doing something right • This provides the opportunity for 'fame' • If the brands approve my design and it is released as an official product it will be sold all over the world. This is really exciting and something I can share for the rest of my life	
Technological	• Yes, I do a lot of research when designing. I especially look at the features of the product I have designed, the history of the colours of appearance	
Psychological	• I use the brands products as a hobby, now I'm going one step further and making original products • The recognition and enjoyment are really motivating • When you think about others, you are more likely to succeed. Also if you are making a product. It's normal if we think you'll take it with someone else. When I do my designs, I get inspiration from other designs. It is very important to observe, to get original sets, and to learn new new techniques. I get ideas from them, I use them in my own designs. • Yes, I feel it. Because if I only do this by thinking myself, I fail.	
Consumer-Brand Relationship	• I love the brand, it was a big part of my childhood, I am honoured to represent them	

Consumer Participant G:

Driving Factors	Supporting Data	Contrasting Data
Financial	• Mainly financial, work started to die down, I had more time • Financial (1 main motivator) • It's such a huge pay-out for the time that went into it • I've had some of the most lucrative couple of months of my life	
Social	• The quality of the clients is amazing, establishing yourself as a freelancer is tough • Peer recognition is good for the ego (not super important) but it is good to get feedback from around the world • Winning contests boosts self esteem, its cool that you get the credit, I'm building my own portfolio of successful projects with huge brands • Your work is not localised, its out there and global	• I may be way up there with the community picks (peer reviews)- but the brand doesn't select them • I put myself at the forefront (my designs meet my expectations), what would speak to me the most • Getting feedback online, I don't listen to it too closely, I trust my own skills
Technological	• The brand will get inside my head so much that I will learn a lot about them. You start noticing things in everyday life that you relate to brands • I learnt a lot of quotes, now I'm the quote guy	
Psychological	• Time and to stay engaged between work projects, 'to stop myself going crazy' keep the mind going (2nd main motivator) • Used my relevant experience and skill and applied it to co-creation • I enjoy coming up with ideas, names, copywriting • I'm interested in the idea of going freelance, this is more or less me trying freelance in a serious way • I enter a mixed bag of contests altogether; I'm winning about 1 in 4. Some are social media (idea), I won 2 for a soft drink company (Designing an illustration for the cans), I got two from a health and beauty brand (to design advertisements for tooth brushes). A lot are poster ideas/slogans, others are thinking of ideas for the future. • Coming up with ideas is really good for the mind, if I'm working with certain ideas, my mind is thinking in a completely different why than I would usually (in personal life), you become faster • There is nobody limiting your creativity, there are no bosses/restrictions- this attracts me to the brand • For each client you can flex a different skillset • The diversity of work is interesting • You see a lot of bad stuff out there (products and marketing) there is so much scope for improvement- you wonder how certain things make it • You are not restricted as a co-creator, you can send crazy ideas	
Consumer-Brand Relationship	• The quality of brands I am working with is amazing	

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Consumer Participant H:

Driving Factors	Supporting Data	Contrasting Data
Financial	• It is pretty important. I'm not sure I would have bothered if there was no financial reward.	
Social	• Yes providing value to the brand and wider community • It's nice to be recognised, but not very important. • Yes created more ties • I design a lot of custom models and share them with the community through my website, YouTube channel and other social media platforms • I have been sharing building instructions of my custom designs with the community for years, and though I do not sell kits of these models myself, many people have recreated them using the instructions I've provide using their own pieces • The opportunity to have a chance of the brand actually producing one of my designs as an official set was really appealing	• Not really. I'd be doing what I do (designing custom products) with or without the acknowledgement, influence or involvement of the brand
Technological	• I guess. I definitely keep up to date with what is going on in the with the brand and online community	
Psychological	• Very much so fuelled by a creative desire • I would never design a model for the sole purpose of submitting it to the brand. I always design primarily for my own interest. If it happens that the model might also be suitable to be submitted to the co-creation community, then that's just a bonus • I submitted a custom model to the co-creation platform, ideas.lego.com, and it was selected to be produced as an official set. I have since submitted a few other designs to the platform, one of which was not selected, and one which is still gathering support. • I am a big fan of the brands products	
Consumer-Brand Relationship	• I have a strong affinity towards the brand, I would be creating designs regardless of the co-creation network	

