An action research approach to develop a framework for the development of dot-com ventures for SMEs

A thesis submitted for the degree of Doctor of Philosophy

By

Azael Serrano

Department of Information Systems and Computing

Brunel University

January 2012

Those who plan do better than those who do not plan even thou they rarely stick to their plan.

- Winston Churchill (1874-1965)

Plans are worthless. Planning is essential.

- Dwight D. Eisenhower (1890- 1969)

Abstract

Internet adoption and e-business has been of particular interest amongst researchers and practitioners, however, most of the studies focus on large organisations and only recently there has been a shift of interest to e-commerce/business adoption by Small and Medium Enterprises (SMEs) with little or no reference to *dot-com* initiatives. It is well documented that SMEs have significant and different challenges in comparison to large organisations in the brick and mortar domain. Therefore, investments in the e-business domain (such as dot-com start-ups) present even more challenges to SMEs. Consequently, this research offers an in-depth study of the start-up process of a dot-com company by examining the stages, phases, and components that are key for this process.

The empirical contexts of this research are three projects with three different SMEs that have actively participated in the creation of a new dot-com venture. These were analysed using an action research approach with interpretative and qualitative analysis. The main component of the action research approach covers a longitudinal study (2 years) divided in four cycles, followed by two case studies used for the evaluation of the findings of this research.

These results of all research cycles, which in turn, can be considered the contributions to theory and practice of this research, can be seen in two ways: the development of a start-up framework for SMEs, and a Business Information Database (BID) that supports the implementation of the framework. The framework is designed to visualise, from a strategic perspective, the stages that an organisation have to go through in order to initiate a new *dot-com* venture. Is proved that organisations have, directly or indirectly, followed specific steps related to the phases described in the framework. Hence new entrepreneurs can use the phases of the framework to facilitate and ease their start-up process looking at the main features of each phase. The BID was constructed under two premises: a) to structure the main documents and corresponding building blocks used in industry and in the proposed framework, such as the Strategic Plan, Business Model, Business Plan, and Business Case, and b) to identify the relationships among the building blocks of all the aforementioned documents. The BID and related documents can be used to identify how a particular piece of information (e.g. building block) affects other aspects of the dot-com initiative. The BID can be also be used as an independent artefact to assist organisations through the structure of the business documents in the start-up process, even if the organisation is not following a specific framework. Hence the BID itself can assist entrepreneurs to start-up firm without the need to have an overarching framework. Last but not least, practical recommendations are offered to practitioners and stakeholders interested in developing new ventures within the *dot-com* domain.

Dedication

This thesis is dedicated with deepest love and everlasting respect to:

Moje serce nie może w pełni wyrazić wdzięczności i uznania, które kieruje pod adresem mojej żony, Joanny. Jej bezwarunkowa miłość i wsparcie emocjonalne pomogły mi w ukończeniu tego etapu mojego życia. Pomimo ciężkich chwil, udało się. Dziękuje Pani Serrano za Twoja troskę i zrozumienie.

Agradezco también con todo mi cariño y amor a mis padres Ariel y Elvia, que sin los cuales simplemente   no existiría, pero sobre todo les agradezco que siempre apoyaron mis sueños personales y profesionales. Mi más profundo agradecimiento a los dos, los quiero.

Por su puesto no puedo olvidar a mis hermanos, Ariel, Erick y Alan, que a pesar de haber hecho difícil mis primeros años en este mundo, me han brindado siempre su amor y apoyo incondicional. Ariel gracias por ser mi segundo padre; Erick sé que me estas mirando desde el cielo con una sonrisa, Alan que te puedo decir… no hay palabras para describir el apoyo y soporte recibido de tu parte, especialmente en todo lo relacionado con esta tesis… tal vez un simple gracias sea lo más apropiado por el momento.

To start with, my heart cannot fully express the gratitude and appreciation that I owe to my precious wife Joanna, whose unconditional love and emotional support have encouraged me to finalise this stage of my life. Despite the pressure I have gone through. You have never been but caring and understanding person, thank you Mrs. Serrano.

I also thank, with all my love, to my parents, Ariel and Elvia, without them I simply would not exist, but mostly I thank you for your unconditional support and encouragement of my personal and professional dreams. My deepest thanks to both of you, I love you.

Last but not least I would like to show how grateful I am to my brothers, Ariel, Eric and Alan, who despite having not made easy the first years of my life, have always given me their love and unconditional support. Ariel, thank you for being my second dad; Erick, I know you are always looking down from heaven with a smile, Alan ... what can I tell you? There are no words to describe help and support received from you, especially your valuable advices and insightful contributions to complete this research … thus at the moment I can only say a simple thank you.

Thank you all…

Acknowledgments

All research activities are collaborative in nature and this research is not the exception thus the support of a number of individuals is gratefully acknowledged. Many people are part of this journey which I will not be able to enumerate. Thanks you all because you directly or indirectly have contributed to at this point of my life... My thanks can be expressed in terms of supervision, empirical, emotional and financial support.

First and foremost, I am grateful to express my deepest appreciation to my supervisor Dr Anastasia Papazafeiropoulou for her time, scholarly advice and patience through-out my studies. Her support and thorough advice overcame always my research problems.

Secondly thanks are due to those individuals who contributed to the empirical side of this work. Specifically I am grateful to Andres Nieto, Antonio Diaz, Dr. Serrano, Dr. Al-Debei, Harry Mylonadis and Phil Moss.

I am also grateful to my fellow students and staff of the department of Information Systems and Computing who have offered exchange of ideas, intellectual stimulation and friendship along this journey.

Last but not least I want to acknowledge as well my gratitude and love to my parents, my wife and brothers who provided nothing but love, support and encouragement. Without them this stage would not been accomplished.

Publications

The following papers have been published during the course of this research and present various aspects of the theoretical and practical findings that are detailed described in this research.

Papers in refereed conference proceedings

Chen H, Serrano A. E., Serrano A. (2010) "Investigating Factors Affecting Integration Technologies Adoption in Organisations" Proceedings of the 16th Americas Conference on Information Systems, (AMCIS), August 12-15, Lima, Peru.

Serrano A. E., Serrano A. Al-Debei M. (2010) "Implementing an e-business model for a dot-com SME: Lessons Learned" Proceedings of the 16th Americas Conference on Information Systems, (AMCIS), August 12-15, Lima, Peru.

Gutierrez A., Orozco J., Serrano A., Serrano A. E. (2006) "Using tactical and operational factors to assess strategic alignment: an SME study" Proceedings of the European and Mediterranean Conference on Information Systems (EMCIS), July 6-7, Alicante, Spain.

Contributions in edited volumes

Kumar, P. Gutierrez, A., Orozco, J., Serrano, A. and Serrano, A.E. (2007) "Using tactical and operational factors to assess strategic alignment: an SME Study" In Technology Management: Concepts and Applications. India: The Icfai University Press, pp. 113-127

Contents

Appendix section

List of tables

List of figures

Chapter 1:
Introduction

Azael Serrano
Brunel University

Contents

Chapter 1: Introduction

1.1 Introduction

Nowadays the Internet has grown to become a global network with more than one billion users (Cerf, Vinton and Kahn, Robert 2006), and it has revolutionised the way of interchange information across individuals and organisations and changed the business philosophy in organisations. However, it was until 1984 when the Internet gained popularity with the introduction of Netscape (Weisman 2000) and also, until early 90's organisations perceived the potential of the Internet and the term e-Commerce emerged (Turban et al. 2000), this term later evolves into e-Business.

E-Business is much more than just web sites and interaction with customers/providers and financial transactions. E-Business is nowadays the modern way to make business; it includes not only buying and selling but also servicing customers and collaborating with business partners, and involves integration across business processes and communication within the organisation (Rowley 2002). Therefore, E-Business in today Business Management is as important as accounting, finance or marketing. In other words e-Business provides the mechanism to put working together various parts of the organisation by the use of technology (Davis et al. 2003). Moreover, for some companies like the aforementioned *dot-com* companies which are companies that do most or all of the business through the Internet, e-Business is the main component.

Although Internet adoption and e-Commerce has been of particular interest amongst researchers and practitioners, only recently there has been a shift of interest to e-Commerce/business adoption by Small and Medium Enterprises (SMEs) with little or no reference to *dot-com* companies. Moreover, the literature up to date in the IS domain has little or no information related to the start-up process for a *dot-com* company, and what are the steps to follow in order to have a coherent, logical and consistent business implementation or in other terms, starts a new business initiative. In addition to the standard limitations reported in the literature in the SME arena, SMEs have restricted access to information related to the documents used during this process, and how organisations can use these documents to start a new venture. Moreover there are not clear indications of how a SME start-up a new venture under the *dot-com* format, thus there is also not clear indication on how organisations can use and incorporate the web 2.0 tools and applications into the value proposition, taking into consideration the increasing use of such applications in today's world and the importance of such technologies within the *dot-com* context.

Consequently, this research recognised the importance of developing a set of procedures or recommendations to follow in order to develop a *dot-com* company, stressing the difficulties and challenges those SMEs faced during this process.

This chapter serves as an introduction to the research conducted on this thesis. Hence in the next section the motivation for this research is presented, principally focused in the needs of *dot-com* companies and the challenges faced during this process. In section 1.2 the motivations for this research are explained, in section 1.3 the research aims and objectives are defined, section 1.4 is an introduction of the methodology followed in this research, and finally section 1.6 presents the structure and content of the entire thesis.

1.2 Motivations for researching the *dot-com* start-up process whiting the SME context

This section presents the researcher's motivations for investigating the start-up process, and the relevance of this process whilst developing new *dot-com* ventures. Hence the start-up process reported in the literature is summarised in section 1.2.1, followed by the involvement and relation of the business logic with this process that is also related with the Business documents used by organisations in this process. Finally section 1.2.4 presents the main limitation of SMEs which has major impact in the start-up process, and section 1.2.5 portray the limitations of previous research made in this domain.

1.2.1 The need of The start-up process in IS

A "new venture" is the end result of the process of creating, planning, organising and establishing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth (Gartner 1985). Hence a new venture can be defined as a firm that has not yet reached a phase in its development where it could be considered a mature business (Serarols et al. 2008).

There is not much research undertaken under the perspective of the IS referring to the creation of new firms or start-ups. However, there are a number of studies from many different theoretical perspectives, such as economics, physiology, business management and social sciences among others, attempting to portray this process. These studies that aim to understand the start-up process can be summarised in the studies of Gartner (1985) and Gatewood et al. (1995).

Most of the studies related to the process of venture creation have mainly related to the factors of success and failures of such firms, e.g. Simpson et al. (2004), Lewis et al. (1984) and Headd (2003), or focused to the start-up process from the entrepreneur point of view (Shane et al. 2000). Other

3

studies, such as Galbraith et al. (1983), Kazanjian et al. (1990) and, Liao et al. (2005) have portrayed and assumed a linear, unitary process for venture creation that described a set of activities, beginning with the recognition of a business opportunity and culminating with the first sale, however there are some indications in the literature that indicates the start-up process might not be linear. Moreover some studies suggest that the start-up process for creation new firms is complex and the developmental stages are hardly identifiable (Liao et al. 2005).

Although, the process of venture creation has increasingly become the centre of study among academics and practitioners, and some studies have been undertaken under different perspectives, still few studies have differentiated between the start-up process from tech-based companies versus non-tech based, such as the research of Liao et al. (2008), and even fewer studies have look into the *dot-com* arena, such as Aspray et al. (2008). However, none of this studies have analysed, neither described the start-up process for a new *dot-com* venture.

Hence the challenge of this research is to describe the kind of activities entrepreneurs need to take for start-up a company, the number of activities and the sequence of such activities; thus, first an analysis of the entrepreneurial process of new venture creation need to be investigated, in addition this research aims to identify whether is there a relation between the number and sequence of those activities with the success of create a new venture, throughout a revision of the principal models and frameworks exploring the characteristics of the start-up process.

1.2.2   The role of the business logic

In the Information Systems (IS) literature, the process of venture creation is linked with the process of creating value as depicted in the business logic system (BLS). The BLS is described by Petrovic, Kittl and Tekstenc (2001) and later Osterwalder and Pigneur (2002), as the logical flow of information and actions that companies need to follow (from top to bottom) in order to develop a valid value proposition and "highlights the relevant e-Business issues and elements firms have to think of, in order to operate successfully in the Internet era" (Osterwalder et al. 2002).

The Business logic system (BLS) as explained in Osterwalder and Pigneur (2002) describes the relationships between the Strategy, the Business Model (BM) and the Business processes; see figure 1.1. The BLS makes clear the existence of three levels, which ideally any organisation has to follow from top to bottom to succeed in the elaboration of a company or project. The first level (planning level) involves the elaboration of the Strategy as a main step to develop an organisation or project, the second level (architectural) implies the creation of the BM, which it will help to implement, provide shape and find gaps or inconsistencies on the Strategy, also is the main platform to

4

understand and develop the business processes and can help companies to understand, change, communicate, measure, simulate and learn more about the different aspects of the core functionality of a firm. The final level (Business Process) refers to the implementation of the BM, in other words, how the company will operate and how the processes are linked to the BM, and therefore to the Strategy. Furthermore Petrovic et al. (2001) highlighted the importance of the definition of the Strategy as a higher level, explaining that changes on the highest level of the BLS always result in changes on the inferior layers or levels.
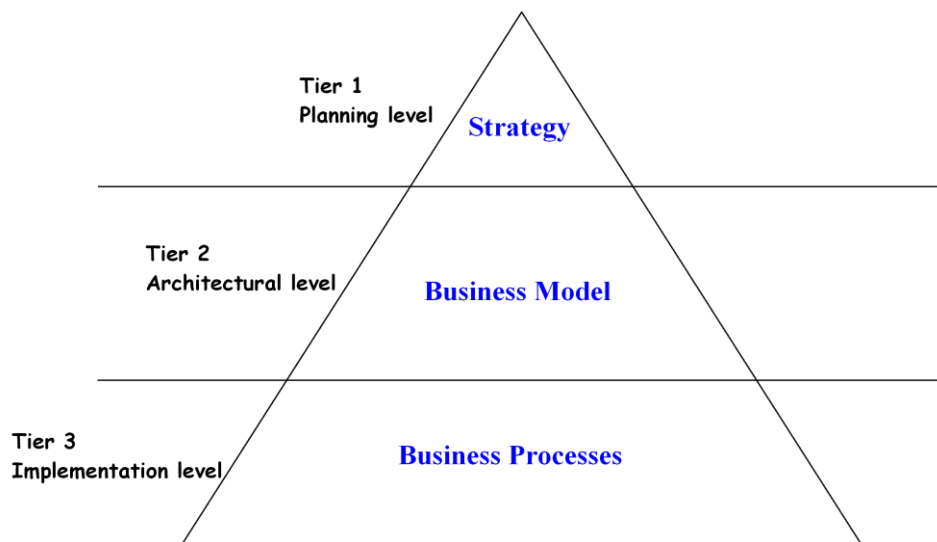
Figure 1. 1: Business Logic System, From Osterwalder & Pigneur (2002)

One of the key steps to develop an e-Business solution highlighted in Petrovic et al. (2001) and Osterwalder and Pigneur (2002) is the definition of a Business Model (BM), which requires the expertise from different areas such as finance, technology, marketing, and project management. Whereas it is known that Small and Medium Enterprises (SMEs) count with limited resources to undertake this type of e-Business initiatives, and thus prompt to failure. Broadly speaking Business Models (BM) are used for a broad range of informal and formal descriptions to represent core aspects of a business including purpose, offerings, strategies, infrastructure, organisational structures, trading practices, and operational processes and policies. The application of such models in practice, however, is not an easy task and requires of expertise in the different areas the model touches upon.

Moreover, the BM explains how the business works and it has a direct relation with the Business value in relation with the Architectural level, in this manner the BM is a representation of the organisational Strategy and is the starting point for planning the business processes or the core operations of the business (Lamersdorf et al. 2004). Hence from the IS perspective, the BLS can be seen as the overall activities that organisations need to perform, at least to some extend, to facilitate the gestation of a new venture.

1.2.3 The confusion of the Business Documents

The term 'Business document' is vague and the literature does not show a clear unique definition, also this term can be used in different contexts. In general a business document can be defined in two approaches; the documents that companies are required by law to keep for a certain period of time (statutory records), such as accounting and financial documents (e.g. balance sheet), or the documents that companies used for internal purposes and normally are used to plan certain activities related to the core activities of the firm, also a third definition of the business documents refers to all the documents that a company produce and interchange with customers, suppliers and partners, such as invoices, memos, quotations, business cards and so on. However in this research, the second definition will be used to describe the term 'business document' and it is defined as follows: A business document are a focused collection of information that is processed as a unit and intended for use by people and primarily include natural written language, supplemented with tabular text and graphics, to present ideas and/or facts relating to a different business process in general or part of it.

Nowadays companies, particularly medium and large, are using different types of business documents (electronic or paper based) with the purpose of article the different actions needed to deploy their strategies. However there is not a standard definition of such documents, neither a common agreement of the functions of the existing documents and the uses. As a result, SMEs have to face a variety of concepts and documents linked to the development of a new venture, product or specific strategies. Documents vary by type, function and size and can be use through different stages of the start-up process, the common documents used by practitioners can be summarised in four types; Strategy development (Strategy Planning), Planning (Business Plan), description of the business and definition of sources of income (Business Model), and documents used to seek for approval for projects or investors (Business Case). However as previously mentioned these documents do not have a unified definition and are used interchangeably, also the documents can be rather confused for entrepreneurs. For instance, a Business Case (BC) and Business Plan (BP) are related to the Business Model (BM) but are not necessarily the same. This creates even more confusion to the inexperienced SME entrepreneurs when trying to find direction to this kind of projects. Additionally, the "Business model" and "Strategy" are terms used mistakenly in business, and still these concepts remain confusing and difficult to use for most practitioners and academics. However these are concepts with substantial practical value when it comes to concepts that are fundamental to organisations' performance. Hence those definitions needs clarity as no organisation can afford blurry thinking (Magretta 2002).

Furthermore an extra confusion encountered in the literature, particularly with SMEs where the owners have limited knowledge in some aspect of these concepts, is the arbitrary use of the term Business Model and Business Plan, which in essence both documents are completely different things. The first one, the business model refers to the whole deployment of the Strategy while the Business Plan is a document generally used to develop and portray the action plans that an organisation or individuals need to perform in order to achieve a goal. Similarly, in the case of the business case and Business Plan, these are documents that have coexisted as one thing, however organisations like OGC and PMO have make clear this differentiation between this two documents as explained in chapter two of this thesis. Moreover a further definition of those documents is presented in next chapter in order to clarify the functionality of each document and the relationship with the start-up process.

1.2.4   SME Limitations (in terms of the start-up process)

"Emerging organisations are likely to be small, fragile and volatile". Hence, the new venture creation process, mainly in the *dot-com* arena implicitly entails the SME characteristics for the reason that new ventures in the *dot-com* field normally involves the participation of one or few entrepreneurs, thus the majority of the new *dot-com* ventures are born under the SME umbrella (Katz et al. 1988).

SMEs are known to have several limitations when it comes to deploy new initiatives mainly related to the lack of resources which they count, such as the lack of human resources, financial resources and managerial resources (Wymer et al. 2005; Dholakia and Kshetri 2004; Tucker et al. 2004; Jones et al. 2003; Del Aguila-Obra et al. 2006).

Additionally to the challenges SMEs faced, *dot-com* organisations have even more challenges to solve as there is little information available for these organisations. Inexperienced entrepreneurs in the *dot-com* market have the wrong impression that a good idea can make money in the Internet without having proper strategic planning, as it was the case of successful *dot-com* companies such as Facebook, Google and e-bay. However it is proved that a brilliant idea in isolation is not enough to succeed in the market, as it depends from other factors such as the background of the entrepreneur and the capital available for initiate the new venture. Additionally, SMEs tend to have little or no strategic planning at all and they are used to take ad-hoc decisions. Whilst this may work in the brick-and-mortar domain, competition in the web is fierce and an eBM (e-Business Model) can be rapidly replicated, thus strategic planning is essential to avoid failure (David J. 2010).

Another problem faced by SMEs is the lack of Strategy that these firms normally present. The lack of the Strategy or a not well defined Strategy leads the new venture to failure, moreover the lack of Strategy creates a gap in the process of building a BM which is not addressed in the literature, and

therefore the business logic system (BLS) is broken, leading to an unsuccessful BM and weak business processes.

In addition to this challenge, SMEs count with limited resources to lead and understand the significance of the selection and implementation of the BM and the impact that it may have on the desired results. For instance, e-Business models found in the literature are mainly based on the assumption that organisations have a well defined Strategy, which is not the case for many SMEs neither the case of new *dot-com* initiatives that are not directly linked to the core business activities.

Finally, a *dot-com* company by nature has to deal with the use of new technologies emerging over the net, such as web 2.0 tools and applications. However, SMEs do not know how to employ web 2.0 technologies in benefit of the core business, and there is no information available in the literature in that respect. Despite, the switch of interest of researchers concerning this domain, there is still a small amount of studies regarding how SMEs make use of the web 2.0 technologies to beat their deficiencies that usually SMEs have against large organisations. E.g. Lack of resources, marketing strategies, qualified personnel and so on (Helmers et al. 2011; Rogers et al. 2011).

Hence another motivation to study the start-up process for *dot-coms* is to investigate how to overcome SMEs limitations to succeed in the start-up process. SMEs are known to lack of resources, human or financial, to develop robust solutions and thus face several challenges when trying to choose and implement a business model and to succeed in the start-up process.

1.2.5   Limitations of previous research

This study touch upon different areas of research, thus the limitations of previous research is presented in five sections; the start-up process, *Strategy* development, Business models (BM), business documents used by organisations and the web 2.0 technologies.

The Start-up process: The studies concerning the process of start a business has been on discussion over the last three decades, those studies have use other terms referring to the description of the actions needed to be undertaken for the creation of a firm, the different concepts analysed in the literature are; "gestation" (Reynolds et al. 1992), "organisational emergence" (Gartner et al. 1992b), "pre-organisation" (Katz et al. 1988), "prelaunch" (McMullan et al. 1990), "the organisation in vitro" (Hansen 1995), "nascent entrepreneurs" (Carter et al. 1996b) and "Start-ups" (Van de Ven et al. 1990, Pool R 1989, Vesper 1990). Whilst some of these studies focus on the identification of the various stages or steps in the start-up process, others studies focus to encapsulate the types of entrepreneurs who embarks in this process, thus are more focused in the characteristics of the entrepreneurs and their motivations to start-up a firm (Carter et al. 1996b).

The academic literature and the information found in the Internet from practitioners and consultancy companies regarding the start-up process have coincided in a certain number of steps that entrepreneurs need to achieve for the successful development of a firm. However the number of steps or actions to be undertaken varies in number and focus. For instance, the majority of the information provided by consultancy companies focused in the legal and financial aspects to start a business, such as the legal and tax registration, in the other side the academic literature, particularly in the social sciences, have focused in the characteristics of the entrepreneur, analysing the factors that determine the success or failure of a start-up firm.

As previously mentioned, the actions or steps described in both, the literature and Internet, varies largely in number, however the main steps can be encapsulated in five key aspects; a Market research, Financial aspects, the creation of a Business Plan, Determination of the Selling proposition or value proposition, and particularly for the development of a *dot-com* company; the development and maintenance of the portal.

Moreover, the literature in the area normally embraces the following steps that companies need to consider (not necessary in that order) to start-up a new venture:

- o   Decide the Company structure
- o   Personnel characteristics needed
- o   Seek and get professional help (lawyer, accountant, experts)
- o   Obtain licences and permits
- o   And for *dot-com* companies: chose the name and domain

Although, these key aspects or steps describes the what to do, and some how, the order of the actions needed to develop a firm, still the information available does not provide the how to do it?, or in order terms, the information presented up to date has not described the particular actions that entrepreneurs need to follow to start-up a new venture. Moreover the literature shows that the majority of the frameworks and models attempting to explain the start-up process, does not expressively embrace SME organisations, with the exception of the research of Katz et al. (1988), Birley et al. (1994), Carter et al. (1996a), Barrow (2009) and, Gartner et al. (1992a), where the authors use the concept of "entrepreneur" or "founder" as a single entity akin to the characteristics of SMEs.

However, the literature in the SME domain related to the start-up process has primarily focused to the origins of success and failure of SMEs, covering mostly three areas (Watson et al. 1998): Motivations for business start-ups (Storey 2002, Mayes et al. 1990, Mazzarol et al. 1999), Factors

influencing success and failure (Ray 1993, Richard L. Osborne 1993, Smalibone 1990), and growth of small business (LeBrasseur et al. 2003, Davidsson et al. 2006).

Although the growing research in this area, still few studies have explored the process of venture creation in *dot-com* firms. The research of the *dot-com* firm is still in its emergent phase, and there is more to know about the phenomenon and the elements of the venture creation process (Serarols et al. 2008, Carrier et al. 2004, Jiwa et al. 2004, Serarols-Tarrés 2009). As a result of these studies new concepts have emerged such as the "cyber-entrepreneurs" and "cybertraders" (Carrier et al. 2004).

Carrier et al. (2004) have conducted an exploratory study on the entrepreneurial process of creating a firm on the Internet and the results of their study argues that the "cyber-entrepreneurs" are performing basically the same stages that "traditional" entrepreneurs use for the creation of a new venture, despite the fact that they belonged to different industries. However, some other studies (see Wilson, 1999) suggest that additional steps need to be added to the common steps, that are especially intended for *dot-com* firms or e-Business initiatives (e.g. obtain a domain name and construct website and e-mail systems, payment secure systems). Hence there is a need to research in the area of new *dot-com* ventures to analyse the difference of these kind of ventures with the traditional business types.

Business Model: The Business Models proposed in the literature have been mainly designed or created for traditional business such as "brick-and-mortar" business, and despite the latest turn of interest for researchers to propose new BM to adjust to the new types of organisations, like the organisations operating through Internet, e-Commerce initiatives and *dot-com* companies, still this models are created in order to aid large organisations or to adopt e-Commerce BM within SME brick-and-mortar business types, with little or not mention to the *dot-com* domain, see (David J. 2010, Chang et al. 2007, Gillmer et al. 1999, Gordijn et al. 2005, Linder et al. 2000, Mahadevan 2000).

The concept of the BM has been used widely in the domain of e-Commerce, hence descriptions, definitions, classifications, taxonomies and implementation approaches into business models have been considered and studied in the literature, specifically for Internet commerce (Afuah and Tucci, 2003; Alt and Zimmermann, 2001; Gordijn and Akkermanns, 2001; Pateli and Giaglis, 2004; Gordijn, Osterwalder and Pigneur, 2005). Despite these efforts, there is still no universal identification of the e-Business Models (eBM) main components that need to be considered when implementing an eBM.