Consumer Participant I:

Driving Factors	Supporting Data	Contrasting Data
Financial	• The financial reward is very attractive, its amazing the brands would do that • I understand why people would be motivated by the money • Signing over IP is not a problem, unless a big company picks up your idea, it would never be made (too expensive)	• The financial reward was not even thought of, the design was for myself • I don't think people set out for fame and fortune, its more about an enjoyment
Social	• People want to see their ideas made into something real • Consumers always want what they have designed/thought of • The public went crazy for it, that was a fun moment • I was hoping the brand would see some of my stuff, and see my skills • Voting for my project was going crazy online, it was capped at 10,000, it was the top most supported ever • The recognition is great- positive comments online are great (positive experience) • This boosts self esteem • For the brand to recognise the idea, that what was I was looking for, the brand contacted- it was very important, it made it special • I create for me, not for anybody else • I've made a few friends through the community-people I chat with online • I enjoy the feedback, the community and chatting to people • So many people contacted me regarding my design, I definitely feel like I provided value to the community- I feel like I inspired other people • It's great there are so many diverse interests in the online community	• It can also have the opposite effect, if an idea is not supported it can be devastating
Technological	• For sure, it is important to learn about the product/brand	
Psychological	• I built something for myself, I was encouraged to submit by other people passionate about the brand • I never thought I would get so many votes, I made it for myself • I build stuff for me • I see my designs as art, creativity is the reason behind my ideas • I have to be proud of the design before I show it to the world, I have made lots of models but only submitted two • Motivated by a lack of products, I would like to see different products out there	

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Consumer Participant K:

Driving Factors	Supporting Data	Contrasting Data
Financial	• I had people asking to buy my models, so I thought if my ideas are good enough for people to try and buy them, I should upload them and try get them produced	• The financial rewards are of no importance to me, I would be happy to receive money but its not the gas that drives me
Social	• My idea could all over the world. It could be in other peoples houses • I always had questions coming from other consumers (are there instructions, where can I buy one of these) • I have a fanbase and I am somewhat known in the community • After consideration I understood the need for the brand to retain the IP (but I'm not particularly happy with that) • Having followed and support is a boost to self esteem • I started to co-create because I believed my ideas were good enough to provide value to the brand (the brand would make profit from my creations) • It is very important to have my submissions recognised from people within the brand • Its very good to have people within the community support and recognise my ideas • The visibility of the platform meant that people from adjacent organisations contacted me for my design skills • I was contacted by people from a car manufacturer to see whether they could use images of my model/design through the visibility of the online platforms • I really enjoy it when the brand of the model I built recognised my design (car manufacturer/Brazilian airforce)	• The support is not my main motivation thought
Technological	• I can use some of my engineering skills (project, sketches), I print 3D models of my ideas and build to scale • When I go to build I research the objects (engines etc.) • I enjoy learning about the brands or products I base my designs on	
Psychological	• I would really enjoy it if I could see one of my creations in the stores • I want to express my skills and have the possibility of other people having my creation in their home • My main motivator is just for the fun	

Consumer Participant L:

Driving Factors	Supporting Data	Contrasting Data
Financial		• Not applicable, having the brand publish an idea would be like winning a lottery, very unlikely
Social	• I sought to participate because other individuals have asked for my designs. I cannot afford the time that it would take to create plans or instructions, so posting on the co-creation platform lets me show the people that like my models that there's a chance – if they participate enough. • I enjoy sharing my work, and enjoy nice comments when the public makes them. Of course, you're also at risk for people disliking the work as well. • It would be "nice", however I am fortunate enough to have received nice feedback from builders and fans around the world • Its "nice", but there are better community forums for the brand's enthusiasts to share ideas.	• I don't care about providing value to the brand. I feel like the community is being "used" by the brand for their own purposes. I'm not sure how much "value" I'm providing to the community, they can see my creations and vote on them • I build projects I want for myself. Posting them is incidental; I do not build designs specifically for the co-creation platform • The brand makes open communication that nearly impossible, there is no "forum" or way to discuss people. I've engaged with 2 or 3 other individuals,
Technological		• The co-creation platform is not a great place to learn more about the brand, products, building techniques, or anything else.
Psychological	• Yes, though I would build things anyway and have more rewarding outlets (financially and emotionally), like blogs and YouTube • So I provide photos and stuff on blogs, and used the co-creation platform as a place to say "hey, if you really want this, then go vote for it."	