Additionally, these BM or eBM established in the literature are mainly based on the assumption that the organisation has a well defined Strategy, which is not the case for many SMEs neither for the case of new *dot-com* initiatives. Although the advantage that the BM offers to organisations, the BM has

not been used in full, more specifically in SMEs who have been reluctant to the use of BM, mainly for the lack of knowledge of the BM per se (Zheng et al. 2004, Serrano et al. 2010).

Strategy development:

The literature in the Strategy development arena is vast, however the main studies in this domain came from the Business School and the focus of these studies are mainly centre in brick-and-mortar business types, with little or nor information for *dot-com* companies. Moreover, the literature in this area has mainly worried for the creation of knowledge and value creation (Esper et al. 2010, Nonaka et al. 2005). Although the studies up to date have not explicitly portrayed the connection of the Strategy with the other two layers of the BLS (BM and Business process). What its more, SMEs particularly in the *dot-com* domain, are normally lacking of a well defined Strategy, which makes more difficult the understanding of the links between the BLS.

Furthermore, the literature between the Business and the IS domain has presented some overlaps and confusion between the terms "Strategy" and "BM" which makes even more difficult the understanding and differentiation of those concepts which are essential for the development of a new *dot-com* venture. As a result a clarification of such terms is needed in order to comprehend the start-up process and the relationships among those concepts.

Business documents: The literature concerning the definitions and uses of the business documents is rather little and it mainly concerns with the "traditional" business documents created by organisations already established such as trademarks, business firm seals, contracts, bills, stamps, etc (Tianjin Shi dang an guan, 2009), with little or not information related to the documents needed to start-up a company. Moreover, the literature has neither associated the use of business documents with the documentation of the activities to start a new venture, with the exception of the Business Plans which are described as a formal statement of a set of business goals, the reasons why they are believed attainable, and the plan for reaching those goals (Pinson 2008, Armstrong et al. 1987).

Web 2.0: It seems that web 2.0 technologies have a direct and strong relationship with the creation of a new *dot-com* venture, particularly in the areas of community and network creation. Therefore it is necessary to look at such technologies and the relation with the new venture creation, particularly for *dot-com* companies. Despite the continuous growing of such technologies, still web 2.0 have not been study in full, furthermore, there are no evidence in the literature clearing up how web 2.0 can be incorporated on the BM, neither information on where or in which element or elements of the BM these technologies can be used. Hence, there is a need to understand the business uses of web 2.0 technologies and the relationship with the Strategy development and the Business Model structure.

1.3   Research aim and objectives

The main aim of this research *is to propose a framework for the processes involved in the development of a dot-com company with emphasis on the business documents and challenges related to the deployment of the business logic (from the Strategy to the implementation).*

Therefore the focus of this research is the examination of the practices for the deployment of a *dot-com* company from the conception of the idea to the implementation of the processes, looking closely to the relationships among each of the phases or steps involved in the start-up process. Furthermore, this study aims to investigate the documents involve in this process. The results of the research will help stakeholders to identify the major challenges for the implementation of a *dot-com* company and the importance of the strategic alignment with the Business Model and the Business Plans. Hence the following specific objectives have been stated as:

- *Investigation of the phases/stages identified in the start-up process.*
- *Investigation of the relations between the Strategy, the BM and the Implementation (processes) for organisations, with emphasis on the examination and assessment of the existing Business Models and the challenges of aligning these 3 phases especially for dot-com companies and SMEs.*
- *Identification and description of the main business documents required for the creation of a company.*
- *The use of longitudinal Canonical Action Research (CAR) to study the process followed by a SME involved in the creation of a new dot-com venture with the purpose of aiding the researcher to develop the framework describing the main steps followed.*

The aim and objectives derived from the research motivation will be further analysed in chapter two, highlighting the gaps in the previous and current research in the areas of start-up and new venture creation and the related business documents, as well in the areas of e-Commerce adoption and diffusion. Additionally this research will concentrate on investigating the literature related to the business uses of web 2.0 technologies under the dot-com sector, and the examination of the relation of web 2.0 technologies and the BM and how these initiatives can enhance the operation for a dot-com company through the design of a cost-effective portal.

1.4   Introduction to methodology

Information systems is a multidisciplinary field and the selection of the appropriate research method has not been easy, Information System is multidisciplinary and more a social, rather than a technical subject. Thus, a researcher on the field has to choose among a variety of research methods, approaches and techniques, in order to develop an appropriate framework (Galliers 1992).

12

On the research context under investigation there are several social, political and cultural issues related to the start-up process and e-Business, thus the Strategy used on this research will be **Interpretative** research and finally, concerning the research Strategy, the **Action Research** and the **Case Study** approach had been chosen as is explained below.

After an analysis, for the purposes of this research the **interpretative research** approach have been selected as the underlying research assumption. And the reason of chosen this approach corresponds to the previous literature consulted which shows that there are many social, political and cultural issues related to electronic commerce implementation in SMEs and this issues are more notable in the *dot-com* sector, also the study of e-Business adoption and implementation cannot be separate from the organisational and cultural context of SMEs.

The reason for chosen a **qualitative research approach**, corresponds to the reason that this approach study things in their own natural place, in other words, on site, and try to understand the phenomena in terms of the meaning that people bring to them (Denzin et al. 2000). Finally it's been notable that qualitative research approach has been used in several studies related to this research and the field in which this research is conducted.

A combined approach has been used in this research trough the use of two methods; the **Action Research** and the **Case Study**. In the initial stage of the project a Canonical Action Research (CAR) was used in order to enhance the general concepts of the start-up process and get deeper understanding of the process to develop a *dot-com* company. More specifically a Mexican SME has been contacted for this purpose and the researcher was invited to participate in the development of a *dot-com* initiative. For the last part of the research two case studies were conducted with the purpose to validate the Framework and the artefact proposed as a result of this research.

1.5   Structure of the thesis

The research performed and described in this thesis has followed three stages or phases which have helped the researcher to delineate the activities related to each phase of the research and have also facilitated the recognition of the objectives (outcomes of each phase). Figure 1.2 present the three phases used in this research which are also explained in chapter 3 of this research.
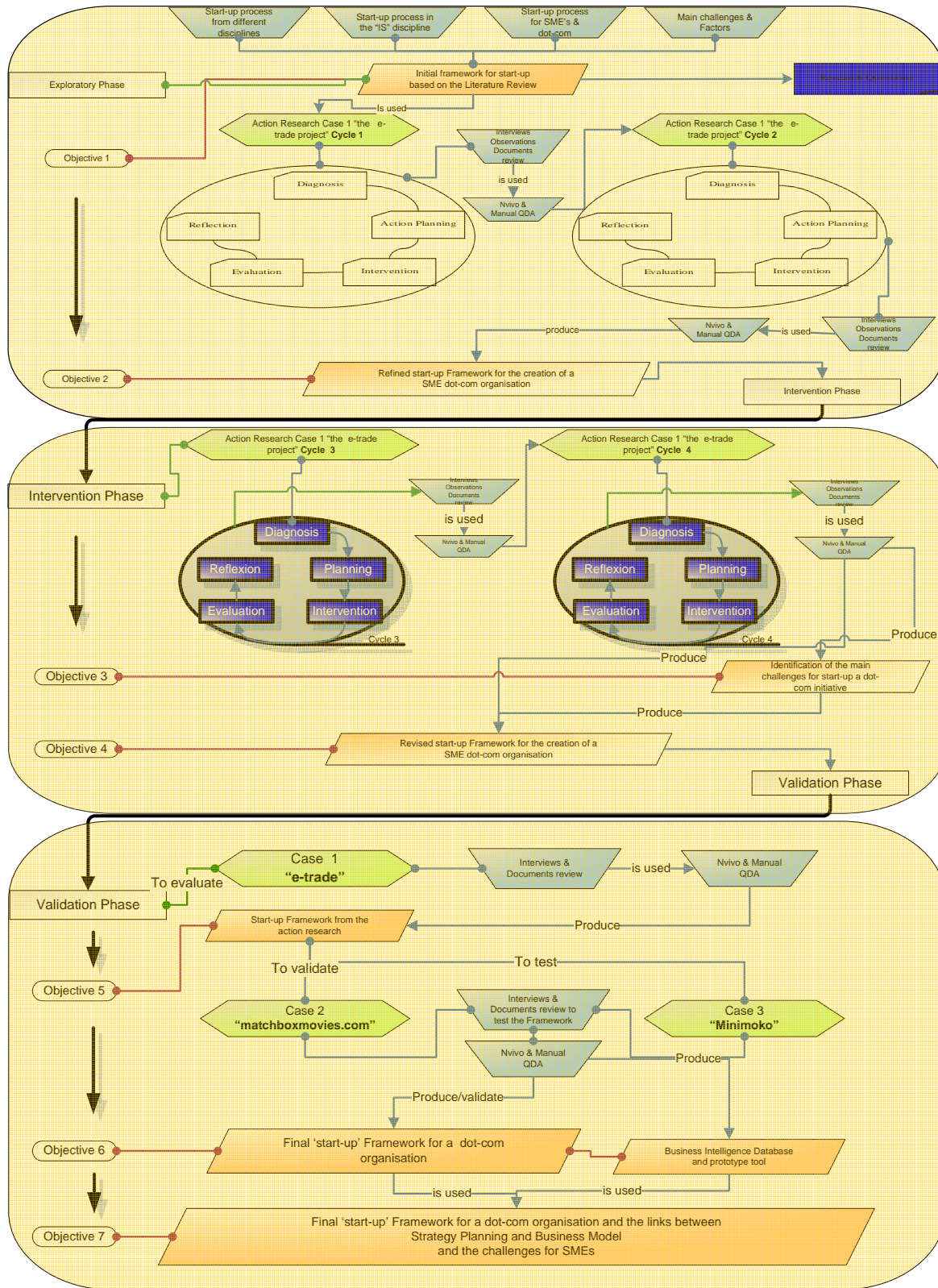
Figure 1. 2: Phases of the research design

Exploratory phase: In the "Exploratory phase", the researcher after made a dedicated literature review on the field decides the research question and the research Strategy to follow in the study. The results of this initial analysis are included in chapter 1 and 2 of this thesis; also chapter 3 describes the research Strategy followed and the reasons behind those selections. Moreover, this stage involves some background research and the actual execution on the field work, thus at this stage the first and second cycles of the Canonical Action research (CAR) is analysed and the result of this analysis is portray in chapter 4.

Intervention phase: In this phase two more cycles of CAR are performed in the organisation under study in order to enhance and improve the framework for the development of a new *dot-com* initiative. The analysis of the activities performed during these cycles is presented and further discussed in chapter 5 of this thesis.

Validation phase: the last phase of this research, "*evaluation phase*", has an additional cycle of AR which is presented together with *two case studies* that are analysed in order to enhance, evaluate and support the findings of this research.

Consequently this thesis is structured around seven chapters as follows.

Chapter One gives an overview and background of this research. It provides a background to the research, motivation for the research, limitations of previous research, objectives and an overview of the methodology selected.

Chapter Two provides the background to the research, which presents the definitions used in this research of a SME and *dot-com.* Furthermore this chapter presents the information related to the start-up process in general and in particular from the SME perspective. This chapter also reviews previous research studies related to SMEs, start-up process and *dot-com* in order to differentiate this research from similar studies.

Chapter 2 also examines the adoption and use of e-Business by SMEs and *dot-com* organisation, particularly glimpses into the web 2.0 technologies and the relation of these technologies with the Business Model.

Chapter Three addresses the research methods used in this research to examine the implementation and deployment of the Business Models by SMEs. This chapter also explain the justification for the selection of the research methodology and the detailed presentation of the specific methodological approaches followed.

Chapter Four gives a detailed description of the empirical context of this research. Also provides an exhaustive description of the participants involved in the fieldwork carried out. Furthermore, this chapter provides some background information about the organisation involved in the field study and their experiences in the implementation and deployment of the business logic system, with focus on the Business Model.

Moreover this chapter presents the first two cycles of CAR conducted in the organisation under study (a Mexican SME initiating a *dot-com* venture).

Chapter Five presents the analysis of the field study conducted in the second phase of this research that covers the last two cycles (cycle 3 & 4) of the CAR conducted in the organisation under study. Hence this chapter presents the framework produced as a result of the CAR undertaken in this research.

Chapter Six presents the third phase of the research; the evaluation of the research findings. This chapter uses the data obtained from two organisations which have successfully completed the start-up process. Hence this chapter presents the evolution of the framework and the resulted artefact.

Chapter Seven summarises the research findings and gives an overview of the research in terms of theory and practice. At last, limitations of the research and further research directions are presented.

For ease of reference the structure of the thesis is summarised in figure 1.3 below.

Research outline

Chapter 1:	⇒	Introduction and Motivation for research

⇓

Chapter 2:	⇒	Literature review on SMEs, dot-com, Business Logic System, Business Models, and Web 2.0

⇓

Chapter 3:	⇒	Selection of appropriate research methodology

⇓

Chapter 4:	⇒	Description of empirical context: Background of the company under study and CAR cycles 1 & 2

⇓

Chapter 5:	⇒	Empirical investigation of the stakeholders involved in the deployment of a dot-com firm: CAR cycles 3 & 4

⇓

Chapter 6:	⇒	Empirical examination and evaluation of Framework proposed through two case studies

⇓

Chapter 7:	⇒	Contribution, conclusions and further research

Figure 1. 3: Thesis outline

1.6   Conclusions

This research aims to produce a framework or list of activities to assist start-ups and any SME who wants to incursion into the e-Commerce field, mainly for *dot-com* companies. This framework will provide a set of recommendations or steps to follow in order to help the decision-makers or any stakeholder involve in the development of a new venture under the *dot-com* domain.

Furthermore, at a practical level the developed framework will be useful to all stakeholders interested in participate in the e-Commerce/e-Business domain, particularly to help the decision-makers to gain knowledge and give the necessary importance to the development of a BM based and aligned with the Strategy of the organisation and to produce and implement the business process needed to start and operate a new *dot-com* venture.

Also at a theoretical level, this research contributes to both the stakeholders and the theory. In the first instance, this will be achieved by understanding the relationships between the three tiers of the BLS and the relationship with the start-up framework. Moreover this research attempts to contribute in the business and IS domain by understanding, identifying and describing the corresponding business documents needed to deploy a new venture.

These contributions will become evident in the following chapters, and also will be discussed in detail in the final chapter (chapter 7).

Chapter 2:
Background research

Azael Serrano
Brunel University

Contents

Chapter 2: Background Research (Literature Review)

2.1 Introduction

This chapter provides an overview of the literature for the creation of a *dot-com* company within the SME context in order to understand the state-of-the-art in this domain and to justify the rationale of this research. This chapter can be divided in two sections. The first section presents the definitions and characteristics of the different concepts used in this study, hence a definition of Small and Medium Enterprise (SME) is portrayed together with the definition and characteristics of a "*dot-com*" company.

The second part of this chapter presents a comprehensive review of the start-up process of a company. Analysis and developments in the field are presented with the view to position this research in relation to existing work. The aim of this review is to identify the 'the state of the art' in the start-up process in different contexts: General (including large organisations), SMEs and *dot-com* companies. Moreover this chapter presents the trends and challenges involved in this process together with the barriers and limitations affecting SMEs.

2.2 SME definition and characteristics

Small and Medium Enterprises (SMEs) are a very diverse group of businesses which usually operate in the formal sector of the economy, thus SMEs play a fundamental role in the industrial development of a country. The importance of the SME sector is recognised worldwide, mainly for the contribution of these companies to the socio-economical aspects of the countries' development, such as employment, Gross Domestic Product (GDP), promotion of exports and fostering entrepreneurship, among others (Keskin et al. 2010). SMEs represent a considerable part of the European Economy, with an estimated of 19.3 million enterprises defined as SMEs in this region which is equivalent to the 93% of the total of organisations in the European Economic Area (Lukacs 2005). These millions of SMEs are the backbone of the European economy and a key source of innovation and growth, providing around 65 million jobs which is an approximate of 66% of employment within the EU, almost two thirds of the total employment in the region (European Commission 2007).

In the United Kingdom (UK) SMEs are considered as the backbone of the economy with 56% of the non-government jobs and 52% of the total turnover, this is a smaller shared compared with other European Union countries, mainly due to a bigger proportion of employment in large corporations in the UK than elsewhere in the EU (Keskin et al. 2010, Lukacs 2005).

In the developing world the private economy is almost totally covered by SMEs and usually SMEs are the support of the economy providing with one of the few real sources of employment. More

specifically, in Latin America the governments recognised that SMEs are the main source for job creation and are important players in the main sectors of the economy, such as technology, supply chains, commerce, and agriculture (Eikebrokk et al. 2007). The majority of the enterprises on developing countries are SMEs, from this group 80% to 90% of companies are micro-enterprises with less than 10 employees. This type of business has flourished among the major regional economies, especially in Brazil and Mexico (Keskin et al. 2010, Lukacs 2005).

Classification of SMEs

SMEs are often classified by the number of employees and the value of their assets. However, the classification varies from region to region and across countries. Frequently a SME definition depends of the size of the economy and the sector in which a SME operate. For instance, in the European Union (EU), SMEs by definition employ less than 250 employees. Nonetheless SMEs are very diverse, from dynamic, flexible and innovative companies to traditional, family-based enterprises, not to mention start-ups which are generally fragile organisations with enormous growth potential (European Commission 2007). Hence, for the purpose of this research, this section aims to clarify the definitions and characteristics of SMEs, as well as the definition and characteristics of *dot-com* organisations as the baseline of this study.

The definition of a Small and medium enterprises (SMEs), differs depending on the characteristics of the market and different countries or economic regions in which a SME operates. For example, the definition of a SME differs vastly in developing countries like New Zealand, South Africa, Peru or Mexico, to the bigger counterparts like Unites States of America, United Kingdom or the European Economic area (EEA). However, those definitions coincide in three main characteristics: *Turnover*, *investment of capital* and *number of employees* (Lukacs 2005), being the number of employees and the turnover the 'most critical aspects' and the 'common criteria' to differentiate a SME from large enterprises (Secretaria de Gobernacion (Mexico) 2011, EUROPEAN COMMISSION 2009, Industry of Canada 2011, NAICS 2010).

In the EU the European Commission in 1996 adopted a single definition of a SME that has been used across the community programmes. In this recommendation (96/280/EC) SMEs are classified by four main criteria such as; pay employees, turnover, balance sheet and independence (EUROPEAN COMMISSION 2009). The European Commission (2009), adopted the *"Recommendation 2003/361/EC"* on 6th May 2003, to take effect from 1st January 2005, which defines SMEs as organisations with fewer than 250 employees and a turnover less than 50 million Euros per year or a balance sheet less than 43 million Euros. Within this classification, *Micro enterprises* are organisations with fewer than

10 employees; *small enterprises* have between 10 and 49 employees with an annual turnover not exceeding 10 million Euros, and Medium enterprises have up to 250 employees not exceeding 50 million Euros of turnover as the limit to belong into this classification (European Commission 2010). The SME definition for the European community is presented in table 2.1.

SME Definition			
Enterprise Category	Ceilings		
	Staff Headcount	Turnover	Balance Sheet
Medium-Sized	< 250	≤ €50 Million	≤ €43 Million
Small	< 50	≤ €10 Million	≤ €10 Million
Micro	< 10	≤ €2 Million	≤ €2 Million

Table 2. 1: SME definition from the European Commission 2010

In the UK, "The Companies Act 2006" (Amendment Regulations 2008), for the purpose of accounting requirements, defines small and medium companies as follows; "*a small company is one that has a turnover of not more than £6.5 million, a balance sheet total of not more than £3.26 million and not more than 50 employees. A medium-sized company has a turnover of not more than £25.9 million, a balance sheet total of not more than £12.9 million and not more than 250 employees*" (The Companies Act 2006), the SME definition for the UK is illustrated in table 2.2.

Size	Turnover	Balance sheet	Employees
small	≤ £6.5 million	≤ £3.26 million	≤ 50
medium-sized	≤ £25.9 million	≤ £12.9 million	≤ 250

Table 2. 2: SME definition in UK, Source: The Companies Act 2006

In Latin America, an SME is generally categorised by turnover, investment of capital, energy consume, and the most used: the number of employees. Normally the number of pay employees is the most common criteria to classify an SME, as example in Mexico a company has been classified in four categories according with the number of employees and the turnover, as shown on the table 2.3.

Definition of a Small and Medium Enterprise accordingly to the "Diario Oficial de la Federación (México)			
Level	Number of employees		
	Industry	Commerce	Services
Micro	till 30	till 5	till 20
Small	31 to 100	6 to 20	21 to 50
Medium	101 to 500	21 to 100	51 to 100
Large	500 +	100 +	100 +

Table 2. 3: Classification of SME in Mexico, source: SIEM- Mexican Business Information System

In terms of this research, the definition of SME used throughout this dissertation is a combination of the definitions of the Mexican government and the UK legislation, for the reason that the organisations under study belong to these countries. Also considering the sector in which this study is based, the *dot-com* sector, the number of employees and turnover of large organisations differs substantially, such as Facebook which reports 3,000+ employees in 2011, or Google reporting 20,000+ employees in the same year. Hence for the ease of use in this research a SME is defined as an organisation with less of 250 employees and a turnover not exceeding the £25 million.

As previously mentioned this dissertation is focused on SMEs participating or with the intention to participate in the *dot-com* market. Therefore, the definition and characteristics of these types of business are described in the following section.

2.3   *Dot-com* characteristics

In order to understand the origins of the *dot-com* organisations a glimpse into the Internet history and evolution can be seen in table 2.4. Internet has evolved in different ways since its origins, covering two main aspects; the social aspect and the business facet of Internet. In one hand Internet has evolved into a way to transmit information between persons and organisations and also allowing new ways of communication and socialising. On the other hand, Internet has benefited organisations and business in general throughout different mechanism to perform faster and better business activities such as selling, buying, and promoting, among many other activities.

The business facet of Internet is dated from the beginning of the Electronic Fund Transfer (EFT) in the mid- sixties and Electronic Data Interchange (EDI) which the beginnings are dated from 1968 (Sienkiewicz 2002, Scala et al. 1993). However it was until 1984 when Internet gained popularity with the introduction of Netscape (Weisman 2000), and it was on the early 90's when practitioners and organisations became aware of the potential of this application and the term "e-Commerce" emerged (Turban et al. 2000), since then, e-Commerce and e-Business have increased popularity along with practitioners and researchers and is still growing and gaining popularity among stakeholders leading to different ways to use and get the advantages that Internet offers to individuals and organisations. A summary of the e-Business chronology is presented in table 2.4.

e-Business Chronology
mid 60's - 1970's: Electronic Funds Transfer
Late 70's - Early 80's: EDI - Electronic Mail
Late 80's - Early 90's: Groupware
1990's: World Wide Web
2000: e-Commerce and E-Business (*dot-com* boom)
2005 - 2010: M-commerce (mobile commerce) and web2.0

Table 2. 4: e-Business chronology

Dot-com companies fall into the umbrella of a wider area namely e-Business, and is a term relatively new, however the origins of the term are dated on the *dot-com* bubble which roughly covers the years of 1995 to 2000 and refers to the rise of Internet sites and the tech industry in general (Kroll et al. 2010). During this period many companies were developed to use the advantage of the Internet and reach a large number of customers, therefore the term *dot-com* was originated to elucidate the usual URL that ends in ".com" of the websites operating at this time.

The majority of the Internet-born successful firms that fit into the category of a *dot-com* company were at their conception Micro or Small companies thus also falls into the category of a SME, less than 100 employees and a turnover around the £6.5 million. For Instance the examples of "Facebook", "Flirk", or "Google" among many others are some examples of *dot-com* organisations that fall into the category of a SME at the beginning of their operations, although these companies soon after become large organisations. Hence a *dot-com* company is a firm which does all or almost all their operations through the Internet following an e-Business Model as it is further described in next section.

2.3.1   *Dot-com* definitions and characteristics

The term *dot-com* Company or simply *dot-com*, also known as *dot.com* or *dot com,* is relatively new, coined in the late 90's during the *dot-com* bubble, which refers to a company which mainly operates over the Internet. However, there is not much academic information defining the term "*dot-com*" apart from the studies about the *dot-com* "boom" or "bubble", though this term refers only to the organisations born during the emerging of Internet and the financial burst of those organisations during this period. Moreover the literature in this domain mainly covers a long list of *dot-com* failures and the reason behind those failures (Mahajan et al. 2002). Some examples of these disastrous failures are, "CyberRebate", "theglobe.com" and "exite@home" among several more.

The *dot-com* term has been used mainly in two ways. The first refers to companies that emerged during the late 1990's in the aforementioned "*dot-com* bubble", and embraces companies using a Business Model based in the Internet. The majority of those firms were start-up companies launched with a weak Business Model and most of them failed to succeed, others were existing brick-and-

24

mortal companies that redesign their Business Model to participate in new Internet market and compete within new markets through the Internet (Kroll et al. 2010, Mahajan et al. 2002, Mahajan et al. 2002, Goldfarb et al. 2005). The second use of the term *dot-com* refers to current companies which are Internet-born, and all its operations are over the Net, however there is not a standard definition in the academic literature about this concept.

The Cambridge dictionary online describes a *dot-com* organisation as "*a company that does most of its business on the Internet*" (Cambridge 2011), The Free Dictionary by Farlex defined the term as "*a company that operates its business primarily on the Internet using a URL that ends in '.com'*" where '.com' stands for commercial (Farlex clipart collection 2003), also the business dictionary.com defines the *dot-com* as an IP address ending in ".com" and also and expression for a firm conducting its business over the Internet (Business Dictionary.com 2011). In order to not to fall into confusion the definition of a *dot-com* company used in this research is stated as follows: "a *dot-com* organisation is a firm that is born specifically to operate in the Internet and does all or most of its business on the Internet". The characteristics of this type of organisations are described below.

Characteristics of a dot-com:

- o Must have a website.
- o The website normally (but not necessarily) is using a URL with the '.com' at the end.
- o Not necessary to have physical presence.
- o e-Commerce or e-Business in place

Moreover, due to the nature of this research, and additional definition need to be stated, this research deals with the process of developing a *dot-com* company under the SME context, therefore a definition of a *dot-com* SME is provided below.

Dot-com SME definition: Despite the majority of the *dot-com* companies are, or at the beginning of their operations where a SME, the researcher has combined these two terms (*dot-com* and SME), as the main companies under investigation fit under these two definitions, therefore an explanation of a *dot-com*, small and medium enterprise is provided as follows:

A *dot-com* SME company is a firm which does all or almost all their operations through the Internet following an e-Business Model, and also falls into the category of a SME, less than 100 employees and a turnover up to £6.5 million, as established in section 2.2.