Consumer Participant M:

Driving Factors	Supporting Data	Contrasting Data
Financial	• One of the key things is the prize money • Financial reward is important	• I would enter a contest even if there was no reward if it was interesting and I had some valuable ideas
Social	• Having my idea realised or produced by somebody is important because I don't have the means to do it • Co-creation gives me the platform to have my ideas seen by other people • I can see my ideas go from paper to a product • When you win a contest this boosts your self esteem • When I see that there is a community supporting my ideas it is motivating • Its not of big importance but its nice to see others within the community to recognise my ideas • It is important for people in the brands to see my idea • I hope my idea is used by the brand (useful for the brand)	
Technological	• I try to take contests that are not related to my job (focus on concept design) and use my skills from my masters. Co-creations lets me use these skills because I don't have the opportunity in my day to day life • This gives me experience which I could not have gained otherwise, its important for me to understand and gain knowledge	
Psychological	• I can use skills from my daily job and translate this to working with brands • It is interesting and enjoyable to enter contests	

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Consumer Participant N:

Driving Factors	Supporting Data	Contrasting Data
Financial	• Financial is a the highest motivator • There is no issue with IP	
Social	• I like to create solutions that benefit the greater public • Recognition from the brand is not so important • I do feel somewhat of a responsibility, I stay away from contest that don't match with my ethics • I am goal orientated, and seek to deliver value to the community • I have created ties with one person	• I prefer the process more than recognition/winning • Social recognition, not that important, I appreciate the concept of the community but I'm not very active in it • Self esteem is not a big issue
Technological	• I like to do research about the brands and product when I enter the process • I enjoy learning about products and brands • Its always something new, you learn about something new	
Psychological	• I'm interested in working my brain to be creative in any situation • I'm motivated by the challenge of being creative, and finding different solutions • The challenge is motivating • Someone who is creative needs an outlet, financial rewards are not so important • You have to come up with something ground-breaking to be recognised- this is where creativity comes in • I feel pride and accomplishment	• Existing products don't affect my participation, its solely creative • Not particularly empowered

Appendix VI: Consumer inhibiting Factors, Interview reactions:

Consumer Participant A:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• 10,000 votes is a large milestone, I only submitted two project one get there, one got half way- If project only rack up a couple of hundred votes isn't as appealing • Creating something which isn't tied to a popular brand, it may not be as successful- and I might be less motivated to submit it to the co-creation platform (I imagine they wont be as successful) • Failure is the most significant factor stopping me form posting ideas again- for myself I don't think I have any ideas to go all the way so there's no point	
BI 2: Lock in		• My design process isn't geared towards the platform; I build for myself and for my followers on social media. As I'm creating I don't think about the brand, if I develop a good idea then I may post it
BI 3: Loss of freedom of choice		• I move freely between online platforms
BI 6: Time		• Time is unimportant- the process is where I derive most of my joy so time is not a factor (it's a non-factor)
BI 7: Effort		• Effort is a Non-factor
BI 9: Intellectual property Concerns	• The guidelines set by the brand can limit the submissions • I reached 10,000 votes, but got no feedback at all- I signed an NDA- the selection process happened behind the scenes and I didn't have a point of view • It is frustrating to reach a milestone and be rejected without an explanation- I understand many factors would be outside of my control, but even so it would have been nice to hear from their side why it didn't work- I would feel more included	

Consumer Participant B:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 4: Psychological efforts to learn		• No, not right. I know the brand is a profit oriented multinational company, every party must have their interest. • No, not. I had the knowledge before. The online community is a fair place, everything was clear
BI 6: Time		• No, the time isn't important factor. If you wish to participate and build something, you must have your neccessary time for it.
BI 7: Effort		• On the one hand it is important, more effort means a better project, but in the other hand, a smaller project can be successfull either. So the amount the effort seems not to be important.
BI 8: Forgone opportunities		• No, It was my decision, so I calculated the time before entering, and I'm aware that developing a project takes time even after entering a contest.
BI 9: Intellectual property Concerns	• Yes, the possibility to violating law or any patent, trademark and copyright issues. I'm unfamiliar with foreign legal systems.	
BI 10: Co-creation experience	• This is a hard question. The dilemma is about let the world know your creation, but ont he other hand nobody will see your name on the box in the store, just the brand's logo	

Consumer Participant C:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• Seeing a lot of people having participated in a contest affects my decision to enter	• I can take some risks, if the question is something I am passionate about, I would still throw my idea out there
BI 2: Lock in		• These contests are not about developing loyalty, they are delivering a quick win or financial reward, there are only few examples of platforms where you are locked in
BI 4: Psychological efforts to learn	• Yes, if it required a significant effort to learn I would not be interested	
BI 6: Time	• Time is important	• This is a space where brands can improve where they have this contest, sometimes it takes a lot of background reading, they don't compensate you for that time- they should make sure that people contributions in terms of time, developing a mental state etc. should be compensated
BI 7: Effort	• I have my core competences, sometimes contests don't link to my competences (e.g. illustrations) • Typically I wouldn't touch a competition that I felt required skills outside of my core competency	• If the contest feed into my competencies I am willing to commit the time/effort
BI 9: Intellectual property Concerns	• Quite often I am not happy to sign over IP	
BI 10: Co-creation experience	• Most of the contests, I have not seen people from the brand acknowledge the winners directly, the brand and the ideators are kept in separate rooms • Feedback would really help, this just seems like one manifestation of brands desire to exploit the crowd sourced brain • To get people to adhere to the brand, they need to be more transparent, and don't stop the co-creation after harvesting the ideas	
BI 11: Lack of authentic co-creation	• I suspect that co-creation platforms are a way to harvest a mass of ideas and only pay out for a few	

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Consumer Participant D:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• If I had submitted multiple designs without getting a positive result I think I would have moved onto other pursuits a long time ago. • If the failure was ongoing than yes, I would stop submitting. At the moment though, I am really designing things that satisfy my own creative instincts and that overlaps with what the brand wants to produce than its a win-win situation.	• Not really. There are so many different design styles and products represented by the brand that there is room for everything
BI 2: Lock in		• When I have an idea that I consider strong enough to execute, I don't really rest until it is finished and submitted - even if once it is finished, I realise the idea wasn't that great to begin with
BI 6: Time	• If you spend a large amount of time on a design that does not get selected by the brand to become one of their products, that design might never be used for anything and thus becomes kind of a waste of time. Therefore I only try to submit designs that are appropriate to my design style and have a life outside of the brand • I work a day job so everything I submit to the brand is done in my own spare time. Therefore time is always a factor and I need to be as efficient as possible.	
BI 7: Effort		• Not very significant. I often come up with idea just while going about my day. I don't sit down just to think about ideas.
BI 8: Forgone opportunities	• Sometimes it would probably be better to go outside or see friends and family in my spare time than to sit down at the computer doing another design.	
BI 9: Intellectual property Concerns		• The brand allows its artists to retain the rights to their designs - so this isn't really applicable.