Web 2.0 and *dot-com*: A *dot-com* organisation by definition does most of their business through the Internet; therefore new technologies available nowadays in the net, such as the web 2.0 technologies, have become a powerful and new channel for diffusion and promotion and have to be studied in

detail. Previous studies in this domain have shown that web 2.0 technologies have a significant effect on organisations; particularly some studies have portrayed the advantages of social networks in start-ups firms, as a channel to build relationships with actual and possible customers (Jenssen et al. 2002). *Dot-com* companies are now expected to include these types of technologies within their services. Hence an analysis of these technologies is presented in the appendix A as part of the literature review on this domain.

2.4 Adoption and Use of e-Business by SMEs and *dot-com* organisations

2.4.1 Challenges on the adoption and use of e-Business by SMEs

Electronic commerce literature has been mainly preoccupied with either successful examples of large organisations or with e-Commerce disastrous failures (Grandon et al. 2004, Pandya et al. 2005). Although the existence of studies on e-Commerce adoptions by SMEs have become known (Bharati et al. 2006), these are still limited as they mostly report on lack of full e-Commerce adoptions by SMEs (Lawson-Body et al. 2006, Chong et al. 2007). These studies suggest that the exploitation of E-Business by SMEs has not been well documented and understood.

Internet and e-Business adoption seems to be related to the size of the organisation thus the SME sector is less likely to invest in new technologies. The significance in this topic has been of interest over the past years under the assumption that e-Commerce/business offers new opportunities to SMEs based on the disadvantage of the size, recourses, geographical isolation and market reach (Wymer et al. 2005).

Researchers in the field have been studying the factors or variables that affect the fully adoption of e-Commerce by SMEs. These variables are classified as either barriers or incentives but differ from author to author. For example some authors focus in the influences of external factors which are determinants for the e-Commerce adoption by SMEs. Economical, technological, legal and financial factors are the most considered among the literature (Molla et al. 2005), along with additional barriers or factors that have been reported in the literature such as resistance to change, lack of education about the potentials of the e-Business, the lack of flexible software, the shortage of skilled labour, lack of government assistance, incorrect technical training and limited access to knowledge created by research institutions (Hadjimanolis 1999, Papazafeiropoulou et al. 2001, Athanasios 1999). Also SMEs faced procedural, organisational and socio-technical barriers (Lind 1998).

Several studies have focused on the identification of these variables, resulted in different ways of classify them. For instance some authors base their analysis in three or four variables while others use 15 or more variables leading to a variety of factors and variables to be investigated (Kanter 2001,

Windrum et al. 2004). Consequently, Wymer and Regan (2005) have made a classification of these variables and as a result they create a table classifying the variables into four main factors, as shown on the table 2.5.

Environmental factors:	
Environmental factors identified in the literature relate to markets, competitive pressures, government rules and regulations, suppliers, vendors, partners and customers.	
Competitive Pressure	Competitive pressure from other Internet adopters
Government	Rules and regulations
Market	Viable market or customer base for e-Commerce
Partners/Vendors	Availability of the right partners
Supplier Readiness	Willingness of suppliers for electronic business
Knowledge factors:	
Knowledge factors relate to executive knowledge and experience, employee expertise, recognition of needs and opportunities and exposure and experience with technology and change management.	
Change Experience	Employee experience
Executive Experience	Experience of top executives with computers and the Internet
Innovativeness	willingness to adopt new technology
Models	Models of successful use
Need	need for change or implementation of Web and Internet Technologies
Prior Experience	prior experience with new technology implementations
Trust	confidence in Web and Internet Technologies
Understanding	of available opportunities and options with e-Commerce
Value	Perceived value or relevance to the business
Organisational factors:	
Relate directly to availability and use of internal resources	
Capital	Access to capital
Employee Reduction	Resulting reduction in number of employees
Priority	Priority relative to other projects
Profitability	Projected profitability
Technical Expertise	Availability of technical staff or consultants with web-skills
Technology factors:	
Technology-related factors that potentially affect e-Commerce adoption decisions.	
Cost	Cost to setup and maintain
EC Technology	Technology for selling products or services online
Infrastructure	Access to network services or infrastructure to support Web and Internet Technologies
Reliability	Reliability of Web and Internet Technologies
Security	Security issues
Technology Availability	Availability or adequacy of existing technology and tools

Table 2. 5: Factors influencing the e-Commerce adoption decisions by SME (source: Wymer and Regan, 2005)

Hojecer, Del Aguila-Obra et al. (2006) argued that the majority of the studies researching the factors, internals and externals, affecting the adoption of IT, are mainly focused on the identification of technological factors related to the barriers to the technology adoptions by large organisations and organisations already established, there are only few studies covering the SME sector particularly in the Internet domain (Del Aguila-Obra et al. 2006).

An SME has more challenges to utilise e-Business than large companies, as often the SMEs lack of a coherent IT investment Strategy, and also lack of standards and interoperability which increases the risk for these companies in technology decisions and investments. However, SMEs have opportunities as well, the small number of employees it makes easier the decision making and the implementation of organisational changes, the internal communication is often more "friendly" and also for a SME is easier to cooperate with other SMEs (Selhofer 2005).

The dot-com context

There is little information about "*dot-com*" organisations and the adoption of the e-Business initiatives. Part of it could be due to the fact the use of e-Commerce or e-Business technologies within *dot-com* organisations are implicit. The definition of *dot-com* firm normally is considered in the SME sector as the majority of the *dot-com* organisations started as an SME.

Nowadays**,** there are two types of firms making use of this new concept. On the one hand, firms with physical presence (traditional companies) use the Internet as a new distribution channel or alternatively as a logical extension of their traditional business. On the other hand, there are *dot-com*, Internet start-ups, or "cybertraders" that have been specifically conceived to operate in this new environment (European Commission 2007, Goldfarb et al. 2005).

However, in both cases (SME and *dot-com*), the entrepreneurs are facing lack of information related to the process they need to follow in order to embark in such activities. The information available describes a large number of individual actions, which can be rather confusing. Even more, those actions do not advise the entrepreneur about the critical factors to be considered in the development of a new venture under the *dot-com* context. The following section explains in more detail the information available for starting a business and in particular a *dot-com* company.

2.5   The start-up process and related business documents

The studies concerning the process of start a business has been on discussion over the last three decades. Studies from many different theoretical perspectives, such as economics, physiology, business management and social sciences among others, have attempted to describe the start-up

process. Those studies use different terms referring to the description of the actions needed to be undertaken for the creation of a firm, such as Venture creation, Gestation, and Start-up process among many others (Carter et al. 1996b). Conversely, there is not much research undertaken under the perspective of the IS domain explaining the creation of new firms or start-ups.

Hence, this section aims to provide an overview of the activities undertaken by firms engaged in the creation of a new venture, the emphasis of this literature review is to understand the start-up process that SMEs need to undertake. Therefore in the following sections the key steps of the process for the creation of a new enterprise are summarised and the introduction of the Business Logic system (BLS) is portrayed.

Start-up definition

Different definitions of a start-up organisation have been given along with the literature, and the scholars have considered different concepts to explain the start-up process such as; "gestation" (Reynolds et al. 1992), "organisational emergence" (Gartner et al. 1992b), pre-organisation (Katz et al. 1988), "prelaunch" (McMullan et al. 1990), "the organisation in vitro" (Hansen And Wortman,1989), "nascent entrepreneurs" (Carter et al. 1996b) and "Start-up" (Pool R 1989, Venkataraman et al. 1990, Vesper 1990). Whilst some of these studies have focused on the identification of the various stages or steps in the start-up process (Gibb and Ritchie, 1982), the majority of the literature reported has focused to encapsulate the types and characteristics of entrepreneurs who embarks in this process (Carter et al. 1996b).

Diverse definitions are found among the literature in the start-up arena. Gartner (1985), Chrisman et al. (1998), Carter (1996) and Serarols (2008), however, coincide in the definition of the start-up concept: A "new venture" is the end result of the process of creating, planning, organising and establishing a new business that develops, produces, and markets products or services to satisfy unmet market needs for the purposes of profit and growth. The studies that aim to define the start-up process share some similarities related to the characteristics of a start-up company. For instance, the definition of a start-up organisation needs to fall at least into one of the following statements as defined by the Strategic Planning Institute and explained in the work of Gartner (1985) and Carter (1996).

- o   Is an independent entity
- o   Has a new profit centre within a company which has other established business

Also an organisation is considered a start-up if:

- o   The owners must acquire expertise in product, process, market and technology

- o   Results are expected within a year of the investment

- o   The competitors consider it as a new entrant in the market

- o   The customers consider it as a new source of supply

Although, the studies investigating the start-up process is vast and several definitions have been provided, still there is not a clear delineation of when the start-up process starts and when the process ends. However the majority of the research performed normally starts with the entrepreneurial intentions and the business idea. The end of the start-up process of a firm is not clearly stated in the literature either, however the literature concur that the process or steps to start a company finishes with the birth-date of the company, witch is the date a company is an active participant of the economy, and normally is denoted with the first sale (Reynolds et al. 1992).

In order to understand the process that organisations need to follow to start a new company, is necessary to have a glimpse into the main studies covering this domain, hence the following section describes the main research made under this concept, specially looking at the main stages or activities described in the literature.

A review of the start-up process

 Similarly to the work of Carland et al. (2000), this section examines and summarises the existing models and frameworks for "the new venture creation" or models analysing the start-up process and presented the main publications in this domain. Table 2.6 presents a summary of the majority of the models examined in this research, stressing the most common steps and characteristics for each model and the focus of the study. A comprehensive review of this area can be found in Appendix B.

Publication	Artefact	Focus	Steps/Activities
Gartner {{551 Gartner,William B. 1985}}	Framework	Entrepreneur	(1)characteristics of individuals, (2)the organisation,(3)the environment and (4) the process by which the new organisation is started
Katz and Gartner (1988)	Framework	Organisation	((1) Intention to create an organisation, (2) assembling resources, (3) developing an organisation boundary and (4) exchange of resources across the boundary (sales)
Van de Ven et al. (1989)	N/A	Business creation	(1) strategy; (2) competencies; (3) sustainable business: and (4) organisation and industry context
Vesper (1990)	Framework	Entrepreneur	(1) Basic Feasibility of the Venture, (2) Competitive Advantages of the Venture, (3) Buyer Decisions in the Venture, (4) Marketing of the Goods and Services, (5) Production of the Goods and Services, (6) Staffing Decisions in the Venture, (7) Control of the Venture, (8) Financing the Venture
Vesper (1990)	Key elements	Entrepreneur	(1) the venture Idea, (2) physical resources, (3) technical know-how in the particular line of work, (4) personal contacts critical to the business, and (5) sales orders from customers.
Reynolds and Miller (1992)	Key elements	Gestation time	(1) entrepreneur's commitment, (2) initial hiring, (3) initial financing, and (4) initial sales.
Gartner (1995)	Model	Entrepreneur	(1) the individuals, (2) the activities undertaken, (3) the organisational structure and (4) the strategy
Gatewood et al. (1995)	Activities	Business Idea/ Entrepreneur	(1) gathering marketing information, (2) estimating potential profits, (3) finishing the groundwork for the business, (4) developing the structure of the company and (5) setting up the business operations
Carter eta al. (1996)	Activities	Entrepreneur	(1) search for facilities and equipment, (2) search for and obtain financial support, (3) formed a legal entity, (4) prepared a team, (5) acquire facilities and equipment, and (6) devoted full time to the business.
Timmons (1999)	Model	Communication/Entrepreneur	(1) the entrepreneur, (2) the founding team, (3) the opportunity, and (4) the resources needed to start-up a firm
Carland and Carland (2000)	Model	Entrepreneur	(1) recognition of the idea and the entrepreneurial drive, (2) couples the idea with knowledge, (3) creativity and experience of the entrepreneur, (4) intuition to create an entrepreneurial vision
Baker, et al. (2003)	Framework	Entrepreneur	start-up intentions (2) gestation typically lead to the (3) creation of a plan which (4) execution of the plan
Shook, et al. (2003)	Model	Entrepreneur	(1) Entrepreneurial intent, (2) Opportunity search, (3) Decision to exploit, and (4) Exploitation activities
Rotefoss and Kolvereid (2005)	Model	Entrepreneur	(1) becoming an aspirant entrepreneur, (2) nascent entrepreneur, (3) founder of a fledding new business
Awayne (1973) and Serarols (2008),	Stages	Business creation	(1) concept, (2) planning and (3) implementation.
Petrovic, et al. (2001) and Osterwalder (2004, 2007)	Stages	Business Model	(1) Strategy, (2) Planning, (3) Procesess (Implementation)
Studying the SME context			
Gibb and Ritchie (1982)	Stages	Business creation	(1) Acquiring motivation, (2) Finding an idea, (3) Validating the idea, (4) Identifying the resources, (5) Negotiating to get into business, (6) Birth and survival
Gibb and Ritchie (1982)	Components	Business creation	(1) the idea and the market, (2) resources, (3) the ability of the entrepreneur and, (4) the motivation and determination
Watson et al. (1998)	Framework	Business creation	(1) Characteristics of the founder, (2) Characteristics of the business, (3) The business customers, (4)The business infrastructure
Studying the dot-com context			
Carrier et al. (2004)	Stages	dot-com	(1) Business Idea, (2) Market needs, (3) Identification of the business opportunity, (4) Feacibility, (5) Search for support, and (6) Venture creation
Seralols et al. (2006)	Framework	cyberentrepreneur	(1) Entreprenuer characteristics, (2) Market and product strategy, (3) Industrial structure, and (4) Financial aspects
Drori, et al. (2009)	Stages	dot-com	(1) Nacent, (2) Multimedia/internte search, (3) Internet conflicts, (4) decline and death

Table 2. 6: Chronological revision of the start-up models and frameworks

Limitations of previous research

The type, and the sequence of activities presented in table 2.6 seem to have a significant influence in the creation of new ventures (Carter et al. 1996a). However the literature suggests that there is no pattern or sequence of events in the creation of an organisation that is common to all new emerging organisations (Reynolds et al. 1992, Katz et al. 1988, Reynolds et al. 1993, Reynolds 1994). The majority of these perspectives shared the view of the entrepreneur as the central player in the start-up process (Barreto, 1989), and no description of the planning level is discussed at this stage.

There is a large amount of studies focusing primary in the characteristics of the entrepreneur, e.g. Gartner (1985) focused on the characteristics of the entrepreneur and not in the process organisations need to execute to start a new venture. Although Gartner (1995) subsequent research was not focused in the entrepreneur's characteristics, his framework has paid little attention to the activities undertaken for the firm creation. Similarly Vesper (1990), Carter et al. (1996), Katz (1990), Timmons (1999), Baker (2003) and Rotefoss and Kolvereid (2005), research emphasises in the skills and knowledge that the entrepreneur need to acquire before starting this journey. Moreover Shook et al. (2003) developed an "organising model" to understand the process of venture creation emphasising the entrepreneurs' characteristics.

Current literature has failed to indentify and outline the boundaries of the start-up process. The most common event or activity reported in the literature to be the first step is the personal commitment by individuals involved in the new venture. Similarly the last common event is the first sale and hiring the first employees, although the most important event reported in the literature is the financial support.

A number of scholars have offered numerous stage models of venture creation process. Yet there is little empirical evidence that either validates or fails to validate the different linear models (Liao et al. 2005). Moreover the literature about the process of start a business has been on discussion over the last three decades, however only few studies have focused on the identification of the various stages or steps in the start-up process (Gibb and Ritchie 1982).

Finally, most of the research on process of venture creation assumed a linear, unitary process, composed of a set of activities, beginning with the recognition of a business opportunity and culminating with the first sale (Liao et al. 2005, Galbraith et al. 1983, Kazanjian et al. 1990, Shane et al. 2000, Liao et al. 2008, Serarols-Tarrés 2009). However further studies have found the process not to be linear, but interactive, and there is still a small amount of empirical studies explaining the

actual activities that entrepreneurs need to perform to start a business, and moreover, how these steps/stages or activities are interlinked between them.

General elements and/or components of the start-up process

The academic literature as well as the information found in the Internet regarding the start-up process coincided in a certain number of activities that entrepreneurs need to achieve for the successful development of a firm. The main activities mentioned in the literature are:

1) Market research
2) Finance
3) Business Plan
4) Selling proposition or value proposition
5) And for a *dot-com* company; the development and maintenance of the portal

Although the literature looks at these key activities and explains what to do in each of the steps, still the literature up to date, does not explain how to accomplish each activity and what is the relation with the other stages/activities is.

Also the literature concurred in these additional factors and steps that entrepreneurs need to complete:

o Company structure
o Personnel characteristics
o seek and get professional help (lawyers, accountant, experts)
o Obtain licences and permits
o And for *dot-com* companies: chose the name and domain

The key steps for the creation of a firm

An in-depth revision of the different stage models in the literature review reveals some similarities that should be noticed. According to Swayne and Tucker (1973) the effective entrepreneur needs to follow three main stages for start-up a new venture: Concept stage, planning stage and Implementation stage. Following a similar approach and rationale used in Wayne et al. (1973), and Serarols (2008) the literature is summarised in figure 2.1. Figure 2.1 presents a summary of all the different stages of the abovementioned start-up models, and gathers the components in just three main stages: (1) concept, (2) planning and (3) implementation (Swayne et al. 1973).

It is important to notice that the models describing the start-up process vary from one author to another, stressing the step(s) they considered most important for the research in context. However, there are common features that make possible the identification of the core steps involved in the process of venture creation. In fact, the different stages presented in the literature are not clearly differentiated and most of the elements are used in various models but in different order, highlighting different stages accordingly with the different perspectives in which the studies were undertaken.

For example Timmons (1998) process starts with the recognition of the opportunity, and not with Strategy, search for resources, and planning, as suggested in other models. Timmons' model proceeds with the creativity skills of the entrepreneur and/or the entrepreneurial team. Creativity results from the combination of academic learning and real world practice, hence Value Creation results from the integration of the opportunity and an efficient use of the resources available. Finally the Combination of people, opportunity and resources together at a particular time may determine the chance for success (Timmons 1999).

According to Baker et al. (2003) there are two approaches when studying the founding process in entrepreneurship research. However only the first approach (design-then-execution framework) assumes a linear process in which start-up intentions and gestation typically lead to the creation of a plan. According with this framework, the planning stage seems to be the most time consuming, complicate and difficult to understand along the process, mostly because of the vast amount of information on the subject of planning, the different approaches in the literature and the missing link between this stage and the concept and implementation respectively.

In order to understand the majority of the steps and activities described in the literature, figure 2.1 presents an initial classification of the various stages for the start-up process established in the literature and maps them alongside three main stages (conception, Planning and Implementation).

The concept or conception stage (also known as gestation stage), as explained by Swayne (1999) is where the idea of the new venture is set up, therefore the main component of this stage is the idea, that essentially is one of the most important factors for succeed in the creation of a new venture and most important, together whit the right planning, it will help organisations to survive and growth.

As previously mentioned, the planning stage is very important, it linearly follows the concept of the idea, and precede the implementation of the activities (plans), but most important, during this phase all the activities are carefully and systematic planned and tested before actually perform an activity.

The studies concerning the stages of the business logic system (BLS) have helped entrepreneurs and academics to understand better the sequence of actions needed to accomplish the planning stage of the start-up process and to embrace the main or common elements of the planning stage and set-up a new venture.

Finally the implementations stage is the phase in which the business begins to operate and the plans of previous phase are put into practice (Serarols-Tarrés 2009). The recurrent activities reported during these phase are; the creation of the team, gathering resources and the launch of the product or service.

Conception		Planning		Implementation	

Webster (1976)

Pre-venture stage	Organisation stage	Financial jeopardy	Introduction of the product	Squeezing out partners	Outcome stage
Venture idea	Set up operations	**Prototypes** and channels established	Produce the product	Gain control by the entrepreneur	Survival

Carter et al. (1996)

Search for facilities and equipment	Search for and obtain financial support	Formed a legal entity	Prepared a team	Acquire facilities and equipment	Devoted full time to the business
Look for facilities and equipment	Ask for funding	Apply for licences/patents	Organise team	Bought facilities/equipment	**Prepare plan/develop models**
Invest own money	Get financial support	Form the legal entity	Hire employees	Rent facilities/equipment	Devote fulltime / save money to invest

Shook et al. (2003)

Entrepreneurial intent	Opportunity search and discovery	Decision to exploit	Exploitation activities
The development of intentions to create a new venture, based on perceptions of feasibility and desirability.	Search for and discover the business opportunity	Decision to exploit based on risk propensity, motives and attitudes	Finding the resources
Previous career experiences, entrepreneurial roll models and social support	Information/knowledge of the entrepreneur	Physiological attributes and cognitive processes	**Planning**, networking, selling. Locus of control
Propensity to act upon opportunities	Past experiences		Carrying out the activities/ opportunity exploitation activities

Carrier et al. (2004)

Business idea	Market needs	Identification Business opportunity	Feasibility	Search for support	Venture creation
The initial vision or idea is generated	Determine the needs of different potential customers for the products	Identify opportunities, propose innovative solutions to market	**Develop prototypes**, write a **business plan**, or find contracts	Gather all needed resources	Formal/legal constitution of the firm and first sales

Veciana (1988, 2005)

Gestation	Creation	Launching	Consolidation
Childhood	Look for a business opportunity	Create a team	Survival
Antecedents and professional knowledge	Create a solution: configuration of the business idea	Obtain and organise the means	Squeezing out partners
Incubator	Evaluate this opportunity. Write a **business plan**	Develop the product/service	All under control
Precipitation condition	Formal/legal constitution of the firm	Find out financial aid	
Decision of creating a new venture		Launch the product/service	

Petrovic, et al. (2001), Osterwalder and Pigneur (2002), and Osterwalder (2007)

Planning level	Architectural level	Implementation level
Strategy development	Planning and defining the **Business Model**	Implementation / Business Processes
ICT weight	E-business opportunity and change	E-business process implementation and adaptation
Strategic objectives	Conceptual and architectural implementation of the business strategy	Implementing the strategic objectives
ICT strategic objectives	ICT planning	ICT implementation

Awayne (1973) and Serarols (2008)

Concept (or gestation)	Planning	Implementation
Idea and new venture set up	Resources needed to produce a product/service	The plans are ready and the firm begins to operate
Entrepreneurs background	Refine the business opportunity	Put into practice the plans
Identification of the business opportunity	Plan activities to execute the idea	Creation of the team and Gathering resources
The precipitation condition	Business plan	Obtain financial aid
The incubator		The product or service is launched

Figure 2. 1: The start-up literature under 3 stages for start-up a firm

The business Logic System role

Similarly to Swayne (1999) and Serarois (2009), but within the IS context, Petrovic et al (2001), Osterwarlder and Pigneur (2002), Morgan (2002) and Osterwalder (2007) have identified 3 stages to describe the logic of a business, akin to the start-up process. In general the "business logic system" (BLS), or "Business logic triangle" or just "business logic" (BL), is a set of formal or informal statements of how a business is done and how the business operates, and can be explained as the relationships between the strategies the BM and the Business processes (Morgan 2002, Osterwalder et al. 2002), see figure 2.2.

The term "Business Logic System" (BLS) can be defined by breaking down their components. The Cambridge dictionary online (2011) defined each term as follows; **Business**: the activity of buying and selling goods and services, or a particular company that does this, or work you do to earn money. **Logic**: a particular way of thinking, especially one which is reasonable and based on good judgment, and **System**: a set of connected things or devices which operate together (Cambridge 2011).

A simple understanding of the Business Logic System by combining these three definitions could be as follows: the BLS is a set of connected elements which bond a particular way of thinking on how to earn money through buying and selling goods and/or services. Similarly Osterwalder (2007) explain the Business logic as "*an abstract comprehension of the way a company makes money otherwise stated; what it offers, to whom it offers and how it can accomplish this.*" The BLS therefore, is an artificial representation of the reality of an organisation with the purpose of describes the logic of a "business system" for creating value that lies behind the actual process (Otto Petrovic, Christian Kittl and Ryan D. Tekstenc 2001).

Osterwalder and Pigneur (2002) described the logic of a business system for creating value, drawing attention to the importance of the "Business logic triangle" also regarded as "business logic system". The Business logic triangle can be explained as the relationships between the Strategy, the BM and the Business processes see Figure 2.2.
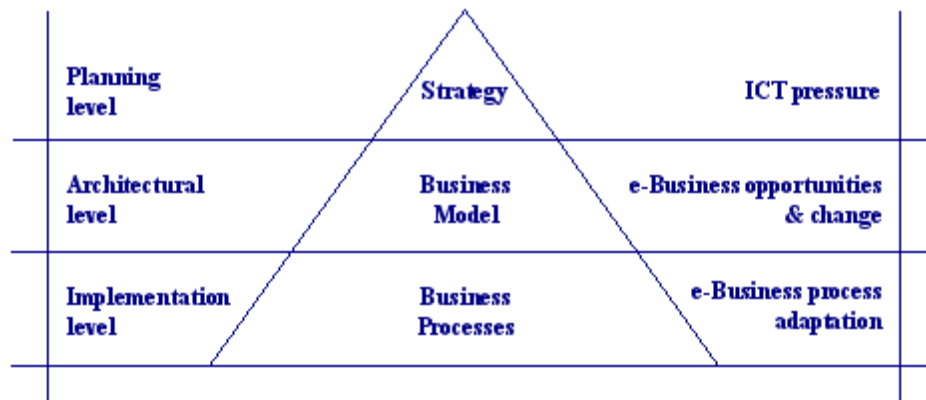
Figure 2. 2: Business Logic Triangle, From Osterwalder and Pigneur (2002) and Osterwalder (2007)

The Business Logic triangle defines three levels, which ideally any organisation has to follow from top to bottom to succeed in the elaboration and planning for start-up a company or new project. The first level (planning level) involves the elaboration of the Strategy as a main step to develop an organisation or project, in this level the ICTs plays a central role whilst elaborating the Strategy of an organisation as the ICT creates new opportunities for value creation, especially for *dot-com* organisations (Osterwalder and Pigneur 2002). ICT allows firms to include strong and new information components into their offerings or in some cases even completely digitalise their products. Moreover the ICT can improve the organisation's business goals, thus the importance of the planning and use of such technologies at the early stage of a project (Osterwalder et al. 2005). The second level (architectural) implies the creation of the BM, which it will help to implement, provide shape and find gaps or inconsistencies on the Strategy, also is the main platform to understand and develop the business processes. The final level (Business Process) it refers to the implementation of the BM, in other words, is how the company will operate and how the processes are linked to the BM, and therefore to the Strategy. (Osterwalder et al. 2002) have defined the BM as "the conceptual and architectural implementation of a business Strategy and as the foundation for the implementation of business processes".