Consumer Participant E:

C	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• At the beginning it was disappointing because I want winning • I feel frustrated with the results, I put so much effort in and get no reward- I try to do unique things and my efforts are not recognised	
BI 4: Psychological efforts to learn		• Learning would never stop me, its make it more interesting, If I can learn something knew, I can use that in different aspects of my life
BI 5: Resources	• Right now I cant invest a lot of time, I'm doing a full time masters • The brand asked me to buy the rights for the image- I incurred a costs because my idea was selected- multi billion dollar companies should be paying for the rights	
BI 6: Time	• Right now I cant invest a lot of time, I'm doing a full time masters	
BI 7: Effort	• I was putting a lot of effort in and getting no reward, I was taking it as a personal challenge	
BI 8: Forgone opportunities	• Sometimes I have a lot of projects so I cant commit to submissions • When you put time in and don't get results, you are sacrificing other things in your life	
BI 10: Co-creation experience	• Its hard to understand why some peoples ideas get selected over mine, a lot of winning ideas are very cliché- this makes me disappointed in the brand • Brands co-create because we have a different vision to advertising agencies, a lot of times they go for cliché ideas- this is unfair	

Consumer Participant F:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort		• No, no matter what I do, once I have an idea I follow it through. I have submitted multiple projects that haven't succeeded but I will carry on
BI 2: Lock in		• Not at all, if I felt forced in to it I would not be motivated
BI 4: Psychological efforts to learn		• If I am interested in the brand this isn't an issue. I am open to the challenge to overcome the difficulties
BI 6: Time	• Time is important, of course. It takes time to make a design. But if there is a time limit for a contest, then it is very difficult to design with haste, and the resulting work may not be successful	
BI 7: Effort	• I have spent up to 3 months on a submission. You have to be patient and believe in your ideas	
BI 8: Forgone opportunities	• I usually work in my free time. But when you start a project you are motivated and you can spend your spare time with it	
BI 9: Intellectual property Concerns		• As long as my design is officially produced by the brand I will be happy

Consumer Participant G:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• In certain circumstances yes, sometimes the brands are on completely different wavelengths to me, the winning ideas were disastrous- so I wont be sending things to those brands	• Because I limit that time that I spend on projects, if I lose, no sweat
BI 2: Lock in	• I get annoyed if I'm not able to submit to an interesting contest If I don't have a good excuse	• Sometimes I will enter a contest, have one look at it and then leave(vague brief)
BI 4: Psychological efforts to learn	• That is another inhibitor, sometimes its just not my field, if they're asking for ideas about something I know very little about, and its not super interesting, I probably will leave the contest	
BI 6: Time	• Time in my personal life is a factor	• I set a personal limitation on myself which is never to spend more than two days on a project (there's is such a low likelihood of winning that if I ever went beyond that I would start to get annoyed)
BI 8: Forgone opportunities	• If I had a fulltime job I would start to consider if co-creating was a good use of my time	

Consumer Participant H:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 9: Intellectual property Concerns	• As part of the submission process, you assign rights to commercialize the design to the brand. Even if the project is not selected, the brand retains the rights for a period of three years. This wasn't really a big deal for me in the end, as I had no plans to commercialize the designs myself, but it was something I considered	

Consumer Participant I:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• You can see how many people are participated, if it's a high number you may not want to enter • If the brief is wide, you think to yourself there's a low chance of winning	
BI 2: Lock in	• I feel I have to finish but it's an internal motivation	
BI 4: Psychological efforts to learn	• The information about the brand and to learn is a factor, I focus mainly on brands I know (if you really know the brand it's a lot easier)	
BI 6: Time	• Sometimes its hard to have the time to enter some of the contests • I do it in my free time, so I sometime struggle to find the time	
BI 8: Forgone opportunities		• I really like spending my time thinking about ideas and brands so I enter multiple contests at the same time. It's easy to enter and complete contests as an when you feel
BI 9: Intellectual property Concerns	• I was unable to show my work in my portfolio because the brand owned the IP • It wouldn't stop me from entering, but you can't share your winning idea	
BI 10: Co-creation experience	• Sometimes the briefs are too open, its not very specific and this makes it difficult to understand what the brand is looking for how to approach the brief • A vague brief can give the impression that the brand doesn't know exactly what they want	

Consumer Participant J:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort		• Failure is not really relevant, I've already had idea succeed (I have had failures) it didn't bother me because I achieved success
BI 6: Time		• Personally time is not an issue, it was pretty easy to do
BI 7: Effort		• I was doing this for myself anyway so I enjoy it, if you're not enjoying it you shouldn't be using the platform
BI 10: Co-creation experience	• I wish I got a little more feedback from them and understood their process a little bit more (why they choose some and why not others) • It makes me disappointed to not know the answers to simple questions like that	