Some of the tangible benefits of the business logic are that companies can control the workflow and reduce the business risk as well as learn and play through changes in the Strategy of the business which will affect the different layers of the BLS (Wang et al. 2006).

 A combination of the three stages of Swayne (1999) and Serarols-Tarres (2009) with the BLS described in Petrovic et al. (2001) and Osterwalder and Pigneur (2002) is used in this research, in order to include all the activities depicted in the literature into three broader stages (Conception, Planning and Implementation).

Consequently in the next sections, the three layers of the BLS are mixed with the three stages of the start-up process, and are discussed in order to explain each of these stages and terms. Hence, section 2.5.1, 2.5.2 and 2.5.3 presents the definitions uses and challenges of the business Strategy (Conception stage), the Business Model (Planning stage) and the Business processes (Implementation stage) respectively.

2.5.1   Conception - Business Strategy: Definition and use

The Conception (or gestation) stage is where the idea of the new venture is set up. This stage is influenced by entrepreneur's background, and it culminates with the identification of a business opportunity. The precipitation condition, the business opportunity, and the incubator play a principal role in this stage (Serarols-Tarrés 2009).

Similarly, the first level of the BLS (Planning level) described in Osterwalder and Pigneur (2002) involves the elaboration of the Strategy as the main step to develop an organisation or project, in other words, how the company will operate and how the processes are linked to the BM, and therefore to the Strategy. Thus the definition of the Strategy as a first step to understand the BLS is necessary at this stage. Moreover the Strategy seems to fit perfectly in the conception stage of the start-up process, just at the end, right after the "conception of the idea" and the "identification of the business opportunity". Hence the Strategy concept needs to be clarified in order to understand the first stage of the start-up process.

The Strategy plays a fundamental role in both, the start-up process and the BLS, although the Strategy's significance is clearer in the BLS, as it form the first level which is the base and foundation of the successive levels (the BM and the implementation of the business processes).

Studies in Strategy have been ongoing since the last 50 years and the understanding of it have been evolving considerably. However, there is not still a consensus on the definition neither a distinctive step-by-step manual to construct Strategy (Seddon et al. 2003). Porter (1996) defined Strategy as "*the right place for defining a unique position, making clear trade-offs, and tightening fit. It involves the continual search for ways to reinforce and extend the company's position*" (P.78). The table (below) depicts the alternative views of the Strategy from Porter's analysis.

The implicit Strategy model of the past (before 1996)	Sustainable competitive advantage
• One ideal competitive position in the industry	• Unique competitive position for the company
• Benchmarking of all activities and achieving best practice	• Activities tailored to Strategy
• Aggressive outsourcing and partnering to gain efficiencies	• Clear trade-offs and choices vis-à-vis competitors
• Advantages rest on a few key successful factors, critical resources, and core competencies	• Competitive advantage arises from fit across activities
• Flexibility and rapid responses to all competitive and market changes	• Sustainability comes from the activity system not the parts
	• Operational effectiveness a given

Table 2. 7: Alternative views of Strategy from the Analysis of Porter (1996)

Based on the table above, Strategy or "competitive Strategy" as defined by Porter (1996) is about being different, thus means that organisations need to choose intentionally a set of activities that deliver a different and unique mix of value in order to achieve a "*superior long term return of investment*"(Porter 2001). However, the creation of Strategy is a matter of discipline that requires focus on the profitability of the organisation rather than just growth, and the capacity to define a unique value proposition (Porter 2001).

Similarly with the concept of Strategy, Strategic management or strategic planning can be conceptualised as a set of theories and models supported by tools and techniques, designed to assist managers and entrepreneurs in the process of thinking, planning and acting strategically. Thus Strategy embraces the long-term objectives of the whole organisation and the implementation of plans designed to achieve those objectives (Stonehouse et al. 2002). Hence Strategic Planning is the organisation's process of defining its Strategy, or future direction, and making decisions on allocating its resources to pursue this Strategy, including the capital and people (Bryson 1993). Strategic planning is the formal consideration of an organisation's future course, thus all strategic planning decisions deal with at least one of three key questions: What do we do?, For whom do we do it? And how do we excel? Or how can the company beat or avoid competition? (Bradford et al. 2000).

Types of Strategy

Several terms are used ambiguously and interchangeably in the literature to refer to Strategy, such as: strategic management, strategic thinking, strategic learning and strategic planning. This ambiguity has hindering the understanding of the concept (Stonehouse et al. 2002). From these concepts, it can be summarised that the strategic planning centres on the setting of long-term organisational objectives, and the development and implementation of the plans designed to

achieve those objectives. However Strategy Planning is still often linked to the strategic management approach which is a larger term embracing all types of Strategy.

A definition of Strategy *for this research*

For the purpose of this research, the definition of Strategy or strategic planning by Stonehouse et al (2002) is used: "the devising and formulation of organisational level plans which set broad and flexible objectives, strategies and polices of a business, driving the organisation towards its vision of the future" (P.854), therefore long-term planning related to Strategy thinking and vision is necessary if the Strategy intents to be translated into actions (Plans) (Stonehouse et al. 2002).

Business documents used in this stage

The Strategy literature has frequently mentioned that the strategic planning process produces a physical document; this document is known as the Strategic Plan (SP), which is the main source to gather all the information related to the Strategy development. The literature suggests that strategic plans should answer basic questions such as, what is the organisation doing, where is currently stand, where the organisation would like to be, how they will get there and how the organisation track their progress.

The literature suggests that strategic plans should ideally contain: a vision statement, mission statement and value statement, an environmental assessment of internal and external conditions, objectives and goals, strategic issues, an implementation plan for obtaining goals, and evaluation and feedback periodically to determine how the strategic plan is progressing (Koteen 1989, Allison and Kaye 1997, Bryson 2004, Mercer 1991, Gordon 2005, Herndon 2001, Bailey 1989). However the elements and components that form part of the strategic planning document (SP) differs from author to author, although there are some similarities, still the large pool of elements is rather confused to practitioners. Hence section 2.6 presents the definition and elements of the SP document.

2.5.2   Planning - Business Model/Business Plan: Definition and use

In contrast to the Strategy stage, that is oriented to the long-term objectives of the organisation, the planning stage or the "Business Planning" is concerned with the short-term objectives of a business and the functional level of the organisation (Stonehouse et al. 2002).

The Planning stage of the start-up process is the phase in which the sequence of the steps is essential to coordinate in detail what resources will be needed to produce a product or to offer a service. Once the entrepreneur has detected the business opportunity and has refined it (in the

Strategy development phase), the next step is to plan how the entrepreneur is going to carry on with the idea. This is the stage where the entrepreneur has to transfer what he/she has "in mind" to a plan. The Business Plan plays a major role in this stage.

Similarly, in the BLS the second level of the framework outlines the definition of a BM as the central activity to shape the business organisation and to outline how the organisation will get revenue, or in other words, the sources of income.

The Business Model has to main functions; allow manager and entrepreneurs to conceptualise possible implementations of strategic objectives and understand the relevant issues, and secondly the formulation of a BM can help managers and entrepreneurs to communicate what they expected from the different stakeholders involved in the development of a new venture (Osterwalder 2007).

Definitions

The first challenged presented in this section is to get a common and universal definition of the Business Model. Academics and practitioners have overused the term Business Model (BM), overflowing the literature with plenty of examples. However this concept has been normally used but rarely explained (Osterwalder, 2002). In general a BM is represented in text, verbal or graphical form, which usually limits a comprehensible understanding of the business processes of an organisation (Gordjin, 2001). The literature shows different definitions of the Business Model (BM), usually depending on the person's view point and the context. For example, Laudon and Traver (2001) defined the BM as "*a set of planned activities designed to result in a profit in a marketplace*". Additionally Timmers (1998) described the BM as architecture for the product or service, and describes the; service and information flows, including a description of various business actors and their roles, potential benefits for the various business actors, and sources of revenues, whilst Osterwalder and Pigneur (2002) understand the BM "*as the conceptual and architectural implementation of a business* Strategy *and as the foundation for the implementation of business processes*". Furthermore, Magretta (2002) perceived the Business Model as the managerial equivalent of the scientific method, where you have a hypothesis and then you test your hypothesis in models or in real life. "*A good Business Model remains essential to any organisation, whether it's a new venture or an established player*" (Magretta 2002).

A definition of Business Model for this research

Summarising, the definitions of a Business Model embrace two main elements: (a) what the business does, and (b) how the business makes money. However, the type of Business Models might depend on how technology is used. Using ICTs organisations and entrepreneurs can reach a large number of

customers with minimal costs. An e-Commerce Business Model (eBM) may be used to create and/or sustain companies' competitive advantage, and also, consider cost reduction or cost effectiveness as an important factor, along generating companies' profitability (Radovilski,2005). Hence, a definition of the Business Model used in this research is close to the definition described by Rappa; "*A Business Model is the method of doing business by which a company can sustain itself--that is, generate revenue".* Thus the Business Model spells out how a company makes money by specifying the flow of resources and communication along the organisation and stakeholders (Rappa 2010).

Some of the benefits to use a BM to start-up a new organisation are summarised in Osterwalder and Pigneur (2002). Following a similar approach, the following bullets underlined the main reasons for using a BM and highlight the importance of understanding and use of the BM, particularly in the e-Business domain.

- o The BM Facilitate managers and CEOs to communicate and share their understanding of the business with stakeholders (Fensel, 2001).
- o Mapping and using eBM can smooth the progress of change in organisations, as the BM designers can easily identified and modified certain elements of the BM (Petrovic, Kittl and Teksten, 2001)
- o The eBM can help to identify the relevant measures, to recognize the success of the eBM, "similar to the balanced scorecard approach" (Norton and Kaplan,1992)
- o An eBM will serve as the first step for the analysis of the requirements for e-Business information systems and business processes also the eBM can help to analyze the mechanisms that are important in e-Business, such as revenue streams, value objects, customer ownership, price setting, alternative actors and partnership issues. (Gordjin, Akkermans and Vliet, 2001).
- o A well defined eBM can help organisations to implement the business strategies and also smooth the implementation of the processes, furthermore, allow organisations to measure, change and simulate the business (Osterwalder, Pigneur and Tucci, 2005)
- o A Business Model is of great use for planning, as the BM focused attention on how the elements of the systems fit and correlate with each other, thus a good Business Model can be a great instrument for improving execution and in can get use to get everyone in the organisation aligned with the value proposition the company desires to create and therefore with the Strategy (Magretta 2002).
- o Business Models can be a source of competitive advantage and a firm with a unique Business Model that creates more value than their competitors hold a potential competitive advantage (Cristensen, 2001, Zott et al. 2008)), therefore a Business Model might affect an organisation's performance.

Documents used in this stage

The BLS's main component is the Business Model (BM). Osterwalder (2002) highlights the importance of produce at least a graphical representation of the BM; however a text-based document can be also used to represent an organisation's operations and networks. Similarly the studies related to the start-up process have emphasised the use of a Business Plan (BP) as part of the

main activities of the planning stage. The intention of this document (the BP) is to describe in pen-to-paper the short-term strategies, plans and activities that an organisation intent to achieve. However, there is not a single and distinctive definition of the business documents used (e.g. BP and BM). Therefore the scholars have not agreed a common definition of the components and elements that constitute each document. Due to the complexity of the large amount of components and elements used in each document, both (the BM and the BP) are further analysed in section 2.6 of this chapter.

2.5.3   Implementation - Business processes: Definition and use

Implementation stage is when the business begins to run. In this stage, all the plans are ready, and the firm begins to operate. The actions planned are put into practice, the team is created, resources are gathered, financial aid is obtained and, the product or service is launched (Serarols-Tarrés 2009).This stage delineate the end of the start-up process, and normally ends with the first sale or operation. In the BLS, the last level of the framework is the implementation level which the main components are the business processes.

Documents used in this stage

The business process as described in the studies of Petrovic et al. (2001) are designed and described in the Business Model, therefore both levels have a strong and direct relationship, "*the BM give sense to the various business processes by describing why certain process are designed the way there are*" (P.2). The Business process presents a dynamic relationship with the ICTs, particularly in the essential Information Systems (Petrovic et al. 2001). Additionally, Seralols-Tarres (2009) identifies an additional stage (the redefinition phase). This phase begins after the first sales and operations and finishes with the redefinition of the business opportunity and related adjustment of the Strategy that need to be done in order to survive. However, this phase is not considered in this thesis, as this research considers the start-up process which finishes in the implementation stage.

2.6   Business Documents engaged in the start-up process

Large corporations are used to document their activities and plan through business documents, such as the Business Plan (BP) and Business case (BC). However SMEs are likely to have lack of control and management and only in certain occasions produce such documents, for example, when looking for financial support. However, the start-up process highlights the relevance of the planning stage for organisations, which normally is linked to the creation of a BP. Hence this section depicts four main documents, encountered to be the common documents used among entrepreneurs and

organisations; first the Strategic Planning (SP) document is presented followed by the Business Model (BM) and the Business Plan (BP), finally the Business Case (BC) is also analysed.

2.6.1 Strategic Planning

The Strategy development is positioned at the end of the conception phase of the start-up process and plays a fundamental role in the creation of a new firm. Similarly the first layer of the BLS is the "Strategy" component, which deals with the definition of the future state of an organisation and is the base for the development of the BM. Previous studies in the Strategy domain link the Strategy development with the strategic planning (SP) document. The Strategy Planning document varies amongst its components and elements depending of the context of the information and the sources from which the information is obtained, thus the literature does not contain a unified set of components or number of elements that form part of the SP document.

Different components/elements of the SP

In an attempt to group the main components of the SP, Stonehouse (2002) conducted a survey among SMEs to identify the main components that organisations use to develop strategic plans; the results presented 11 components used by those companies: Mission/Vision statement, business level objectives, departmental/divisional objectives, production/volume/output targets, profit targets, sales targets, cost targets, market share targets, staff appraisal, staff development, and staff training. Moreover the main strategic tools/techniques employed to construct the strategic plan identified are: SWOT analysis, critical factor analysis, PEST/STEP analysis, core capabilities/competence analysis, financial analysis of competitors, value chain analysis, organisational culture analysis, portfolio matrices, strategic planning software, spreadsheets, benchmarking tools, and human resources analysis (Stonehouse et al. 2002). Similarly, within the government initiatives to assist SMEs and organisations, McKay (2001) provided a report with ten steps to create Strategy through SP.

1) Agree on a strategic planning process.
2) Carry out an environmental scan
3) Identify key issues, questions, and choices to be addressed as part of the strategic planning effort.
4) Define or review the organisation's values, community vision, and mission
5) Develop a shared vision for the organisation
6) Develop a series of goals or organizational status statements which describe the organisation in a specified number of years – assuming it is successful in addressing its mission
7) Agree upon key strategies to reach the goals and address key issues identified through the environmental scan.
8) Develop an action plan that addresses goals and specifies objectives and work plans on an annual basis.
9) Finalize a written strategic plan that summarizes the results and decisions of the strategic planning process.

45

10) Build in procedures for monitoring, and for modifying strategies based on changes in the external environment or the organisation.

Also similar templates can be easily obtained from various sources, however the components or sections of these documents normally differ in the order of the components, moreover some sources add/subtract sections arbitrarily.

Common elements

The definition of the concept "Strategy" is consistent among the literature of strategic planning. However the elements that constitutes the Strategy differs from author to author. Steinfield et al. (2002) describes four main elements to build Strategy under the e-Commerce context: Cost savings, improved differentiator, enhance trust, and market extension. Similarly Bryson (2011) grouped the different components that constitute the Strategy Planning into four broad categories; organisational background, organisational assessment, organisational needs and desires, and organisation future appearance (Bryson 2011). Consequently, based on the four categories of Bryson 2011, the common elements and components of the Strategy Planning presented amongst the different studies are outlined in the table 2.8.

Components	Studies mentioning those components

Organisational Background
o Vision Statement
    • clearly expressed
    • realistic
    • future oriented
    • tangible
o Mission Statement
    • clearly expressed
    • define the purpose of the organisation
    • Should be inspiring
o Values Statement
    • clearly expressed
    • express an entity's fundamental values
    • located near the mission and vision statement
	Allison and Kay 1997
	Bailey 1989
	Bryson 1993, Bryson 2011, Bryson and Roering 1988
	Eadie 1983
	Gordon 2005
	Graham and Havlick 1994
	Grant 2005
	Hemdon 2001
	Howe 1997
	Jensen 2005
	Koteen 1989, Koteen 1997
	Mercer 1991
	Sorkin and FetTis 1984
	Bradford et al. 2000
	Abrahams 2010, Porter 2001

Organisational Assessment
o   External Environmental Assessment
    • Should be clearly expressed
    • SWOT should be present
o   Common external factors such as,
    • economic conditions,
    • legal/regulatory, socio-cultural
o   Internal Environmental Assessment
o   Common internal factors such as
    • demographic, managerial,
    • technological
	Allison and Kay 1997
	Bailey 1989
	Bryson 1993, Bryson 2011, Bryson and Roering 1988
	Eadie 1983, Gordon 2005
	Graham and Havlick 1994
	Grant 2005, Herndon 2001, Howe 1997, Jensen 2005
	Kalman and Cyert 1973
	Koteen 1989, Koteen 1997
	Kotler and Murphy 1981
	Mercer 1991, Mintzberg 1994
	Sorkin and Ferris 1984, Bradford et al. 2000
	Abrahams 2010, Fernandez 2001

Organisational Needs and Desires
o   Goals
    • Should be clearly expressed
    • Should be related to factors found in the assessment
    • Should be in harmony with the objectives of the organisation
    • Should contain sub-parts known as objectives
o   Objectives
    • Should be clearly expressed
    • Should be precise
    • Should be measurable
    • Should be subcomponents of a goal
    • Should be time-bound
o   Strategic Issues
    • clearly expressed
    • Should comprise fundamental issues confronting the organisation
    • prioritised by importance
	Allison and Kay 1997
	Bailey 1989
	Bryson 1993, Bryson 2011
	Bryson and Roering 1988
	Eadie 1983
	Gordon 2005
	Graham and Havlick 1994
	Grant 2005
	Herndon 2001
	Howe 1997
	Jensen 2005
	Kalman and Cyert 1973
	Koteen 1989, Koteen 1997
	Kotler and Murphy 1981
	Katsioloudes 2002
	Mercer 1991
	Sorkin and Ferris 1984
	Hambrick et al. 1989
	Kao et al. 2003, McKay 2001
	Porter 2001, Porter 1996

Organisational Future Appearance
o   Implementation / Action Plan
    • clearly expressed
    • contain specific action steps and relevant details
    • contain a timetable, schedule or milestone years
    • contain human resource requirements
    • contain discussion of financial resources
o   Periodic Assessment
    • Should express clearly an allowance for assessment
    • a specific time table in which assessment can take place
    • contain at least one outcome to measure
    • contain a timeframe for updating the plan
o   Feedback from Stakeholders
    • clearly allow for feedback
	Allison and Kay 1997
	Bailey 1989
	Bryson 1993, Bryson 2011, Bryson and Roering 1988
	Peel et al. 1998
	Eadie 1983
	Freeman 1984
	Gordon 2005
	Graham and Havlick 1994
	Grant 2005, Herndon 2001
	Howe 1997
	Jensen 2005, Jackson 2006
	Kalman and Cyert 1973
	Koteen 1989, Koteen 1997
	Mercer 1991
	Sorkin and Ferris 1984
	Porter 2001, Johnson et al. 2008

Table 2. 8: The common elements of the Strategy Planning

47

2.6.2 Business Model

The second level (architectural) in the BLS implies the creation of the BM, which it will help to implement, shape and find gaps or inconsistencies on the Strategy, also is the main platform to understand and develop the business processes.

The literature presents a large amount of definitions of the BM and a consensus has not been reach yet. Although the definitions have been discussed in section 2.5.2, still the definition of the BM as a document needs to be defined together with the main components that form this document.

In addition to the vast amount of definitions available in the literature defining the Business Model, academics and practitioners need to deal with different forms of BM described in the literature. These BM usually are related to describe brick-and-mortar firms, also different types of Business Models are used to describe e-Business initiatives which are also called electronic Business Models or just "e-Business Models".

Internet commerce has raised new kinds of Business Models, and the web is also likely to reinvent traditional Business Models. Internet has allowed the creation of new Business Models, e.g. Auctions sites such as e-bay are a perfect example of it in which the Internet has popularised the auction model and broadened its applicability to a wide array of goods and services. In an attempt to put some order to the large amount of definitions of the BM, Al-Debei et al. (2008) and Al-Debei et al. (2010) performed a comprehensive analysis of the literature around BM, and define a BM as *"an abstract representation of an organisation, be it conceptual, textual, and/or graphical, of all core interrelated architectural, co-operational, and financial arrangements designed and developed by an organisation presently and in the future, as well as all core products and/or services the organisation offers, or will offer, based on these arrangements that are needed to achieve its strategic goals and objectives"*.

Hence, the **BM document** describes how all the elements and activities of the business work together as a hole and could be condensed into two parts; the first part consist of a narrative describing the product/service components, the financial projections and other important elements that can not be graphically represented, the second part consist of a graphical representation of the business, outlining how the business generates revenue, how the cash flows through the business and how the communication of information is shared among stakeholders (Schein 2011).

Different elements of the BM

The main BM and their respective components are summarised in this section, highlighting the different elements depicted in the literature that form part of a BM. The BM literature is extensive in

48

definition and models, covering a number of different areas and domains of research. Consequently, there is not consensus or unified definition of the BM and its components. However the literature in this area has grasped the attention of scholars among different disciplines. As a result of the vast amount of information in the arena, this section only presents the BM and components more cited in the literature and close to the context of this research.

Rayport and Jaworski (2002) BM developed a BM that seems to be appropriate for the e-Commerce initiatives. This BM contained four main components that are summarised as follows:

- o **Value proposition**: Market segments, customer benefits and unique resources
- o **Online offering**: Ordering scope, products, processes, and their mapping
- o **Resource system**: Select and align company resources
- o **Revenue models**: A variety of ways to earn money in e-Commerce solutions

Rayport's model seems to be suitable for e-Commerce initiatives as one of the components refers to the online offering. However this BM was created for brick-and-mortar established firms. Afuah and Tucci (2003) on the other hand suggest nine elements: customer value; scope; pricing; revenue sources; connected activities: value configuration; implementation; capabilities; and sustainability. Similarly, Osterwalder (2004) Business Model was build upon nine building blocks that form the BM. The nine building blocks of Osterwalder's (2004) BM were divided into 4 categories: Infrastructure, Offering, Customers and Finances, and the nine building blocks are: Core capabilities, Partner network, Value configuration, Value proposition, Target customer, Distribution channel, Customer relationship, Cost structure, and Revenue (Osterwalder 2004).

Infrastructure
- ▪ Core capabilities: The capabilities and competencies necessary to execute a company's Business Model.
- ▪ Partner network: The business alliances which complement other aspects of the Business Model.
- ▪ Value configuration: The rationale which makes a business mutually beneficial for a business and its customers,

Offering
- ▪ Value proposition: The products and services a business offers. Quoting Osterwalder (2004), a value proposition "*is an overall view of products and services that together represent value for a specific customer segment. It describes the way a firm differentiates itself from its competitors and is the reason why customers buy from a certain firm and not from another.*"

Customers
- ▪ Target customer: The target audience for a business' products and services.
- ▪ Distribution channel: The means by which a company delivers products and services to customers. This includes the company's marketing and distribution Strategy.
- ▪ Customer relationship: The links a company establishes between itself and its different customer segments. The process of managing customer relationships is referred to as customer relationship management.

Finances
- Cost structure: The monetary consequences of the means employed in the Business Model. A company's DOC.
- Revenue: The way a company makes money the through a variety of revenue flows. A company's income.

In an attempt to end the confusion and misuse of the term BM, Al-Debei et al. (2010b; 2010a) develop a unified framework of the BM concept and developed an ontology embracing all the components and elements used to describe a BM.

The resulted ontology was the foundation of the BM called "V^4 Business Model" and quoting Al-Debei et al. (2010) *"the V^4 BM was specifically made for the "digital world" and it comprises all the elements and relationships needed to develop a strong BM for any kind of initiative"*. The "V^4 Digital Business Model" is a summary of current Business Models for e-Business, and encompasses roughly all variables used to develop an e-Business Model, hence could be of valuable to understand the BM components and their relationships. This model was called "V^4" in reference to the four values or 'dimensions' that constitute the BM: Value Network, Value Architecture, Value Proposition and Value Finance. The dimensions and elements of the V^4 Business are explained in the work of Al-Debei et al. (2010). This particular study was useful for the understanding of the relationships and dependencies between the elements of the V^4 BM which were use in this study (as presented in chapter 5). Due to limitations of space this analysis is not presented in this study, however can be found in Al-Debei et al. (2010) and through the following link: (www.*bura.brunel.ac.uk*).

2.6.3   Business Plan

The information related to the components and elements of the Business Plan varies considerably depending to the sources of information. Therefore, a summary of the literature is presented in this section, together with a definition of common components/elements found in the literature as part of the Business Plan document.

A Business Plan contains the action plans that an organisation needs to perform in order to pursue their goals and objectives. The BP consists of a formal statement of a set of business goals, the reasons behind these goals, and the plan to achieve those goals and it some cases the BP also contain background information about the organisation. The Business Plan consists of a narrative part and several financial worksheets; it can also include graphics and pictures if necessary. The narrative part is the body of the Business Plan, and could contain up to 150 questions divided into sections.

The BP can be divided in, as many chapters as needed, but usually the BP includes at least two chapters; Analysis of the Current Situation and Marketing plan Strategy and Objectives (Sharma 2009).

Analysis of the current situation - past year
- Business trends analysis
- Market analysis
- Competitive analysis
- Market segmentation
- Marketing-mix
- SWOT analysis
- Positioning - analyzing perceptions
- Sources of information

Marketing plan* Strategy *& objectives - next year
- Marketing Strategy
- Desired market segmentation
- Desired marketing-mix
- TOWS-based objectives as a result of the SWOT
- Position & perceptual gaps
- Yearly sales forecast

More chapters, however, are normally used by organisations depending on the way they are structured and how the objectives will be accomplished. Hence the most common division of a Business Plan include at least, and not necessary in this order: Analysis of the Current Situation, Strategy and Objectives, Marketing Plan, Operational Plan, Financial Plan, and Management and organisation Plan. A comprehensive definition of the elements of each chapter of the BP is presented in the appendix section (appendix F).

2.6.4   Business Case

A Business Case (BC) is used to obtain management commitment and approval for investment for project and programmes. The Business Case provides a framework for planning and management of the business change. Also, the ongoing viability of a project or programme will be monitored against the Business Case. In few words, a Business Case is a document mainly used to control and monitor projects within a company. However, a project can be the development of a company by itself.