Consumer Participant K:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort		• It would stop me if an idea was successful. My previous projects received very little support and this didn't stop me.
BI 4: Psychological efforts to learn		• I enjoy learning about the products and brands I am building. I choose the projects so I have a keen interest. My next project is huge and will be very time consuming but it is fun for me.
BI 6: Time	• Without the online platforms I don't think I would be designing and building models (it would take too much time to spread the word) • If a project takes too much time to be built I work on a number of projects to make sure I am delivering new designs	• Time is not a significant factor
BI 7: Effort		• The harder the challenge is the more energy I have for it (its fun) • Because I am interested in the model and I enjoy it, nothing stops me
BI 9: Intellectual property Concerns	• Initially I wasn't very happy with the IP framework	

Consumer Participant L:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort		• Not really, I'll share stuff on other platforms where there is no "fail". And on the co-creation platform there is no real chance of success • I will stop submitting ideas because it's a black hole that sucks up ideas, but provides no user community forum or other "reward" for the participants
BI 2: Lock in		• I submit projects I have already created, so not really. I get frustrated if the brand rejects stuff without great feedback
BI 4: Psychological efforts to learn		• There's not really much to learn on the co-creation platform, I don't see this as related
BI 6: Time	• Yes, time is very important	
BI 8: Forgone opportunities	• Yes. My main goal with the platform is to show people my own fans that I'm "trying" to give them what they want (a kit of my models). I don't expect to "win" the content.	
BI 9: Intellectual property Concerns		• Yes, or I would not have submitted the project. In my case there are very few viable financial outlets to gain money from my projects, so this is not very limiting
BI 10: Co-creation experience	• There's no interactive feedback and it is difficult to "share" building techniques and the like. Ideas is nowhere near as engaged with the community as other platforms • No. Less empowered after learning more about it. The brand could care less about the ideas and the people.	
BI 11: Lack of authentic co-creation	• I feel like the community is being "used" by the brand for their own purposes. • The brand's terms are one-sided. They have no incentive to encourage participation or to increase the enjoyment/rewards of the people participating	

Consumer Participant M:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• Before the risk of failure was important	• Now I don't consider it as important
BI 2: Lock in	• If I join or register with a competition it is hard to stop sometimes (I join because I have a good idea in my head) • I only take part when I am motivated enough to finish it	
BI 3: Loss of freedom of choice	• In some way the brand can restrict your imagination	• If I don't like the brief I would not participate
BI 4: Psychological efforts to learn	• Sometimes I struggle to come up with good ideas or choose an idea to focus on	• If I like the topic or the theme of the contest I don't mind putting in research and efforts to learn
BI 6: Time	• Lack of time can be a significant factor, co-creating is not my day job	
BI 9: Intellectual property Concerns	• Sometimes I am not happy to sign over the IP	• When I realise I cannot produce the product by myself I sign over, I prefer to see my ideas come to reality rather than have my name on it

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Consumer Participant N:

Inhibiting Factors	Supporting Data	Contrasting Data
BI 1: Risk of failure despite invested effort	• Risk of failure an issue	
BI 2: Lock in	• My (internal) drive stops me from leaving	• Logistically speaking I could stop at any point
BI 4: Psychological efforts to learn	• I am inhibited by a lack of knowledge of video, the technical part inhibits me- even if I have a good idea I don't have the skills to deliver it	
BI 5: Resources	• Creating video requires a lot, equipment, people, permits etc.	
BI 6: Time	• It is time consuming to a degree, it's a constant effort almost like a vocation	• Not at all
BI 7: Effort	• With video, the effort blocks me (I learnt from failed attempts)	• I am driven by the enjoyment of being creative so effort is not an issue • The effort of reading/understanding is not an issue
BI 8: Forgone opportunities	• This is an issue, I could he spending my time doing other things	
BI 10: Co-creation experience	• When the project is not well defined, I lose interest	