Most of the companies have an established document structure that must be followed in every case. This structure varies from company to company, but a typical Statement of a Business Case should include these standard sections:

- Summary,
- Background,
- Objective,
- Proposal,
- Alternatives,
- Benefits,
- Disadvantages,
- Consequences,
- Finance,
- Method,
- Details.

Also the Business Case should contain information covering five key aspects: strategic fit, options appraisal, commercial aspects, affordability and achievability. These five aspects are obtained from the following documents.

- Procurement documentation
- Programme/Project management plans and documentation
- High level requirements
- Business Strategy

The Office of Government Commerce in UK (OGC) is an organisation highly recognised in the industry and the leading organisation certifying project managers. OGC has provided a clear definition and suggested content of the BC; the definition of the different elements of the BC is presented in the table 2.9.

o **Achievability:** High level plan for achieving the desired outcome, with key milestones and major dependencies (e.g. interface with other projects); Outline contingency plans e.g. addressing failure to deliver service on time; Major risks identified and outline plan for addressing them; Provider's plans for the same, as applicable, skills and experience required. Description of the business need and its contribution to the organisation's business Strategy	o Output based specification
o Organisational overview	o Sourcing options
o Contribution to key objectives	o Proposed sourcing option with rationale for its selection
o Stakeholders	o Key features of proposed commercial arrangements
o Existing arrangements	o Contract terms
o Scope (minimum, desirable, and optional	o Contract length payment mechanisms
o Constrains	o Performance incentives
o Dependencies	o The procurement approach/Strategy with supporting rationale
o Strategic benefits	o Payment mechanisms
o Strategic risks	o Risk allocation and transfer
o Critical success factors	o Personnel issues including TUPE (Transfer of Undertakings (Protection of Employment))
	o Implementation timescales
Options appraisal	**Achievability**
o Long and short list of options	o High-level plan for achievement the desire outcome
o Opportunities for innovation and/or collaboration with others	o Key milestone
o Service delivery options	o Major dependencies
o Detailed options appraisal: High level cost/benefit analysis of at least three options for meeting the business need.	o Interface with other projects
o Risk quantification and sensitivity analysis	o Similar projects (where available)
o Benefits appraisal: Analysis of 'soft' benefits that cannot be quantified in financial terms	o Project roles
o Identification of the preferred option and any trade-offs	o Procurement Strategy
Affordability	o Project plan
o Budget based on whole life cost	o Outline contingency plans
o PSA period	o Contract management
o Income and expenditure account	o Risk management Strategy (Major risk identified and outline plan for addressing them)
o Cash flow	o Post implementation reviews and Project evaluation review

Table 2. 9: BC minimum suggested content, source OGC, 2010

Definition of elements of the BC

Strategic fit: Description of the business need and its contribution to the organisation's business Strategy. Objectives: Why it is needed now? Key benefits to be realised? Critical success factors and how they will be measured?

Options appraisal: High level cost/benefit analysis of (ideally) at least three options for meeting the business need; Include analysis of 'soft' benefits that cannot be quantified in financial terms; Identify preferred option and any trade-offs.

Commercial aspects: This section is applicable where there is an external procurement; hence this section outlines the potential contracts.

Minimum content required for this section: Proposed sourcing option with rationale for its selection; key features of proposed commercial arrangements (e.g. contract terms, contract length, payment mechanisms and performance incentives); the procurement approach/Strategy with supporting rationale.

Affordability: Statement of available funding and 'ballpark' estimates of projected whole-life cost of project; departmental costs (where applicable); Achievability

2.7   Challenges and barriers of the Start-up Process

The literature is vast in studies related to the challenges and barriers affecting the implementation of e-Business initiatives. However the information available covers a variety of areas under different perspectives and approaches. The variety of perspectives researching the creation of new ventures have made difficult the selection and analysis of the relevant literature. Hence this section gathers the main problems observed during the start-up process, under the perspective of the phases or stages identified in the literature related to the start-up process and the BLS.

Challenges related to the Strategy

o   A common confusion among academics and practitioners is the boundaries and differences among the Strategy Planning and the Business Planning. Although the Business Planning (short-term objectives) can be fitted into the Strategy Planning (long-term objectives) by adjusting the long-term objectives, still both concepts remain confuse amongst practitioners, thus need to be treated separately and not be mistaken (Stonehouse et al. 2002).

o   Although the theories and frameworks of strategic development are well documented in the literature, still the practical evidence of their application is relatively little (Stonehouse et al. 2002). Moreover there is little evidence of the use of tools to measure the strategic fit.

o   Large companies seems to make greater use of the long-term objectives (Strategy), conversely SMEs generally have a shorter-term focus, making use of policies rather than plans. In the other hand large organisations seems to have greater strategic orientation than the Small and Medium counterparts. Similarly only a limited set of tools to measure the Strategy are deployed by SMEs, whilst the large organisations seem to be more likely to take a more structured approach (Stonehouse et al. 2002).

Challenges related to BM:

o The concept of the BM has been used widely in the domain of e-Commerce. Description, definitions, classifications, taxonomies and implementation approaches into Business Models have been considered and studied in the literature, specifically for Internet commerce (Afuah et al. 2003, Alt et al. 2010, Gordijn et al. 2005, Gordijn et al. 2005, Pateli et al. 2004). Despite these efforts, there is still no universal identification of the BM main components that need to be considered when implementing a BM. For example, Mahadevan (2000) proposes three general facets: value stream, logistical stream, and revenue stream as the main aspects required to be addresses when developing e-Business Models (eBM). Alt and Zimmermann (2001) argues that mission, structure, processes, revenues, legal issues and technology are the main constituents of BM. However, their definition of the components is not clear, as the components of the BM contain similitude with the Strategy concept and components.

o Seddon et al. (2003) argue that people with more IT background tend to use the term Business Model instead of Strategy and vice versa with those of business process background, since they include processes and mission as components.

o The literature suggests that the identification of the BM suitable for a specific case strongly depends on the knowledge that the stakeholders have on background, for the reason that some BM are by nature complex and difficult to understand for a non-experienced entrepreneur.

o There are several design themes and templates to design a Business Model, such as; novelty, efficiency, cost differentiation among others. A new organisation or entrepreneur need to carefully choose the BM that better suits their strategic objectives. However the variety of design themes makes difficult the selection of a sole BM as a standard. Moreover, these design themes are not mutually exclusive and many themes can be presented in an organisation's Business Model (e.g. an organisation can choose to follow at the same time, a Strategy of product differentiation, cost leadership and early market entry) making even harder for a SME the selection of a suitable BM (Zott et al. 2008).

Challenges related to the BM and Strategy

"Business Model" and "Strategy" are terms used interchangeably in business. These, however, are concepts with substantial practical value, when it comes to organisations' performance, in which case those definitions need clarity as no organisation can afford "blurry thinking" (Magretta 2002).

To emphasise the constant misuse of those terms in the literature, Magretta (2002) and Porter (2001) underline the confusion among those concepts:

"*Today, "Business Model" and "Strategy" are among the most sloppily used terms in business; they are often stretched to mean everything—and end up meaning nothing. But as the experience of companies like Dell and Wal-Mart show, these are concepts of enormous practical value.*" (Magretta 2002). "*The definition of a Business Model is murky at best. Most often, it seems to refer to a loose conception of how a company does business and generates revenue. Yet simply having a Business Model is an exceedingly low bar to set for building a company. Generating revenue is a far cry from creating economic value …*" (Porter 2001, P.73)

Moreover, it is argued that these two terms might reasonably be interpreted as having roughly equivalent meanings and in some occasions these concept may be the same (Seddon et al. 2003). Seddon (2003) concludes that there is a lot of overlap between these two terms, and attempts to define the BM and the Strategy considering the confusion presented in the literature, as illustrated in figure 2.3.
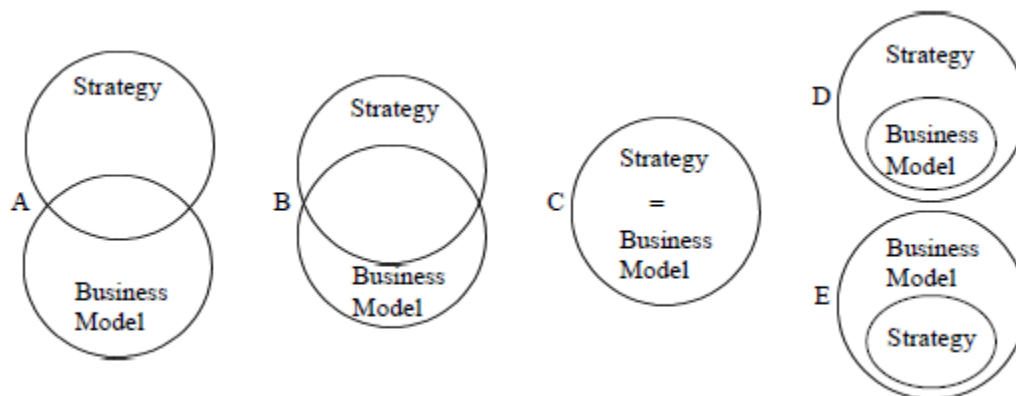
Figure 2. 3: Possible overlap between the concepts "Strategy" and "Business Model" from (Seddon et al. 2003)

Seddon et al. (2003) describes five diagrams (see figure 2.3) which illustrates the overlaps of these terms in the literature. According to Seddon et al. (2003), diagram A describes the BM of Weil and Vitale and how the authors address the Strategy, their work describes some overlap between the terms, but in some parts only. Diagram B describes the research of Applegate (2000), where the Strategy and the BM overlaps in many aspects. Diagram C describes the similitude between the definitions of the Strategy of Porter (1996) and the BM of Magretta (2002). Diagram D and E describes more models that contradict each other; the first group of researchers perceived the Strategy as the main component for the venture creation and the BM is only a part of the Strategy,

the second set of studies discern radically and perceived the Strategy as an aspect of the BM, however in all the studies, the Strategy plays a fundamental role in the development of the BM.

To add even more confusion to the terms Seddon et al (2003) denotes that the Business Models and Strategy are different in the level of abstraction *"A Business Model is an abstract representation of some aspect of a firm's Strategy"* (Seddon et al. 2003). The authors differentiate the Business Model from the Strategy, explaining that much more information is necessary to presents the business Strategy than is required to represent a Business Model. Based on that assertion, owners, entrepreneurs and managers can create different and unlimited number of Business Models based on an organisation's Strategy, as shown in the figure below.
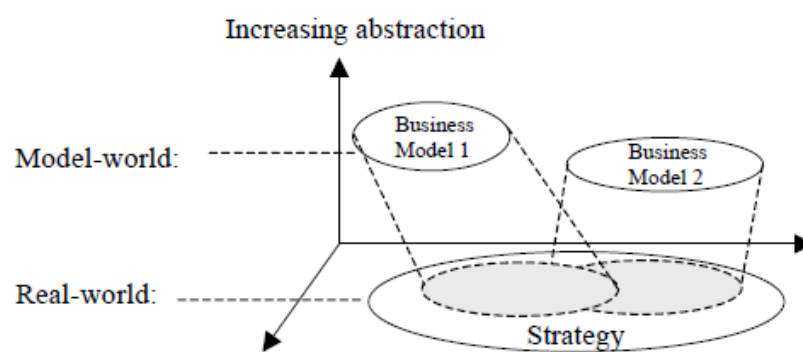
Figure 2. 4: The relations ships between the concept Business Model and Strategy from (Seddon et al. 2003)

Challenges related to the Business Model, Business Plan and Business Case

Another problem detected in the literature is the confusion of BM with other business terms. The BM is sometimes misused as a business case, to describe financial analysis processes. It has also been used to depict coordination systems and cross-company collaboration (Haaker et al. 2006). The fact that there may be misconceptions of what a BM is, suggests that the team involved in the implementation of such models should share the same view to avoid communication problems.

Confusion found in the literature depicts the arbitrary use of the term Business Model and Business Plan, particularly with SMEs where the owners or entrepreneurs normally have limited knowledge in some aspects of the business. However these terms (BM and BP) in essence are completely different things. The first one, the Business Model refers to the whole deployment of the Strategy while the Business Plan is a document generally used to develop and portray the action plans that an organisation or individuals need to perform in order to achieve a goal.

In the case of Business Plan and business cases, a similar confusion is detected among practitioners. However in this case business cases and Business Plans have coexisted as one thing, and the BC can

be seen as another chapter of the BP, however organisations like OGC and PMI have made clear a differentiation between this two documents.

Challenges for dot-com and SMEs

o Most of the studies over related to Internet Business Models have been focused in "traditional" business moving from brick-and-mortar to Internet e-Business Models, with well defined strategies, products and customers. Little attention have been paid to the Business Models of companies which they do not have a clear revenue stream, furthermore not a structured product offer, by other means start-ups in the field.

o Many organisations, both *dot-com* and established firms have initiated their business proposition with an unclear Strategy or a complete lack of Strategy. Therefore, a good Strategy focused on profits, instead of concentrated on delivering real value for its customers.

o Business start-ups lacked of history and reputation, thus face high failure risk. Also the lack of information, combined with entrepreneurial factors affect financial decisions which are the major constrains among SMEs (Huyghebaert et al. 2007).

o A start-up firm is highly dependant on the owner and managers both are the main resource of decision making, however as the firm grows in complexity, it may be necessary to review and probably change the process of decision making with a more professional manager style of leadership (LeBrasseur et al. 2003).

o Start-ups face more challenges that established SMEs, as the activities of enter into, or create new markets and raising capital, are the main challenges inhibiting the start-up process (Drori et al. 2009).

o Access to essential resources is one of the main challenges for start-ups (Drori et al. 2009).

o It seems to be a relationship between the problems faced by an organisation and the size of the firm. Small firms are know to have unsuitable premises, financial control, and few qualified staffing as the main problems, also marketing and selling was a major problem reported together with lack of finance (Stonehouse et al. 2002).

o Although studies have indentified certain characteristics of the entrepreneur, such as the need for achievement (McClelland, 1961), risk taking propensity (Brock-haus. 1980), tolerance of ambiguity (Schere, 1982), family background, (Mathews and Moser, 1995). However is still hard to determine what personality characteristics distinguished entrepreneurs from non-entrepreneurs (Mazzarol et al. 1999).

- o The main weaknesses found in new business or start-ups were the inadequate preparation, research and planning, estimation of the market. Also one of the main reasons of start-up failures detected on the literature was the insufficient revenue and a business concept (BM) weak and/or inadequate defined (Smalibone 1990). Also the rush to market particularly in the *dot-com* arena is a major factor to fail and affects their operability of the websites. (Al-Dwairi et al. 2010)

- o Among the *dot-com* sector, in addition to the normal challenges and barriers presented, the security, design, privacy and content are among the major concerns to develop a trustful e-Commerce/Business initiative (Al-Dwairi et al. 2010).

2.8   Conclusions

This chapter presented a comprehensive literature review concerning the start-up process for venture creation. The resulted review, depicted different approaches to start a new venture, However, the frameworks and models available did not clearly delineates a unique set of steps to achieve this objective. Moreover the information available does not investigate in full the relationship among the different stages and steps involved in this process. Hence the literature presents a gap related to the examination of these relationships. Although a number of studies are attempting to build frameworks and models explaining the start-up process, still, there is a wider more important need to provide insights into the process of start-up itself (Gibb et al. 1982) and to analyse the entire process of venture creation, from its conception to the birth of the company and the link with each of the stages of these process (concept, planning and execution), by doing so, this research aims to help managers and entrepreneurs to understand better this process.

Conceptual framework

From the findings of the literature review and using a combination of the start-up stages of Swayne (1999) and Serarols-Tarres (2009) and the BLS defined in Osterwarlder and Pigneur (2002), the researcher has developed a conceptual framework based on the literature. This framework is used to initiate the research reported in this thesis, and also is used as the working hypothesis that guides this research in terms of the start-up process. This initial framework will be used, tested and modified during an Action Research study involving an organisation starting-up a new *dot-com* venture. Hence the rest of this thesis will detailed explore the process of new venture creation under the *dot-com* sector.

The theoretical framework consists in three sequential stages and their respective components that organisations are supposedly to achieve in order to start a new venture. Figure 2.5 presents the three stages of the start-up process.

CONCEPTION
- The intentions to create a new venture
- Business idea
- Evolution of the business idea
- Identification of the Business opportunity
- Entrepreneurs' background
- The initial vision or idea is generated
- Propensity to act upon opportunities
- The incubator process

PLANNING
- Strategy and strategy development
- Prepare plan, develop business models and prototypes, set channels and find contracts
- Obtain professional support (if necessary)
- Configuration of the business idea
- Evaluate the e-business opportunity
- Organise team
- Transfer the idea into a plan
- Gather all needed resources
- Ask for funding
- Implementation of the business strategy
- ICT planning
- Plan activities to execute the idea
- Refine the business opportunity
- Look for facilities and equipment

IMPLEMETATION
- Decision to exploit
- Opportunity exploitation activities
- Set up operations and produce the product/service
- Implementing strategic objectives
- E-business process implementation
- ICT implementation
- Formal/legal constitution of the firm and first sales
- The firm begins to operate
- The product or service is launched
- Networking, selling.
- Gain control by the entrepreneur
- Adaptation
- Survival

Figure 2. 5: Conceptual Framework from literature

This framework will be used as a starting point to develop a *dot-com* venture within the *dot-com* sector through an action research study, consequently it will be further analysed in chapter 4.

Chapter 3:
Research Methodology

Azael Serrano
Brunel University

Contents

Chapter 3: Research Methodology

3.1. Introduction

This study covers a variety of disciplines, and the selection of the appropriate method is not a straightforward task (Fitzgerald 1998, Avison 2006), the study of Information Systems (IS) is complex, since it is multidisciplinary and social rather than a technical subject (Galliers 1992b). Therefore the researcher has to choose among a variety of research methods, approaches and techniques in order to develop a research framework accordingly to the characteristics of the study to perform.

The approach in which the research is conducted may be visualised of in terms of the research philosophy, the research strategy employed, and the research instruments utilised in the pursuit of a goal, in this case; the research objectives, and the hunt of a solution for a problem (the research question). Hence the purpose of this chapter is to underline the research methods used in this study which are related to the development of a start-up framework for the creation of a *dot-com* company, and how the research method fitted into this research.

Hence this chapter describes in detail the reason behind the selection of the **Interpretative** research assumption and the use of **Canonical Action Research** and the **Case Study** as the main strategies selected, moreover the role of the researcher (**Observer-Active**) and the **Qualitative Data** gathering technique, together with the use of **Observations, interviews and interpretation of documents** is described, finally in this chapter is explained the use of **Thematic analysis** as the main source for data analysis.

Consequently, this chapter is separated in sections as follows: section 3.2 is an introduction to the different philosophies in IS research, the positive, critical and interpretative paradigms are described, and the selection of the appropriate research approach is explained. Subsequently in section 3.3 the research design followed in this study is presented, together with the examination of the methodology and instruments employed in this study. Section 3.4 and 3.5 depicts the combined approach used in this research; hence the use of Case Study and Action Research is explained. Furthermore, the data management techniques and the methods of analysis are analysed in the last sections of this chapter. At last, the role of the researcher and the ethical issues are considered.

3.2. Research Philosophy

A research philosophy is a belief about how data on a particular phenomenon, should be gathered, analysed and used (Galliers 1992a). This belief or set of believes that guides the researcher actions, can be defined as paradigm (Denzin et al. 2005, Denzin 2008). Therefore a paradigm is a broad framework of perception, understanding belief within which theories and practices operate, or as

Bassey (1990) described it "...*a network of coherent ideas about the nature of the world and the functions of researchers which, adhered to by a group of researchers, conditions their thinking and underpins their research actions*" and a basis for comprehension, and interpreting social reality (Cohen et al. 2000).

Mingers (2001) study on IS research describe three main components or elements of the paradigm which are *Ontology* (what is assumed to exist, How do you look at reality?), *epistemology* (the nature of valid knowledge, concerned with the origin, nature, methods and limits of knowledge) and *methodology* (a set of guidelines to assist in generating valid and reliable research). Similarly Guba et al. (1994), state that the basic beliefs that define a particular research can be summarised answering three fundamental questions (ontological, epistemological and methodological questions). According to Chua (1986) the relationship between the knowledge and the human physical world is constrained by rules or beliefs created by the man. These beliefs define the domain of knowledge, the empirical world and the relationship between them, therefore the three beliefs described in the work of Chua (1986) can easily be transferred to the IS domain.

Ontology is the starting point of research and it is logically followed by the epistemological and methodological positions. One of the complete definitions of Ontology is defined by Blaikie (2000) who describe it as "*claims and assumptions that are made about the nature of social reality, claims about what exists, what it looks like, what units make it up and how these units interact with each other... Ontological assumptions are concerned with what we believe constitutes social reality*".

Epistemological assumptions are related with the theory of knowledge, especially in regards to its methods, validation and how gain knowledge of social reality. In broad terms, epistemology refers to the nature of knowledge, also will decide what is to count as acceptable trust by identifying the criteria and procedures of assess true claims (Chua 1986). Different authors have used three similar questions to investigate epistemological assumptions, see (Chua 1986, Hirschheim et al. 1995, Denzin et al. 2000, Waller et al. 2006). What can be known? What is the relationship between the knower and the known? And how do we find things out?

Methodological assumptions indicate the research methods and techniques appropriate for gathering valid empirical evidence (Chua 1986). Chua (1986) has made a classification of the basic beliefs based on paradigmatic assumptions. This classification is presented in table 3.1 and is explained as follows.

The first set of assumptions concerned to the *beliefs of knowledge* is dual; it contains epistemological and methodological assumptions. As discussed above, the epistemological assumptions concern to the criteria by which valid knowledge about a phenomenon may be constructed and evaluated (Chua

1986). In the other side, methodological assumptions indicate which research methods and techniques are considered appropriate for the collections of valid empirical data.

Beliefs about physical and social reality are assumptions about the object of study; there is an extended variety of assumptions existing, although Chua's work has previously analysed and discussed about this subject, Chua (1986) emphasises three beliefs as the dominating ones in the social science. These assumptions are concern about ontology, human purpose and social relations. Ontology beliefs are concern with the essence of the phenomena under investigation, by this means that all the empirical theories are rooted in the essence of the phenomena. Human purpose beliefs deal with the intentions of the researcher or group of researchers to the humans they study, also refer to how people interact in organisations, groups and the entire society (Burrell 1992).

Beliefs about the relationship between knowledge and practice are related to the role of theory in the empirical world. Fay (1975) explains in his work that '*theory may be related to practice in several ways and have to reflect the intentions and values of the researchers towards their research work, and what researchers believe is appropriate to accomplish their work.*'

A Classification of Assumptions

A. **Beliefs About Knowledge**
   Epistemology
   Methodology
B. **Beliefs About Physical and Social Reality**
   Ontological
   Human Intention and Rationality
   Social Order/Conflict
C. **Relationship Between Theory and Practice**
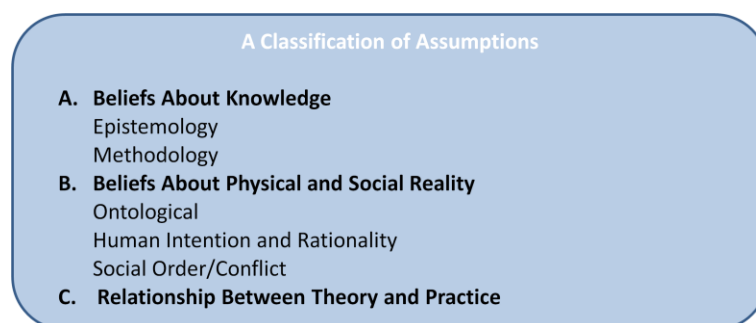
Table 3. 1: Classification of paradigmatic assumptions (From Chua 1986)

The classification of assumptions based in Chua's three categories has been adopted and enhanced in Orlikowski and Baroudi (1991) studies, the authors identified three distinct paradigms in IS research: Positivist, interpretative and critical. The characteristics of each paradigm and their associate philosophical assumption are illustrated in table 3.2 and explained below.

Positivist studies, as described by Orlikowski and Baroudi (1991), "*are premised on the existence of a priori fixed relationships within phenomena which are typically investigated with structured instrumentation*". Positivists believe that the reality is stable and can be described from an objective viewpoint without interfering with the phenomena under study (Levin et al. 1991). Positivists believe that the phenomena studied have to be isolated and must be repeatable. Furthermore, the positivist paradigm believe that social observations should be treated as separate entities from the observer and real causes of social scientific outcomes can be determined reliably and validity.

The term 'interpretivist' encompasses a number of philosophical traditions and the substitute term 'anti-positivism' sets the paradigm in binary opposition to positivism. The interpretative paradigm is originated in the social science (Denzin et al. 2005), and the studies assume that "*peoples create and associate their own subjective meanings as they interact with the world around them*" (Orlikowski and Baroudi, 1991), the intent of the interpretative paradigm is to understand a deeper structure of a phenomenon, and this understanding can be used to inform other settings.

Critical studies, as described in the work of Orlikowski and Baroudi (1991), have the main goal of critique the status quo, "*throughout the exposure of what believe to be deep-stated, the structural contradictions within social systems, and thereby to transform these alienating and restrictive social conditions*". Critical studies have some particular characteristics which help to classify the work made under this paradigm. Evidence of a critical work, stand towards settled assumptions about organisations and IS and the "dialectical analysis which attempt to reveal the historical, ideological and contradictory nature of existing social practices" (Orlikowski and Baroudi, 1991).

Beliefs / Paradigm	Positivist	Interpretative	Critical
Physical and Social reality: Ontology, Human rationality, Social relations	Ontologically, the researchers using positivist IS paradigm assume an objective physical and social world that its independent from the human , the role of the researcher is to find out the physical and social reality by using precise measures, the researcher is role in this paradigm is to play a passive and neutral role in the study and does not interfere in the observable fact. The assumptions about social reality is that humans interact in constant an organised ways.	Ontologically, the interpretative perspective, emphasises the importance of humans as the constructors and re-constructors of their reality. The interpretative paradigm attempts to understand how and why individuals interact and participate in a social world through ongoing social interactions. Another interpretative assumptions is that the social world is produced and reinforced by humans, therefore organisations, groups and social systems cannot be characterised and measured in some objective or universal way.	The main idea of the critical paradigm is the belief that social reality is fully composed, hence the human beings, , organisations and societies are not confined to existing in a particular state. This idea of totally implies that things cannot be treated as isolated elements. The critical philosophy presumes that the contradictions innate in existing social forms lead to differences and conflicts, from which new social forms will emerge. Therefore the role of the critical research is to find and analyse these "hidden" contradictions and attempt to reframe the social forms.
Knowledge: Epistemology, Methodology	With respect to Knowledge, the epistemological belief of the positivist paradigm is determined with empirical way of test the theories, positivist researchers work with the aim to discover unilateral causal relationships, that are the basis for of generalised knowledge, hence can predict patterns of behaviour across the phenomenon. The positivist paradigm assumes that following a number of "appropriate" methodologies is the only way to obtain valid knowledge, primary data collection techniques used in this paradigm are sample surveys and controlled experiments, and inferential statistics is the data analysis method used to "discover" causal laws.	Epistemologically, the interpretative philosophy is based in the principle that social process is not confined in hypothetical deductions. Instead , to understand the social process, the researcher needs to getting inside the world of those generating it. Interpretative researchers generate interpretations or explanations of a particular setting in the real world . The primary aim of the researcher is to describe, interpret, analyse and understand the social world from the participants perspective. Methodologically, the researcher attempts to obtain his constructs from the field by in-depth examination of the phenomena. The research methods appropriate for generating valid interpretative knowledge are, field studies.	The epistemological belief of the critical perspective is grounded in social and historical practices, and as Chua (1986) describes: is based on the belief that a phenomena can only be comprehended through the time or historically, by the analysis of three basic questions, "what is has been, what it has becoming and what it is not". The research methods of choice under this paradigm are long-term historical studies and ethnographic studies of organisational processes and structures. Critical researchers believe that the interpretations of the social world is not enough, they claim that the material conditions of dominations need to be understood and evaluated too.
The relationship between knowledge and empirical work	The relationship between theory and practice in the positivist paradigm, is in the basis, mainly technical. Researchers act as impartial observers, which they can objectively evaluate, predict and calculate actions or processes, but they can not get implicated in moral judgements or subjective opinions.	The relationship between theory and practice in the interpretative philosophy is that the researcher can never assume a value-neutral position, and is always involved in the phenomena being studied.	The relationship between theory and practice in the critical philosophy is that the role of the researcher is to bring to awareness the restricted conditions of the status quo, and helping to eliminate the bases of alienation and domination .

Table 3. 2: Philosophical assumptions of IS research paradigms, based on Orlikowski and Baroudi's interpretations (1991)

Based on the characteristics of the different research paradigms (see table 3.2) **an interpretative approach** is adopted as the most appropriate to address the aim of this thesis and is further explained in next section.

3.2.1. Selection of the appropriate research approach

Selecting the appropriate research approach is not an easy or straightforward task, as previously mentioned the researcher has to overcome the first challenge which is the selections of the research approach. According to Weber (2004) each of the different research methods have different strengths

and weaknesses, for that reason the researcher has to choose the methods that better fit the purpose of the research.

Based on the complexity of chosen a research paradigm. The researcher has concentrated his effort on:

- Gain the necessary knowledge about the existing approaches in order to make a knowledgeable decision. See (Galliers 1992a, Orlikowski and Baroudi, 1991).
- Following the sense on intuitiveness of the researcher to match the research problem to a particular research approach. See (Walsham 1995a, Walsham 1995b).
- Using the philosophical assumptions of IS research paradigms, based on Orlikowsi and Baroudi's interpretations, to make an accurate decision (see table 3.2).

For the purposes of this thesis, the *interpretative* **research approach** has been selected as the underlying research assumption of this research. The reason for that choice is based on the analysis made in the two previous chapters of this thesis, which pointed up that there are a lot of social, political and cultural issues involve in the creation and development of a company, in this case a SME, *Dot-com* Company. Moreover, the study of this particular phenomenon cannot be separated from its organisational and cultural context as the challenges and factors affecting the creation of a company were studied also. In addition the reason for chosen the interpretative approach is based in the following beliefs.

Ontologically, the interpretative paradigm attempts to understand how and why individuals interact and participate in a social world. Which in the case of this research, the researcher has studied the interaction and participation of individuals, involved in the creation of a *dot-com* company.

Epistemologically, the interpretative philosophy is trying to understand the social process; therefore the researcher needs to get inside this world. As it will be explained in section 3.4, the Case Study approach and Action Research methodologies were used for the analysis of the phenomena under study, therefore the researcher has got inside the working world of the main actors; furthermore, the researcher has generated interpretations of a particular setting of the real world.

Methodologically, the researcher needs to obtain his constructs by in-depth examination of the phenomena. Which in the case of this study the researcher has selected Action Research (AR) as the main methodology for an in-depth study of the phenomenon. However, the Case Study was used in addition, as part of a combined approach which is explained in section 3.4 of this chapter.

In relation to the relationship between knowledge and the empirical work; under the interpretative paradigm, the researcher has been always involved in the phenomenon under study. The researcher in this study interacts closely with the human subjects, making impossible the separation between facts and values, resulting in a change of perception for both parties (Walsham 1995a).

Having discussed the reasons of selecting an **interpretative research approach**, in the next section the nature of the *qualitative* **research** approach is described in order to justify its relevance to this research.

3.2.2. Qualitative research

The term interpretative research is frequently confused and used interchangeable with the term qualitative research. However, qualitative research has been used in different disciplines, fields and subject matters. Qualitative research has separate and distinguish histories in different fields of study, such as; education, social work, communications, philosophy, history, organisational studies, medical science, anthropology, Information Systems and sociology among others (Denzin et al. 2000). Also depending on the underling assumptions of the researcher, the research can take form of any of the predominant paradigms in IS, such as interpretative, critical and positivist (Klein et al. 1999). Despite the incorrect use of this term, the researcher consider the *qualitative research* **approach** as the choice which better fits the main aim of this research and is further explained below.

In order to select the appropriate method of data gathering, researchers have to consider many issues to ensure and justify the appropriate method. Hence, the reason for chosen a **qualitative research approach** is because this approach study things in their own natural place, in other words, on site, and try to achieve a better understanding of the phenomena in terms of the meaning that people bring to them (Denzin et al. 2000). Also this research fits well into the types of research for which qualitative research would be appropriated. Marshall et al. (2011), see table 3.3.

Qualitative Research	
	Research that examines in depth into complexities and processes
	Research on little-know phenomena or innovative systems
	Research that seeks to explore where and why policy and local knowledge and practice are at odds
	Research on informal and unstructured linkages and processes in organisations
	Research on real, as opposed to stated, organisational goals
	Research that cannot be carried out experimentally for practical or ethical reasons
	Research for which relevant variables have yet to be indentified

Table 3. 3: Research for which Qualitative Research would be appropriate. From: (Marshall et al. 2011)

Moreover, Lee (1999b) describes three major characteristics of qualitative research: a) time expended by researcher physically in the site; b) research interactions with participants operations and activities; and c) researcher efforts to understand the participants, operations and activities. These three characteristics fit entirely within the Action Research and Case Study methodologies which are used in this research and explained in sections 3.4.1 and 3.4.2.

The qualitative research approach has been selected for this research, as this approach is more suitable for understanding people within their social and cultural contexts (Denzin et al. 2000). In this research there are many issues related to Internet, electronic commerce, business models and organisations that need to be studied from inside. Hence, qualitative research seems to be more appropriate for collecting the views of stakeholders and understanding the complexity of a socio-economic environment where they operate.

Finally it's been notable that qualitative research approach has been used in several studies similar to this research, some examples of similar studies in the field will be further discussed in section 3.7 of this chapter. Although, next section provides a detailed description of the research process followed in this research and the reason behind the use of the *qualitative research process*.

3.2.3. Qualitative Research process (Research Approach)

Literature up to date has coincided in the main components or phases used to design the research process. However, it is remarkable that each research process differed to others, since the foundations of each research are unique and distinctive depending of the goals and methods followed. Malterud (1993) for example, has described five phases or "steps" of the research process, which are: Problem setting, Sampling, Data collection, Data analysis and Procedures. Similarly, Shaw (1999) has provided a detailed description of the research process on her work and has detailed also five main phases as follows; Research problem, Research design, Inductive analysis, Research outcomes and Benefits, and limitations of the research. The work of Shaw has particularly contributed to this research for the reason of the similarities between the studies of Shaw (1999) using the qualitative research process in small firms, and this research. Additionally Denzin et al. (2000) define the research process in five phases as well, these components do not differ substantially from the ones presented in the studies of research design and process, e.g. (Malterud 1993, Shaw 1999, LeCompte et al. 1993, Miles et al. 1994, Robson 1995, Maxwell 2005), and will be further discussed in this section.

Maxwell (2005) has presented a model for developing a research process called "interactive" which is characterised for its flexible interconnected structure and its five components. Although, this model does not follow a linear or cyclic sequence, instead the components form an integrated and

interactive whole, which each component interacting to several others. The components mentioned in Maxwell's work are; Goals, Research questions, Conceptual framework, Methods, and Validity, those components contain certain similarities with the work of Denzin et al. (2000), Shaw (1999) and Malterud (1993).

For the purpose of this research, the phases of the qualitative research process described in the work of Denzin et al. (2000) have been adopted in this research, and it has been a frequent method used in the IS field, particularly with qualitative methods. The researcher of this study has made little adjustments to enhance these phases with the interconnected structure of Maxwell (2005), and the researcher consider these phases the best approach for this study, mainly due to the nature of the research, and the interactive and interconnected structure of Maxwell fits better the research questions. The components of the qualitative research process are briefly described below; moreover the research design based on this model and followed in this research is presented in figure 3.1.

Phase 1: the researcher. During a qualitative research process, the researcher enters into the depth and complex of the traditional qualitative research perspectives. This traditions locate the researcher in history, guiding and at the same time constraining work in a specific study, the researcher must also confront the ethics and politics of the study. These ethics and politics as well as the role of the researcher are further discussed in this chapter in section 3.10 and 3.9 respectively.

Phase 2: Theoretical paradigms and perspectives. Qualitative researchers are guided by highly abstract principles; these principles combine beliefs about ontology, epistemology and methodology, this net of beliefs are called 'paradigms' or 'interpretative framework' and shape how the qualitative researcher sees the world and act in it. In this research the interpretative paradigm has been chosen, and the reasons for its selection are explained and presented in section 3.2 of this chapter.

Phase 3: Research strategies. The research design involves a clear focus with the research question and the aims of the study, it helps the development of what information will answer better the research questions, also advises which strategies are most effective for obtaining this information. Therefore a research design describes a flexible set of guidelines that connect the paradigms with the strategies of enquiry and the methods for collecting empirical data. The next section (section 3.3), makes clear the research design followed in this study and explain the phases involved in the study.

Phase 4: Methods of collection and analysis. Qualitative researchers have to choose between several methods for collecting empirical materials such as; interviews, observations, and documents among others, besides they may need to analyse the materials in a variety of different ways, including; content, **themes**, narrative, and semiotic strategies, moreover, the researcher look for ways of

managing and interpreting those large amounts of materials, normally aided with data management methods and computer-assisted models. Detailed description of the techniques of data gathering is included in section 3.8 of this chapter and further analysed in chapter 4.

Phase 5: the art, practices, and politics of interpretation and evaluation. This is the final phase of the qualitative research process where the researcher has to make public the interpretations of the research carried out and produce a public text that comes to the reader. Additionally the evaluation has to be applied in this phase using a variety of criteria for evaluation practices to show the quality of the results. The data analysis techniques are described in section 3.8.4. Also the presentation of the findings is included in chapter 5 and 6; moreover the evaluation of the outcomes of this research is presented in the chapter 6 of this thesis.

Based on the phases of qualitative research defined by Denzin et al. (2005), and the interconnected structure of Maxwell (2005), the selection of the process followed in this study is explained in figure 3.1 where the highlighted objects indicate the choice made in this research.

Phase 2: Theoretical paradigms and perspectives
Interpretive
Constructivism
Hermeneutics
Feminism
Radicalised discourses
Critical theory and Marxist models
Cultural studies
Queer theory

Phase 3: Research strategies
Case study
Action Research
Grounded Theory
Ethnography
Participant observation
Ethnomethodology
Life history
Historical method
Applied research
Clinical research

Phase 1: The researcher

History and research traditions
Conceptions of set and other Ethics and Politics of research

Phase 4: Methods of collection and analysis
Interviewing
Observing
Documents and archival records
Visual methods
Autoethnography
Data management methods
Textual analysis
Focus groups
Applied ethnography

Phase 5: The art, practices, and politics of interpretation and evaluation
Thematic Analysis
Practices and policies of interpretation
Writing as interpretation
Policy analysis
Evaluation traditions
Applied research
Criteria for judging adequacy

Figure 3. 1: Qualitative Research process used in this study

3.3.   Research strategy (Research Design)

This section presents three phases designed and followed in this research in order to achieve the aim of this study. The research design refers in this study to the overall strategy and rationale; site selection, population selection or both; the researcher's role; data collection methods; data management; data analysis strategy; trustworthiness features; and a management plan (Maxwell 2005). To design a study, particularly a qualitative study is not a simple task either; it needs an ongoing development that involves iterations between the different components of the design and assessing the implications of goals, theories, research questions, methods and validity, and not necessarily proceeds through a sequence of steps neither do have a starting on a predetermined point, but involves interaction and interconnection between all the design components (Maxwell 2005). Nevertheless, one of the purposes of having a research design is to preserve the design flexibility that is a characteristic of qualitative methods.

The core of a good qualitative research design is the use of a set of procedures that are open-ended and rigorous at the same time (Flick 1998). There are different approaches to design a research, for example Janesick (2000) described the qualitative research design through a metaphor with the choreography, in which the author describes three major phases; warming-up and preparation, stretching exercises and cooling down. Similarly but in an innovative context, Serrano et al. (2010) has described an ontology to model the research process in information systems, the authors argued that researchers needs to take more "practical" approach by focusing in the process of thinking and planning the research activity, rather than focusing on justifying the use of the research methods. Comparable with Janesick (2000), Serrano's study make use of research stages as a temporal part of the research project, these research stages or phases have a particular objective to achieve and are sequentially followed from previous stages (Serrano et al. 2010).

The overview of research has followed the structure proposed in the work of Serrano et al (2010), although the purpose of this model is to be self explanatory, a textual and graphic description of the main elements of the ontology to model the research design is presented in table 3.4.
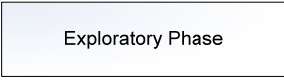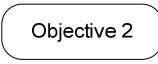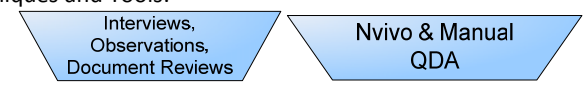
Icon / Connector type	Description
Methods/Methodologies: Icon: Action Research: Case 1 Connector type:	Methods or methodologies are defined by the authors as "a well defined sequences of operations that if carried out proficiently yield predictable results" (Serrano et al. 2010). Methods and methodologies may differ depending on the author's interpretations
Research Stages: Icon: Exploratory Phase connector type:	Research Stages are temporal parts of a Research Project and can be used to divide the research project. Research Projects should have at least one Research Stage (Serrano et al. 2010). Research Stages have a particular objective to achieve and can produce an Artefact as an outcome of the stage and or can also use Artefacts from other stages for the completion of the stage.
Objectives: Icon: Objective 2 connector type:	Objectives are achieved through Research Stages. Objectives are a type of Goals or particular objective in the research design.
Milestone/Events: Icon: Milest one 1 connector type:	Research Stages can be measured through the achievement of milestones, milestones events can also be mapped against objectives.
Artefacts: Icon & connectors: Is produced → Initial Framework for Start-up → Is used →	Artefacts can be seen as the outcome produced during a Research Stage that will have a specific use in the research process. Examples of Artefacts could be the results derived from a survey, the data derived from a simulation run, a piece of software, a product prototype and literature review.
Techniques and Tools: Interviews, Observations, Document Reviews Nvivo & Manual QDA Icon: connector type:	This class represents the group of techniques and tools available to undertake research. For the purpose of this ontology, techniques are defined as "*A way of doing a particular activity in the research process*" (Serrano et al. 2010). Each technique may involve the use of one or more tools.

Table 3. 4: Main elements of the ontology to model the research design

3.3.1. Phases of the research design

The research stages have been explained in chapter 1 of this thesis, and as a part of the first stage of the research, the "Exploratory phase", the researcher after made a dedicated literature review on the field, decides the research question and the research strategy to follow in the study. The results of this initial analysis are included in chapter 1 and 2 of this thesis. This chapter (3) describes the research strategy followed and the reasons behind those selections. Also this stage involves some background research and the actual execution on the field work, at this stage the first cycle of the Action Research (AR) is analysed and the result of this analysis is reflected in chapter 4.

Figure 3.2 depicts the first phase of the research design (The exploratory phase); in this phase the extensive analysis of the literature review performed in different areas, together with the execution of the first two cycles of Canonical Action Research (CAR) directs this research towards the 'Research Questions' as part of the first objective in this phase. Additionally towards the end of this phase the researcher proposed an Initial framework for the start-up process based on the analysis of the literature, which is the objective 2 of this phase as shown in the figure 3.2
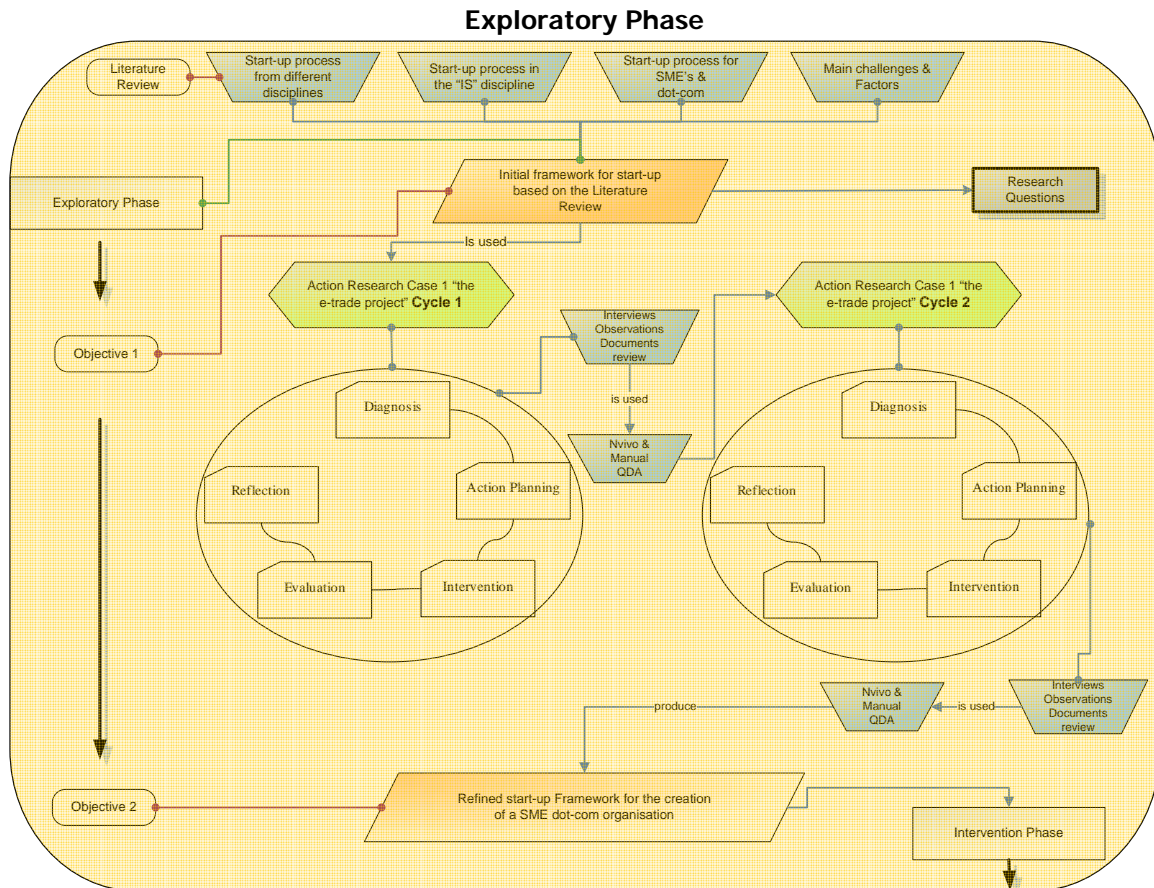
Figure 3. 2: Exploratory phase of this study

The second phase of this research, "*intervention phase*", is preceded by the first phase and the first two cycles of CAR. In this phase two more cycles of CAR are performed in the organisation under study in order to enhance and improve the framework for the development of a new *dot-com* initiative. The analysis of the activities performed during these cycles is presented and further discussed in chapter 5 of this thesis.

Figure 3.3 presents the second phase of the research design; In this phase the remaining two cycles of AR in the organisation under study are deployed, once again the use of QDA techniques were applied to examine qualitative data in form of; interviews, documents and observations. This extensive analysis was useful to identify the main challenges found during the start-up process of

this project, which is the objective 3. Furthermore, this analysis together with the conclusion of the Canonical Action Research (CAR), leads the research towards the 'revised' start-up Framework for a creation of a SME-*dot-com*, as part of the objective 4 and those findings are presented in chapter 5.
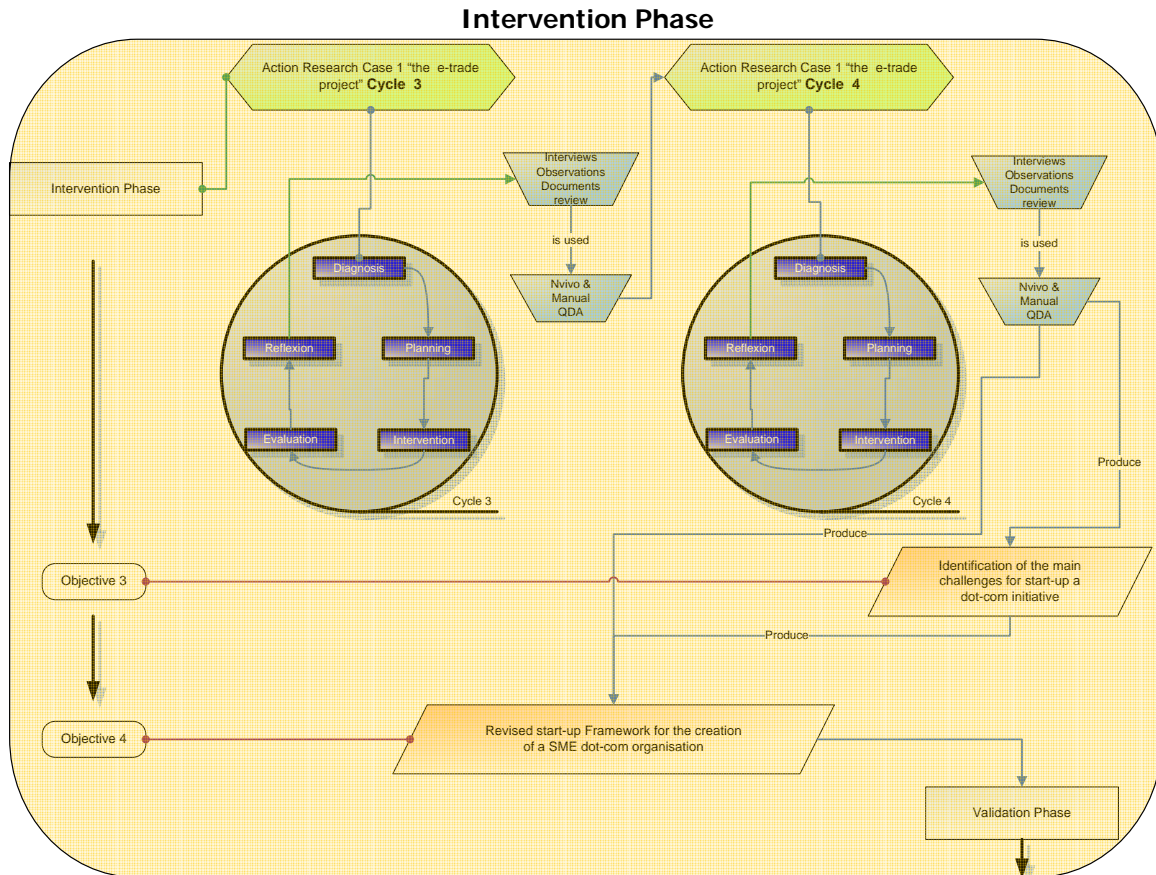
Figure 3. 3: Intervention phase of this study

In the last phase of this research, "*validation phase*", an additional cycle of CAR is presented together with **two case studies** that are analysed in order to enhance, evaluate and support the findings of this research. Figure 3.4 graphically describe the last phase of the research design.

Figure 3.4 correspond to the third and final phase of the research design; in this phase the use of "Case Study" methodology is employed in order to validate the framework developed during the AR study. First the main organisation under study is questioned about their experiences and thoughts of the project, and the participants are invited to discuss and contribute in the final start-up framework. The analysis of the final data collected among the participants of the e-trade project, corresponds to the objective 5 of this research. Subsequently, two more case studies were used to evaluate the framework proposed and the outcomes of the analysis of these case studies are presented in the final framework, which is part of the objective 6. Finally last reflexions and analysis of further data are used to achieve the objective 7 of this research, which is the answer to the

research question originally proposed in the first stage of the research, the findings and conclusion of this research are presented in chapter 6 and 7 respectively.
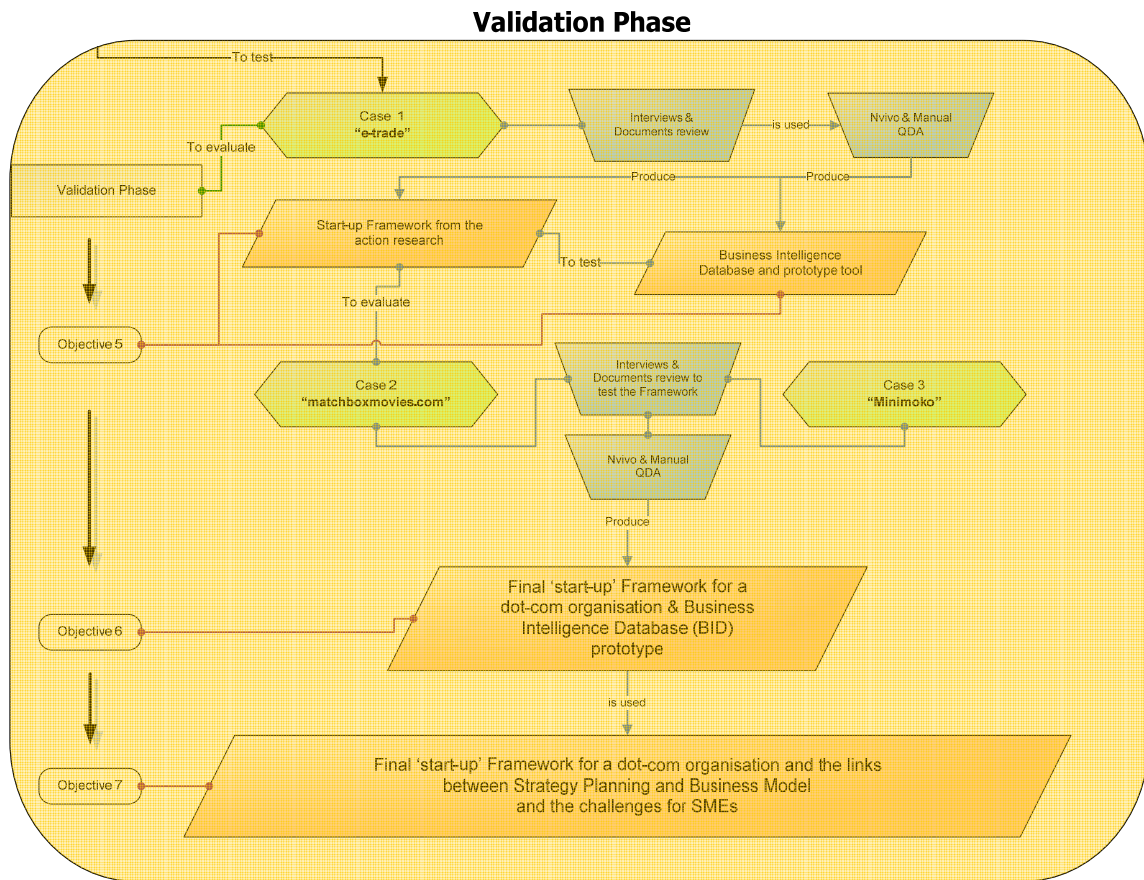
Figure 3. 4: Validation phase of this study

Following the structure of the research design discussed above, the "Case Study Research" and "Action Research" are the main strategies of enquiry used in this study and are further described in next sections. The Case Study approach was used in this study only during the validation phase of the research design, through the analysis of qualitative data among two SMEs. Conversely, the AR approach was used in all the three phases of the research design; therefore AR plays a central role in this research.

3.4.   The Case Study – Action Research: A combined approach

Discussions of qualitative research methods in IS are normally exemplified with Case Study methods, ethnographic research methods, and Action Research methods (Baskerville et al. 1998). Despite, Action Research, Case Study, ethnography and grounded theory are types of Qualitative research methods. Benbasat et al. (1987) claim that Action Research is part of the Case Study family of methodologies; however, the researcher in this study, intentionally treat them as separate forms.

Action Research studies are likely to include cases; conversely case studies evade Action Research, and the difference between them is that Case Study research examines phenomena in its natural setting with the researcher as an independent outsider with no intention to change the phenomena, while in Action Research (AR), the researcher is active participant and is "useful" for the environment under investigation as the researcher is directly involved in planned organisational change in Action Research (Avison et al. 2007), thus the knowledge obtained can be immediately applied. Table 3.5 highlight the Case Study and Action Research main characteristics as described in the work of de Vreede (1996) and Baskerville (1999).

	Action Research	Case Study
Approach	Prescriptive, intervening	Exploratory, explanatory or descriptive
Paradigm	Interpretative	Interpretative or positivist
Researcher	Active participant	Observer
Focus on questions	"How to"	"How" and "Why"

Table 3. 5: Main characteristics of Case Study and Action Research

The phenomenon measured in this research involve business (organisations) and professionals (individuals) working in a real context, therefore interpreting Information systems that includes problems related to social, organisations and conceptual aspects of the development of a *dot-com* company is a complex task, and needs to be investigated asking "how" and "why" questions to help to understand the nature of the process like in the Case Study approach, and also asking "how to" questions, assist the interpretation of the data collected, akin to the Action Research approach.

Both, **Action Research** and **Case Study** have been used in this research for different purposes. Principally a four-cycle AR was use during the first and second phase of the research design, with the aim of defining a framework for the development of a *dot-com* company and for the development of a tool to aid decision's makers in organisations, particularly within SMEs, furthermore the execution of those cycles has helped the researcher and practitioners to elucidate the main challenges presented during this project. At the end of this study in the Validation phase an additional Action Research cycle was performed in order to validate the finding of previous cycles and to develop the final framework based on those findings. Once the CAR is completed, the researcher have made use of two Case Studies with the aim of evaluate the final framework and tool proposed, and to make changes accordingly.

The researcher believes that using a bi-methodological combination (Action Research and Case Study) has facilitated the answer of the research questions of this study for various reasons related to the strengths of each methodology, which are explained in the next two sections, also in order to construct validity, rigor and relevance of this research, Thematic analysis was used through multiple

data collection methods, which are described in section 3.8 of this chapter, and a systematic inductive guideline for collecting and analysing data, as described in section 3.8.4.

3.4.1. Case Study research

There are a variety of studies describing the Case Study approach (see Walsham 1995b, Benbasat et al. 1987, Yin 2009, Lee 1999a), among these literature, Benbasat et al (1987) described three reasons why the Case Study will be viable in this study which are: (1) it is necessary to study the phenomenon in its natural setting; (2) "how" and "why" questions are essential to understand the nature and complexity of the process under study; and (3) the research being conducted should be in an area where few or none studies have been undertaken. This research have based on these rationale.

Case studies can be defined in various ways; therefore, a standard definition does not exist, although one of the most accurate definitions for the Case Study is discussed in Benbasat et al (1987) work. The authors made a compilation of the definitions of Case Study described in the works of Benbasat et al. (1987), Yin (2009), Stone (1978), Bonoma (1985), and Kaplan et al. (1988); and later discussed in Robert Davison's work, as a result Benbasat et al (1987) described Case Study as follows:

"A Case Study examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities (people, groups or organisations) the boundaries of the phenomenon are not clearly evident at the outset of the research and no experimental control or manipulation is used".

There are a number of factors to consider at the moment of deciding whether use a Case Study approach or not, in general case studies are preferred among researchers when questions like "how" and "why" are being posed, also when the researcher has little control over the events and when the focus of the study is on a contemporary phenomenon within some real-life context (Yin 2009). Hence, the decision of using a Case Study methodology depends on three fundamental conditions; the type of research question, the kind of control the researcher has over the actual events; and the focus on a contemporary phenomena.

The Case Study, similar to other research strategies is a way of investigating an empirical topic by following a set of systematic procedures, therefore, the logic that links the data to be collected and the conclusions to be drawn needs the constructions of a conscious and analytic research design (Yin 2009). Another aspect to note in relation to the Case Study approach is that the Case Study is not sufficient to compare states before and after a change, since the outcome may have been influenced by other factors than those intentionally studied and/or used. Therefore it may be important to also

follow the actual course of events during the change process, similar to what is done in Action Research but without the participation of the researcher in the process.

Use in this research: Accordingly to the research strategy of this study (see section 3.3), the research was carried out in three phases. In the third phase, "The validation phase", two case studies have been undertaken, first the case of "mailboxmovies.com" is analysed followed by the case of "Minimoko", and both studies are portrayed in chapter 6 of this thesis.

The data gathering techniques used in both cases are: *structured and semi-structured Interviews* and *documentation reviews*. Together, these case studies were used to validate the proposed framework for the development of a *dot-com* company resulted from previous phases. In addition, the insights for these case studies facilitated the validation and usability of the tool developed "Business Intelligence Database" which includes the information and documents needed for the creation of a robust business model. These case studies are further examined in chapter 6, and the data gathering techniques are also explained in section 3.8.

3.4.2. Action Research

The origins of Action Research method (AR) are dated from the work of Kurt Lewin on 1946. Lewin is attributed for developing the method at the Research Centre for Group Dynamics in the University of Michigan, the concept of AR emerges during Lewin's work in social psychology within the framework of field theory (Smith 2001). Conversely, another group working at the Tavistok clinic or as today is know "The Tavistok Institute" developed a similar method in the field of operational research, in both methods the scientist were participants in their own research (Baskerville et al. 1998).

The origins of AR, and the ways in which AR is conducted and perceived are still open to dispute, therefore there is not one precise, widely accepted definition of this particular method (Altrichter, et al., 2002), however the literature on AR is reach in useful definitions. The definition of AR has evolved through time; from the earliest definition of (Lewin 1948).

> "...a comparative research on the conditions and effects of various forms of social action, and research leading to social action."

Evolving through many definitions like the ones proposed in the studies of Avison et al. (1999), Rapport (1970), Clark (1974), Checkland (1984), Argyris et al. (1985), Schein (1988), Checkland et al. (1990) and, Baskerville et al. (1996), also an ample definition is proposed by Kemmis et al. (1998), and later discussed in Altrichter et al. (2002) as well as analysed in "The First international

symposium on Action Research in Industry, Government and Higher Education" in Brisbane, Australia, in 1989 which defines AR as:

> "Action Research is a form of collective, self-reflective inquiry that participants in social situations undertake to improve: (1) the rationality and justice of their own social or educational practices; (2) the participants' understanding of these practices and the situations in which they carry out these practices... The approach is Action Research only when it is collaborative and achieved through the critically examined action of individual group members."

A simplified definition of AR, which the author of this study considers more appropriate for this research, because of the simplistic approach and clear explanation of the concept is provided by Avison et al. (1999):

> "Action Research combines theory and practice (and researchers and practitioners) through change and reflection in an immediate problematic situation within a mutually acceptable ethical framework. Action Research is an interactive process involving researchers and practitioners acting together on a particular cycle of activities, including problem diagnosis, action intervention, and reflective learning".

Hence, in a simple way, AR is "learning by doing", where a group of people identify a problem, do something to resolve it, see how successful their efforts were, and if not satisfied, they try again (O'Brien 2001).

Although there is not universal definition of AR, academics and practitioners have coincided in three key aspects of Action Research: (1) a group of people working together; (2) involved in the cycle of planning, acting, observing and reflecting on their work; and (3) producing a public report of that experience (Altrichter et al. 2002, Zuber-Skerritt 2002).

Despite the growing interest of academics and practitioners in AR, there still some confusion about the IS Action Research practice. Moreover, discussions of qualitative research methods in Information Systems often proceed as if there were only one definite case method, e.g.; Case Study research method, ethnography research method and Action Research method. However, each of these terms refers to a type of research methods (Baskerville et al. 1998), therefore the author of this thesis have considered important the analysis and the selection of the appropriate form of AR that better fits this research.

Action Research forms.

Different forms of AR have different models, structures and goals, although AR studies, in all its variations, share five characteristics unique of this method; (1) multivariate social setting, (2) highly interpretative assumptions about observation, (3) intervention by the researcher, (4) participatory observation, and (5)the study of change in the social setting (Baskerville et al. 1998).

In order to describe the features of the different AR forms, Carr et al. (1986) identified three basic characteristics to differentiate the types of AR; (1) Aims, (2) Facilitator's role and, (3) Relationship between facilitators and participant. Similarly, a comprehensive analysis, made in the work of Baskerville and Wood Harper (1988), identified four types of characteristics that lead to a classification of the AR forms. These are: (1) Process model, (2) Structure, (3) Typical researcher involvement, and (4) Primary goals.

Each form of AR is notable by a variety of characteristics; these characteristics can be classified in at least four types, as mention above: Process model, structure, typical research involvement and primary goals. The characteristics of AR forms are further decomposed and explained in the table 3.6.

Characteristics of Action Research Forms

Characteristic	Definition	Characteristic	Definition
Process Model	Characterise different action research forms	Structure	Stress two distinctive forms of structural guidance of the research
Iterative	Involves a repeating sequence of activities, normally cycling between action activities and problem diagnosis	Rigorous	Is characterised by delineated stages, steps or activities carried out on a cycle or sequence
Reflective	Is necessarily iterative and focuses more on the reflective analysis rather than problem diagnosis	Fluid	Defines activities very loosely and leaving various activities relatively undefined
Linear	Does not involve iteration, but a single sequence of activities; 1. engage, 2. diagnose, 3. unfreeze, 4. change, 5. freeze and 6. disengage		

Characteristic	Definition	Characteristic	Definition
Typical Involvement	It refers to the level and different ways of involvement of the researcher with their study	Primary Goals	It refers to, how the different forms of AR can be used with many different goals in mind
Collaborative	Implies that the researcher is an equal co-worker within the study subjects and the study tasks can be shared with all participants without restrictions	Organisational Development	Involves a primary goal of improving the human organisation, thus implies the development of social conditions of the organisation
Facilitative	Distinguishes the researcher as an expert between the study subjects. The task of the researcher is to help the subjects with expert advise	System Design	Involves a primary goal of creating or modifying organisational systems, normally system design always involves a computer-based IS
Expert	Also distinguishes the researcher as an expert but the researcher has to solve immediate problems	Scientific Knowledge	Implies a primary goal of contributing a general understanding of the problem setting to the scientific literature in the field
		Training	The primary goal is individual learn from the study

Table 3. 6: Characteristics of Action Research forms (based on the findings of Baskerville and Wood-Harper, 1998)

Based on these characteristics, Baskerville et al. (1998) have made a taxonomy of the various forms of AR. The foundation of the taxonomy elaborated in their work is based on the characteristic of process model that leads to three categories in which all the forms of AR lays: The Iterative IS Action Research, Reflective IS Action Research and Linear IS Action Research. The groups or categories of AR are illustrated in the table 3.7, the table is based on the work of Baskerville (1998) and it has been enhanced with two recent forms of AR described in the work of Davison et al. (2004) and also with some recent publications of each form of AR.

Characteristic	Process model			Structure		Typical Involvement			Primary goals			
AR Form	Interactive	Reflective	Linear	Rigorous	Fluid	Collaborative	Facilitative	Experiment	Organisational development	System design	Scientific knowledge	Training
Canonical AR	√			√		√			√		√	
IS Prototyping	√			√		√	√			√		
Soft Systems (SSM)	√				√		√		√	√		
Action Science		√			√		√		√		√	
Participant Observation		√			√			√			√	
Action Learning		√			√			√				√
Multiview			√	√		√	√	√		√		
ETHICS			√	√			√		√	√		
Clinical Field work		√			√		√		√		√	
Process Consultation		√		√				√	√			
Collaborative Practice	√				√		√		√		√	
Dialogical Action Research		√		√		√			√			

Table 3. 7: Characteristics of Action Research forms, adapted from: (Baskerville et al. 1998, Davison et al. 2001, Davison et al. 2004)

Following these characteristics of AR, a **Canonical Action Research** form has been adopted in this study based on the following: An Interactive process model has been has been considered for the reason that this research has followed a repeating series of activities in four cycles; the structural guidance used in the study is characterised by delineated stages, steps and activities carried out, leading the research into a Rigorous form; the involvement of the researcher in this study is through collaboration with the participants as an equal co-worker; and the primary goal of this research is to improve the human organisation and contributing to the understanding of the problem setting to the scientific literature in the IS field.

3.5. The Action Research process

For the reason explained in previous section, the Action Research, particularly the Canonical Action Research (CAR) has been chosen in this study as the main methodology to gather information and conducting the research, thus in order to design a proper CAR process is necessary to have a thoughtful revision to the Action Research process. Hence, this section analyses this process and explain each of the phases involved in the CAR process design.

The AR process is described as a juxtaposition of action and research, or a combination of theory and practice. This duality of AR involves two aims that the researcher has to accomplish: make improvements throughout making changes in a problematic situation, and generate new knowledge as a result of the activities carried out (McKay et al. 2001). Therefore in the AR process, "*the researcher wants to practice a theory in real situations, gain feedback from this experience and adjust the theory as a result of the insights*" (Avison et al. 1999).

Although, there is not conventional way to carry out AR, the different forms of AR contain different model structures, goals and phases that researchers can use as guidance for the development of an AR study. One of the most used description of AR process in Information Systems, is the work of Susman et al. (1978), furthermore Baskerville (1999) have improve this process describing five phases of enquiry in a cyclical process; (1) diagnosis, (2) action planning, (3) action taking, (4) evaluating and, (5) specified learning (Baskerville 1999). Similarly Altrichter et al. (2002) have developed a simple model in spiral sequence of the cyclical process with four phases or steps; Plan, act, observe and reflect, and the common representation of the AR process is a single cycle with possible iterations, regardless which form of AR is used (McKay et al. 2001).

The phases of enquiry used in all AR forms barely differ and usually contains four/five steps. Although there are still small differences on the phases carried out depending on the form of AR used, in this study the Canonical Action Research (CAR) has been used and the reason why the researcher has selected this form has been explained in section 3.4, moreover the cyclical process model and the phases of enquiry of CAR are explained in next section.

3.5.1. Phases of enquiry in the Action Research process

The most prevalent description and one of the most widely adopted AR process in the social science particularly in the IS domain, is the method developed in the work of Susman et al. (1978). The method first requires the establishment of a client-system infrastructure or research environment, followed by five phases of enquiry: Diagnosis, Action Planning, Action taking, Evaluating and, Specifying learning (Richard Baskerville 1999, Lindgren et al. 2004). Similarly, Davison et al (2004)

have described the CAR process model build not only based on Susman and Evered work, but upon various perspectives such as Kemmis et al. (1998) and, McKay and Marshall (2001).

In this study, the CAR process model for enquiry described in Davison et al. (2004) has been adopted as the main phases which guide this research, and it is illustrated in figure 3.5.
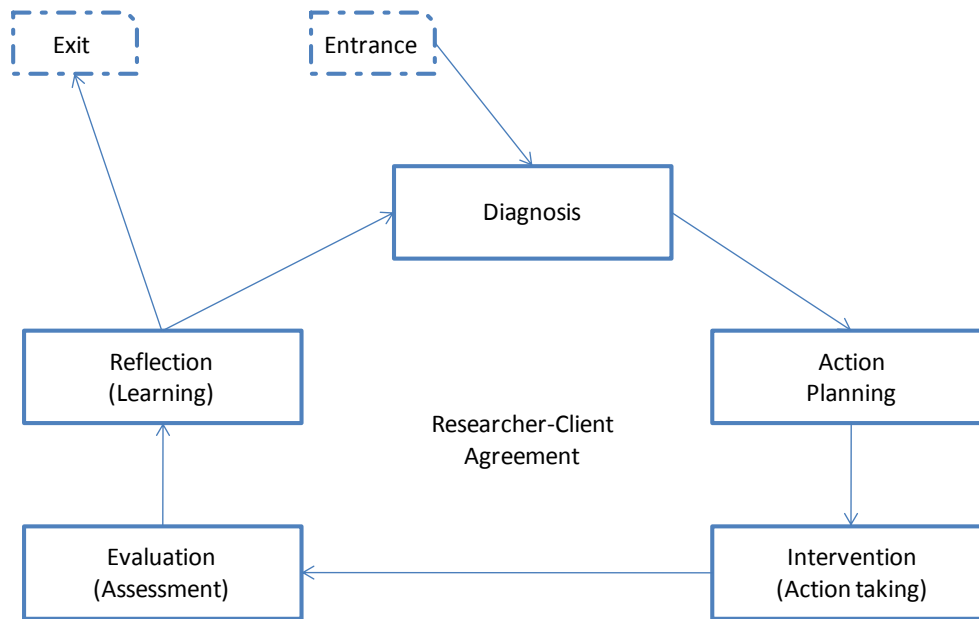
Figure 3. 5: CAR Phases of inquiry (source: Davison et al. (2004)

As a canon for AR, the method from Davison (2004) formalise the principles of this iterative, rigorous, and collaborative research process by describing it in terms of five phases: Diagnosis, Action Planning, Intervention, Evaluation and, Reflection (Davison et al. 2004, Lindgren et al. 2004). These phases are described as follows

Diagnosis (Identification of the problem)

Once a research client agreement has been established, the next step is the diagnosis of the current organisational situation, together with the identification of problems and the primary sources of those problems. In this phase, a detailed understanding of the problem and the surrounded environment is a pre-requisite for deciding an appropriate intervention. In this phase the researcher and stakeholders formulate a "working hypothesis" of the phenomena to be used in the subsequent phases. The working hypothesis used in this study is presented in an initial framework which is further described on chapter 4 of this thesis.

Action Planning (Collection and organisation of data)

In this phase, the intended sequence of actions are specified, this actions needs to improve the problem situation, also this phase involves the consideration of alternative actions to solve the problem. The planning actions are subsequently implemented and evaluated.

Intervention (Action taking)

This phase refers to the implementation of the actions planned in the previous phase, and consists of selecting a course of action. The intervention stage may need assistance from external stakeholders to help out the initiation of the process.

Here, the data gathering techniques are employed, mainly before, during and after the action taking phase. However, is important to mention that the data collection continues during all the phases, to ensure a rich pool of data for a subsequent post-intervention analysis.

Evaluation (Assessment)

The evaluation phase aims to studying the consequences of actions comparing them with the project objectives and expectations, and involves the assessment of the intervention by practitioners and the researcher.

Reflection (Learning/evaluation)

The last stage completes the cycle by identifying general findings and provides the opportunity to openly reflect on the activities and outcomes, furthermore helps the researcher to decide whether proceed into an additional cycle if needed or exit the project. These outcomes must contribute to both, theory and practice.

3.6. Conducting Canonical Action Research (CAR) in this study

The focus of Action Research is twofold: it engages solving organisational problems throughout involvement and at the same time contribute to the knowledge in the field. The discipline of Information Systems (IS) seems to be appropriate for the use of AR methods (Baskerville et al. 1996, Davison et al. 2004), furthermore the characteristics of conducting AR fits perfectly to the research undertaken in this study. The main characteristics to conduct a Canonical Action Research are summarised in the definition of AR from (Kjell Grønhaug 1999) which is presented in the table 3.8.

Characteristics of Action Research from Gronhaug and Olson (1999)
Emphasises the importance of both scientific contributions and the solving of practical, real-life problems (even though this also often is the purpose of (much) traditional research, the research as such is frequently separated from future actions)
Focuses on the common values and standards of researchers and clients (the value standards of researcher and clients - even though important - are usually not explicitly taken into account in "traditional" research)
Represents an intensive research strategy (which also may be the case, but need not necessarily be so in "traditional" research)
Involves some aspects of collaboration between researcher and client (which is paid almost no attention in prototypical, "traditional" research. (Frankfort-Nachmias and Nachmias, 1996)
Is longitudinal and emphasises gradual learning and improvements (even the learning aspect is crucial in "traditional" research, very much of the research literature focuses on the single study. In "real-life", however, the focus is often on longitudinal knowledge creation and learning)
Assumes that the researcher needs contact and interaction with clients to really know their problems and influencing factors ("the total situation"). As such, this represents a deviance from the "traditional", distant and "objective" research ideal. This may also explain the strong anti-positivistic attitude reflected in very much of the Action Research literature (see Peters and Robinson, 1984; Reason, 1994; Susman and Evered, 1978)

Table 3. 8: Conducting Action Research adapted from Kjell Grønhaug (1999)

In addition to the characteristics mentioned above, this research has taken into consideration a set of guidelines described in the work of (Baskerville et al. 1996) to ensure the fit of Action Research with this project and to assure quality. Hence the researcher has positively answered the following questions which are based on Baskerville and Wood-Harper's (1996) guidelines:

- Is Action Research appropriate for the domain?
- Has a formal research agreement being established?
- Is there a theoretical foundation for the problem?
- Is there a plan for the methodological collection of data?
- Will input gained from subjects be fed into the cyclical process?
- Are iterations planned?
- Is the output intended to have large generalisation claims?

Although in the last few years more researchers, particularly in IS, have look into the Action Research under many perspectives, still critics of Action Research have exposed suspicions about the appropriateness of the Action Research within IS research. For instance, lacking in task and measurement validities, poor instruments together with lack of control, and lack of statistical power are some of the critique in opposition to Action Research (Benbasat et al. 1987, Baskerville et al. 1996, Jarvenpaa et al. 1985, Ives et al. 1984, Baroudi et al. 1989). Also Action Research has been criticised for lacking of methodological rigor (Cohen et al. 2000), its tendency for producing "Research with little action or action with little research" (Dickens et al. 1999) and the lack of distinction between Action Research and Consulting (Avison et al. 2005). Moreover the "double challenge" of action (solving of a practical, real life problem) and research (contribution to knowledge), generate an unenthusiastic reaction for researchers (Avison et al. 2001).

The restrictions or limits of Action Research outlined above can be a valid critique if Action Research is conducted deficiently, additionally, if the design of the Action Research lacks of rigour and relevance the Action Research is at risk of become a consultancy and the researcher an adviser (Davison et al. 2004). Hence Davison et al. (2004) provide a set of principles for Canonical Action Research to overcome the critics surrounded Action Research and to improve theoretical quality and preserve relevance. These set of five principles are further discussed in next section, furthermore the use of these principles in this research is further analysed in section 3.6.2.

3.6.1. Principles of CAR (Control aspects: rigor and relevance)

Canonical Action Research (CAR) in IS, is a method that aims to improve theoretical quality and at the same time preserve relevance. Therefore, it is important to specify the criteria and principles by which the CAR project will be evaluated in order to ensure and assess rigor and relevance (Lindgren et al. 2004). Rigor can be defined as "exactness" or "strict precision" also it refers to the selection and correct use of methods (Benbasat et al. 1999). In CAR, Rigour has two key components; iterating through cautiously planned cycles of activities, and engaged into a continuous process of problem diagnosis. Relevance is essentially how to identify what or whom study is relevant to the context (Davison et al. 2004), therefore a relevant research will focus on concerns of practice and provide "real" value to the IS practitioners (Benbasat et al. 1999).

The five principles and 31 criteria of CAR, depicted in the work of Davison et al. (2004) are used in this research for the reason that these principles were developed specifically for CAR. Moreover the researcher believe that the use of these principles have helped this research adding rigour and relevance. These five basic principles, (1) Researcher Client Agreement, (2) Cyclical Process Model, (3) Theory, (4) Change through Action, and (5) Learning through Reflection, and the related criteria for each principle are described in the table 3.9.

Researchers are advised to follow these principles in order to conduct an accurate AR and to not fall into the criticism existing in the literature. The researcher has adopted these principles for the analysis of the company under study; hence the use of these principles inside the context of this research is explained in next section.

Principle	Criteria / Questions
Researcher-Client agreement (RCA) The RCA provides the basis for mutual commitment and role expectations.	1. Did both the researcher and the client agree that CAR was the appropriate approach for the organisational situation? 2. Was the focus of the research project specified clearly and explicitly? 3. Did the client make an explicit commitment to the project? 4. Were the roles and responsibilities of the researcher and client organization members specified explicitly? 5. Were project objectives and evaluation measures specified explicitly? 6. Were the data collection and analysis methods specified explicitly?
Cyclical process model (CPM) The CPM consists of the stages diagnosing, action planning, action taking, evaluating, and specifying learning.	1. Did the project follow the CPM or justify any deviation from it? 2. Did the researcher conduct an independent diagnosis of the organisational situation? 3. Were the planned actions based explicitly on the results of the diagnosis? 4. Were the planned actions implemented and evaluated? 5. Did the researcher reflect on the outcomes of the intervention? 6. Was this reflection followed by an explicit decision on whether or not to proceed through an additional process cycle? 7. Were both the exit of the researcher and the conclusion of the project due to either the project objectives being met or some other clearly articulated justification?
Theory Theory must play a central role in action research.	1. Were the project activities guided by a theory or set of theories? 2. Was the domain of investigation, and the specific problem setting, relevant and significant to the interests of the researcher's community of peers as well as the client? 3. Was a theoretically based model used to derive the causes of the observed problem? 4. Did the planned intervention follow from this theoretically based model? 5. Was the guiding theory, or any other theory, used to evaluate the outcomes of the intervention?
Change through Action Action and change are indivisible research elements related through intervention focused on producing change.	1. Were both the researcher and client motivated to improve the situation? 2. Were the problem and its hypothesised cause(s) specified as a result of the diagnosis? 3. Were the planned actions designed to address the hypothesised cause(s)? 4. Did the client approve the planned actions before they were implemented? 5. Was the organisation situation assessed comprehensively both before and after the intervention? 6. Were the timing and nature of the actions taken clearly and completely documented?
Learning through Reflection Considered reflection and learning allow a researcher to make both a practical and theoretical contribution	1. Did the researcher provide progress reports to the client and organisational members? 2. Did both the researcher and the client reflect upon the outcomes of the project? 3. Were the research activities and outcomes reported clearly and completely? 4. Were the results considered in terms of implications for further action in this situation? 5. Were the results considered in terms of implications for action to be taken in related research domains? 6. Were the results considered in terms of implications for the research community (general knowledge, informing/re-informing theory)? 7. Were the results considered in terms of the general applicability of CAR?

Table 3. 9: Principles and criteria of Canonical Action Research (adapted from Davison et al, 2004)

3.6.2. Principles of CAR applied in this study

Following the set of five principles of Canonical Action Research and associated criteria described in the work of Davison et al. (2004) see table 3.9. This research have make use of these principles to add rigour and relevance to this research. Hence, following these principles has helped the researcher to formulate an Action Research Process assuring to be relevant to the IS field, and using the appropriate methods for data collection and analysis has added rigour to this research. If the research is well organised, following a repeatable cyclical process the researcher should be confident of the results (Davison et al. 2004).

Accomplishing of the five principles of CAR and how each principle has been applied in this research is explained below, however their adoption needs to consider and prevail local norms, cultures and values, therefore "*it is unrealistic, even inappropriate, to indentify a single, seminal published report*

of CAR that precisely follows all five principles and 31 criteria" (Davison et al. 2004). The use of these principles and related criteria in this research is explained below:

The principle of the researcher-client agreement

The client (SME-MX) and the researcher agreed that CAR was the appropriate approach for the organisation problem and the focus of the research project was clearly specified prior to the start of the project, being the organisation very much committed with the project. Also the roles and responsibilities of each participant were well delineated; furthermore the project objectives and the methods of data collection were explicit specified and a confidentiality agreement has been signed for those effects.

The principle of the Cyclical Process Model

This principle deals primary with the activities and design of a Cyclical Process Model (CPM) which help the researcher to ensure that the CAR project is conducted with systematic rigor (Davison et al. 2004). The CAR process model followed in this research is based on Davison's CAR phases of enquiry (Davison et al. 2004); this model is presented in section 3.5 of this chapter under the figure 3.6. The CAR phases of enquiry used in this research are Diagnosis, Action Planning, Intervention, Evaluation and Learning through Reflection.

The principle of Theory

This principle highlights the role of theory in CAR. This CAR project started as theory-free action learning, and the theory did not emerge from the diagnosis phase, however it provides a starting point for compare theories used in similar cases. On the other hand, theorising is necessary as part of the planning stage and it will help to differentiate it from action learning. For these reasons the presence of a theoretical framework is necessary to overcome this principle and to guide the researcher trough the phases of CAR. Furthermore, the reflection phase of the CAR process will result in changes to theory and direct the project into an additional CAR process cycles. The theoretical framework used to guide the first Process cycle is presented in chapter 2 of this research and also is portrayed in the Planning phase of the fist cycle in chapter 4.

The principle of Change trough Action

This principle mainly refers to know what was actually done in practice and what actions were portrayed in plans (Davison et al. 2004). The CAR researcher needs to study interconnections, interdependencies and the dynamics of a total function system rather than isolated factors (Hult et

al. 1980), hence the following criteria related to the principle of change trough action used in this research is explained below.

- The researcher and the client have a common understanding to the research context also called the "organisational situation", and both parties were strongly motivated to improve the situation outlined from the research context. Both parties have decided which interventions were more suitable for the diagnosed problem. Furthermore, the planned actions were designed to address the problem observed in the organisation under study and the researcher explained the planned actions and any justification for carry out those actions to the client. Nevertheless, a certain level of flexibility was given to the researcher in order to adapt the planned actions to different circumstances naturally emerging from the study.

The principle of learning trough Reflection

The specification of learning is the most critical activity in CAR and the action of reporting to two different groups of stakeholders is essential, however the dual responsibilities of the Action Researcher are not easy, nor straightforward. Nevertheless, the Action Researcher needs to accomplish the objectives of transfer knowledge to practitioners and to contribute to the theoretical knowledge by generating new theory or re-inform existing theory. The criteria used in this research to overcome this principle of learning trough Reflection is described as follows.

- First and foremost, this thesis is used to explain how the project and its findings have contributed to knowledge in both, practice and theory. Those contributions are divided in four cycles conducted during this project and the contributions are presented in chapter 4 and 5, also chapter 6 summarises and discuses such findings.
- Also in order to keep the client informed about the project progress; reports mainly in forms of emails and Microsoft documents have been sent to the client once the intervention have finished. These reports were used to reflect on the outcomes of the involvement and to shape directions for further interventions and to decide whether continue with another cycle or exit the project. Additionally the researcher uses the reports to ensure that all lessons learned were properly, clearly and comprehensive documented.

3.7. Applying Action Research in the field

The IS field have received critics over the last years concerning the research methods and philosophy used in the field; the relevance of the IS studies in relation to the practice are one of the concerns of the researchers in this field, see Davenport et al. (1999), Livari et al. (1999). The IS literature shows that positivist methods have been predominantly used in the field (Orlikowski, W. and Baroudi, J.

1991), however some researchers affirm that qualitative approaches are appropriate for an applied field such as IS (Avison et al. 2001, Narayanaswamy 2007), furthermore interpretative studies are gaining popularity among researchers and practitioners such as AR, more particularly the CAR which is the base of this research.

Action Research, have been used in the IS field through its various forms, table 3.10 shows some examples of the different Action Research forms used in IS and recent publications on the field.

AR Form	Published IS Examples	Published Recent IS Work
Canonical AR	Baskerville (1996)	Lindgren et al (2004); Davison et al (2004)
IS Prototyping	Kyng (1991)	Chiasson and Dexter (2001)
Soft Systems (SSM)	Checkland and Scholes (1990)	Checkland and Poulter (2006)
Action Science	Reponen (1992)	Beer (2001)
Participant Observation	Jepsen et al (198	Street and Meister (2004)
Action Learning	Naur (1983)	Zuber-Skerritt and Perry (2002)
Multiview	Avison and Wood-Harper (1991)	Vidgen (2002)
ETHICS	Mumford (1983)	Coughlan (2002)
Clinical Field work	Hammer and Champy (1993)	Wiredu (2007)
Process Consultation	Coad and Yourdon (1991)	Wastell et al (2004)
Collaborative Practice	Mathiassen (2000)	Iversen et al (2004)
Dialogical Action Research	Zellermayer, et al (2000)	Mårtensson and Lee (2004)

Table 3. 10: Published work in IS using Action Research adapted from Baskerville et al. (1998), Davison et al. (2001) and, Davison et al. (2004)

3.8. Sources of data and analysis

Qualitative research involves the study, use and collection of a variety of empirical materials, specifically in strategies which implies studying things in their natural settings, such as Action Research and Case Study. Qualitative researchers normally rely on four methods for gathering data: *participation in the setting, direct observations, in-depth interviews, and the review of documents and culture material* (Marshall et al. 2011). Additionally, Yin (2009) pointed out six sources for collecting the evidence, more specifically in case studies; documents, archival records, interviews, direct observation, participant-observation and physical artefacts. Despite the origins of these data collections methods, these can be applied in Action Research approaches as well, given that similarities of both methodologies. Hence, the data gathering techniques employed in this research were chosen from the variety of empirical materials suitable for this kind of research, such as:

personal experience, documentation reviews, introspective, life story, observations, interactional, interviews, historical, Archival records and physical artefacts (Yin 2009, Denzin et al. 1998).

For the selections of data collection techniques, the researcher has followed three principles based on the findings of Yin (2009); **(1) Use of multiple sources of evidence.** The use of Qualitative research is naturally multi-method in focus, however the use of triangulation or multiple methods can reassure a better understanding of the phenomenon (Denzin 2008, Brewer et al. 1989), **(2) Create a database.** This principle deals with the way of organising and documenting the data, which will be further discussed in appendix C, and **(3) Maintain a chain of evidence.** This deals with how the information is gathered and securely kept.

Accordingly, the sources and techniques of data gathering that better suits this research, because of its flexibility and facility to investigate the phenomena in its own settings, are grouped into 3 main categories or datasets: **(1) Observations and field notes, (2) Unstructured and semi-structured interviews, and (3) documentation reviews, archival records and recorded meetings**. These techniques together with their strengths and weaknesses, as well as the use of these techniques in this research, are discussed in the following sections. Furthermore, the data management and analysis methods are discussed as well.

3.8.1. Field Notes and Direct and participant observations

Observation as a technique for gather information has been used as the major and ancient source for gathering human knowledge since the time the people have been interested in study the social and natural world (Adler et al. 1994). This particular mode of data gathering, "Observations" can facilitate the recreation of paths of actions and interpreting the actions and reactions of others. Observational research can noticeably differ among researchers and practitioners through the stages of the research project and depending on the relationship of the observers and the subjects (Adler et al. 1994). Observations in this research thus consist in collecting impressions of the phenomenon that generally imply direct contact with the actors under examination; observations involve the study of an event with the physical presence of the subjects involved in the phenomena, it can be with or without recorded data (photography, video or audiotapes). However in each case, "the researcher must witness the phenomena" (Denzin et al. 1998).

Observations can take form of "*Direct observations* or *Participant observation*". The first type refers to observations made in the organisations site, where the observer may need to observe and measure certain types of behaviour during certain periods of time; this can involve observations of meetings, sidewalk activities, factory work and so on, although the researcher participates only as an observer of the phenomena. Participant observation as a main difference is that the researcher is

not merely a passive observer. Instead, the observer may acquire different roles and may actually participate in the events under study (Yin 2009). Both, **Direct observations** and **Participant observations** were used in this study, combined with other methods to produce qualitative data. Moreover, these observations were converted into text and grouped in the dataset "field notes".

Observations in research can vary in its character among different practitioners, different stages of the project, and depending of the relationship of the researcher to their subjects (Adler et al. 1994). Thus, the researcher in this project has followed the stages of observation described in the work of Adler et al. (1994), the stages followed for observational purposes are defined as follows: (1) selecting a setting; (2) gain entry to a particular setting; (3) identify the researcher's role; (4) documentation of the observations and (5) interpretation of the observations (Adler et al. 1994, Denzin 1989).

The strengths and weaknesses of the observation are described below, followed by the use of observations in this research.

Strengths	Weaknesses
➢ Rigour – when combined with other methods (Adler et al. 1994, Denzin 1989) ➢ Inconspicuously – observations can be conducted quietly (Adler et al. 1994) ➢ Reality – cover events in real time ➢ Insightful – interpersonal behaviour and motives.	➢ Observer bias – rely on observer own perceptions (Yin 2009) ➢ Validity – if used alone. difficulty to legitimating the work (Adler et al. 1994) ➢ Reliability – researchers cannot ensure their findings are real (Denzin 1989). ➢ Time consuming

Use in this study: Observation on this research took place in client's business premises, and also observations in meetings with owners, board of directors and stakeholders of the company under study, furthermore videoconference assisted by a software application (Skype) was another tool used for direct observations. Hence, **Direct and Participant observations were used in this research;** Observations were carried out also through recording meetings, teleconferences and workshops. These methods of enquiry were collected, whether in form of observations notes or as interpretation of documents (e.g. meetings notes) or together, thus all these information was grouped into the dataset 'field notes'.

During this study, direct and participant observations were carried out during a period of 2 years dived in four cycles. These observations were transcribed into Microsoft Word files and further analysed as "field notes", as a result, during this research, observations were collected during the

implementation of interviews, workshops and meetings, and grouped together in the dataset "Field Notes". Bailey (2007) describes six types of materials that can be contained in field notes, still in this research only four are used; *detailed description of asseverations and interactions in the field (observations), analytic ideas and inferences, personal feelings and reflexive thoughts*. However these materials overlap with each others in this study, especially *personal feelings*.

A total of 85 "Field Notes" were recorded in the CAR carried out in the organisation under study 1 (SME-MX). Although during the validation phase of this research two case studies were considered and some data in form of 'observations' were collected, it was not significant amount of information (7 Field notes). Table 3.11 presents 92 field notes which is the total amount of field notes recorded in each cycle of the CAR and the Case Studies.

	Cycle	No. of Field notes	
CAR	1st Cycle	8	
	2nd Cycle	12	
	3rd Cycle	25	
	4th Cycle	40	85
	Case Studies	7	
	Total	92	

Table 3. 11: Number of Observations and Field notes captured in each cycle of the CAR

In observational techniques, as in the entire "field studies", the *role of the researcher* and the *ethical issues* are major concerns, and the researcher has to consider these issues before start collecting data. Due to the importance of the role of the researcher and the ethical issues in this research, a detailed explanation of this concern is presented in section 3.9 and 3.10.

3.8.2. Interviews

Interviews are the most used methodological tool among qualitative researchers (Denzin et al. 2003), an interview is commonly defined as *"a private meeting between people when questions are asked and answered"* (Oxford Advanced Learner's Dictionary 2011). Fontana et al. (2003) in a revision of the history of interviewing denote three major forms to perform an interview; structured, semi-structured, and unstructured.

Structured interviews are those when the interviewer asks pre-established set of questions with a limited set of response categories, the same set of questions and the same order needs to be carried out among the different interviewees participating in the study. Similarly, **Semi-structured interviews** contain a pre-established order and sequence but offer to the interviewer a more flexible approach in the way questions are asked and answered, living space for additional questions, also it gives the opportunity to both, the interviewer and the interviewee, to express and expand in a

particular answer or topic. ***Unstructured interviews*** has not particular structure to follow, and allows questions based on the interviewee's responses; however, the interviewer must have some key questions prepared in advance (Fontana et al. 2003).

Interviews can take different forms such as; face to face individual or grouped, mailed or self-administrated questionnaires, and telephone interviews. Besides, an interview can be one-time or can take place over multiple sessions and different lengths.

In this research **individual and grouped**, **multiple sessions, semi-structured and unstructured interviews** were carried out over the telephone, videoconference (Skype) and face to face with the owners, members of the board of directors, and stakeholders of the companies under study. The strengths and weaknesses of this tool are analysed next.

Strengths	Weaknesses
➢ Targeted – focused ➢ Insightful – provides perceived causal inferences (Yin 2009)	➢ Bias on the construction of questions ➢ Response bias ➢ Reflexivity – interviewees gives the answers the interviewer wants to hear. (Yin 2009)

Use in this study: As previously mentioned **individual and grouped**, **multiple sessions; semi-structured and unstructured interviews**; face to face and telephone-video interviews were used in this research. The interviews were conducted face to face, through the telephone and through videoconference assisted by Skype, individual interviews were recorded along each member of the organisations under study, also grouped interviews were electronically recorded whereas the opportunity was presented, the recordings also include conversations from work meetings, workshops and casual talks (discussions) carried out in each of the three organisations under study (SME-MX, matchboxmovies.com and Minimoko).

As expected a large number of interviews were performed within the Canonical Action Research study (CAR), which covers the main organisation under study (SME-MX). During the four cycles performed in SME-MX, a total of 52 hours were recorded, conversely, 1 hour was recorded within the organisation 2 (SME2-Matchboxmovies.com) and 3 hours in the organisation 3 (SME3-Minimoko), leading to a total of 58 hours and 43 minutes. Table 3.12 shows the number of interviews performed in each cycle of this CAR together with the duration of the recorded material; also the recorded material from the case studies is presented. Additionally, the entire archive of interviews is summarised in the appendix A.

	Study	(Interviews)	Time	
CAR	Cycle 1	1	00:59:49	
	Cycle 2	5	01:00:49	
	Cycle 3	53	31:01:45	(75)
	Cycle 4	16	19:00:18	52:02:41
	Last cycle	8	06:40:32	
	TOTAL	83	58:43:13	

Table 3. 12: Number and duration of Interviews in this study

3.8.3. Documents and Archival records

This section deals with the interpretations of "mute" evidence, such as written text and artefacts collected from the case studies and the Action Research phases (Denzin et al. 2003). An initial distinction between documents and records is that documents are prepared for personal rather than official reasons. Documents can take form of diaries, memos, letters, and announcements, field notes, meeting minutes, written reports, administrative documents, business documents, progress reports, evaluations and other internal records (Yin 2009). Records in the other side are historical data normally of a person, such as; driving licences, personal profiles, banking statements, and building contracts. Although these terms have been used interchangeably, a clear distinction between both is that documents needs, similarly to interviews, a deeper contextualised interpretation (Hodder 2003).

Archival records often take the form of computer files and records, this files or records can be; service records, Organisational records, Business documents, Maps and charts, list of names or relevant items, survey data (e.g. census or market research) and personal records. Base on Yin (2009) analysis, the strengths and weaknesses of the documentation and archival records are presented below; also the use in this study is explained.

Strengths	Weaknesses
➢ Stable – can be reviewed repeatedly	➢ Reporting bias – or bias of the author
➢ Exact – contain exact names, references, and details of an event.	➢ Accessibility due to privacy reasons or deliberately blocked.
➢ Broad coverage – duration, many events and many settings	➢ Retrieve the documents can be low

Use in this study: The documents and archival records analysed in this research were classified along four main categories; *Business documents* (in different format, e.g. power point, excel, word), *Charts and diagrams*, *Organisational records* and *Personal files*. A detailed description of the documents

used in each organisation and how were analysed is presented in chapters 4, 5 and 6 of this thesis, although a summary of the documents analysed together with the person responsible of the documents is presented in table 3.13.

Organisation	Documents & Archival
Brunel (Researcher, Academic1 & 2)	39
SME1 (SME-MX)	49
Brunel and SME1	17
Developers	20
Consultants	12
SME2	2
SME3	2
Others	9
Total	**150**

Table 3. 13: Documents and Archival records per participants involved in this study

From a total of 150 documents produced and analysed during this research; 39 were produced by the researcher and the team representing Brunel University, 49 were produced by the organisation involved in the Action Research (SME-MX), and 17 were produced by the researcher in conjunction with SME-MX; also during the implementation of the Action Research cycles two Business consultant companies were contacted and two software developers, both organisations contribute with 12 and 20 documents respectively. Additionally during the validation phase of this research two more SMEs were actively participating in this research; "*mailboxmocvies.com*" provides 2 documents for analysis, and "*Minimoko*" did the same contributing with 2 documents also.

3.8.4. Data management and Data Analysis methods

This section aims to provide a clearer explanation of the data management techniques and the analysis method used in this study for both, the Action Research conducted and the case studies used to evaluate the findings. Moreover, this section depicts the different data analysis methods and the reason of choosing "**Thematic analysis"** as the main method for data analysis.

Data management

The first step needed for the analysis of qualitative data is to prepare the data for analysis, thus the data requires to be organised. The most common methods for data collection in qualitative research are interviews, participant observations, focus groups and audio-visual aids; these methods create mainly "text-based" data in form of field notes, audio-record files, transcribed interviews, transcripts and charts and diagrams (Boeije 2009). Additionally the compilation of documents and archival records, as additional source of data, leaves this research with large quantity of information to be

analysed, thus the support of an appropriate data management process is essential for high-quality data analysis, and determines the way in which analysis is conducted.

The data management is a process by which the data is acquired, validated, stored and processed. Data analysis consists of examining, categorising, tabulating, testing, and recombining qualitative evidence to tackle an initial proposal of a study (Yin 2009). These operations have the objective to ensure high quality accessible data, and the documentation and retention of data and analysis carried out during the project (Huberman et al. 2005). Moreover appropriate data management contributes to transparency and assist the opportunity for others to see how the data has been treated during the investigation and preliminary analyses (Boeije 2009).

In this study the researcher has to deal with a large amount of information from various sources of raw data such as field notes, interviews, observation notes, archival record, meeting minutes and documents, all this data needs to be processed and stored with help of a clear indexing system. Therefore, the employ of computer software such as **QSR NVivo**, had helped to store and preserve the data following five general functions as described in the work of Levine (1985): *formatting* (how data is physically embodied and structured into files), *cross-referral* (the link of the data between different files), *indexing* (defining, organising and structuring codes with specific parts of the database), *abstracting* (summaries of extensive material) and, *pagination* (coding the data in order to find specific material in field notes) (Huberman et al. 2005).

Table 3.14 presents four steps described in Boeije (2009) work and followed in this research as part of the data management process.

Data preparation and data management process followed in this research
First: The organisation and storage of different data files in secured areas and easily retrieved
Second: The transcription of Audio and visual sources
Third: Taking out irrelevant data and information that can identify participants and breach the confidentiality agreement
Fourth: Manipulation of data manually or assisted by a software computer program

Table 3. 14: Data Management Process, adapted from (Boeije 2009)

The second step (transcription of data) is a critical research activity since influences the analysis and the claims that the researcher intends to make (Boeije 2009, Forbat et al. 2005).

Methods of Analysis

The clarity of the process and how the researcher have analysed the data and what assumptions have informed the analysis is explained in this section, as well as the reasons of choosing **thematic analysis** in this study.

There are different techniques or methods for data analysis used in IS, more specifically in interpretative studies, and the unification of criteria towards a one ideal theoretical framework for conducting qualitative research or one ideal method for analyse data, has not been consent yet by the academic community. However, what it is important is that the theoretical framework and the methods employed match the research questions, or in other words; what the researcher wants to know (Braun et al. 2006).

The literature shows a small number of 'concrete' instructions regarding how to analyse the qualitative data. The multiple processes of analysis data normally involves five main activities; make sense of the data, break it down, study its components, explore its significance and understand its meanings (Bailey 2007). Moreover, the process of data analysis begins from the moment the researcher decides to conduct a qualitative research, and the practice of collecting and analysis data continues during each stage of the research process, from gaining entrée to the project settings, through the process of building relationships, observing and interacting, interviewing and writing field notes, and the process of analysing data finalises with the structure to produce the final report (Bailey 2007).

There are different methods to analyse qualitative data among the academic community, some of them are more used than others such as; Thematic analysis, Grounded Theory, Discourse Analysis and Narrative Analysis among many others.

In order to understand the differences among the different analytical processes for data analysis existing in the literature, a summary of the main methods of qualitative data analysis is presented in table 3.15. Each of these methods applies a different theoretical interest to the interpretation of the data that are collecting, thus choosing a method for data analysis is a difficult task that needs to consider and match the research design and the research process of the study.

Some of these methods have some similar analytic process in common. Most methods of qualitative data analysis have a tendency to share some similar analytic processes, for instance, the activity in the analytical process called "coding" takes part in all methods of data analysis (Boeije 2009, Boyatzis 1998).

Data Analysis Method	Main Author(s)	Description
Analytic Induction	F. Znaniecki, Howard Becker, Jack Katz (1983)	Is a way of building explanations in qualitative analysis by constructing and testing a set of causal links between events and actions. This mehtod look at the event and develop a hypothetical statement of what happened, then look at another similar event and see if it fits the hypothesis. If it doesn't, the hypothesis is revised and changed naccordingly.
Constant Comparison/Grounded Theory	Anselm L. Strauss (1987)	Developed in the late 60's. Costant Comparison is a method for analasing data in order to develop a grounded theory. Glaser and Strauss (1967) suggest that when used to generate theory, the comparative analytical method they describe can be applied to social units of any size.
Content Analysis	R. P. Weber (1990)	Is a method for summarising any form of content by counting various aspects of the content. Is a Theory driven method where theory determines what the researcher will look for
Discourse analysis	James P. Gee (1992)	Usually use tapes so they can be played and replayed. Several people discussing, not individual person specifically. Find patterns of questions, who dominates time and how, other patterns of interaction.
Ethnography Analysis	Spradley, J.P. (1979), Stewart, A. (1998)	Is a qualitative multi-method which involves; participant observation, interviewing, discourse analyses of natural language, and personal documents. This approach studies people in their "...naturally occuring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher particpating directly in the setting..." (Brewer, 2000:10).
Event Analysis/Microanalysis	Frederick Erickson (1992)	In this method, importance is on finding a accurate beginnings and endings of events by determining specific boundaries or points that mark boundaries or events.
Hermeneutical Analysis	Max Van Manen (1990)	The study of meaning or of meaningful things and actions such as those found in literature and culture. Hermeneutics is associated with qualitative social research in general, and with phenomenology in particular.
IPA (Interpretative phenomenological analysis)	Husserl, Heidegger, and Merleau-Ponty	This approach involves trying to understand the experiences an individual has in life, how they made sense of them and what meanings those experiences hold. Usually these phenomena relate to experiences of some personal significance - such as a major life event, or the development of an important relationship. It has its theoretical origins in phenonemology and hermeneutics
Logical Analysis/Matrix Analysis	Miles, M. B., & Huberman, A. M. (1994)	An outline of generalised causation, logical reasoning process, based on the categorisation and organisation of qualitative data. Often based on comparisons across cases or within cases but across time. Can use flow charts, diagrams, etc. to pictorially represent these, as well as written descriptions.
Narrative Analysis	Catherine K. Reisman (1993)	Is a form of discourse analysis that seeks to study the textual devices at work in the constructions of process or sequence within a text.
Taxonomy	James P. Spradley (1980)	A sophisticated typology with multiple levels of concepts. a taxonomy, or taxonomic scheme, is a particular classification arranged in a hierarchical structure or classification scheme in which higher levels are inclusive of lower levels. Superordinate and subordinate categories
Thematic Analysis	Boyatzis (1998), Braun & Clarke (2006)	Thematic analysis is one of the most commonly used methods of qualitative analysis. In thematic analysis the task of the researcher is to identify a limited number of themes which adequately reflect their textual data.
Typology	John Lofland & Lyn H. Lofland (1995)	A classification system, taken from patterns, themes, or other kinds of groups of data in which Categories should be mutually exclusive and exhaustive if possible. Basically typology is a list of categories; e.g.: acts, activities, meanings, relationships, settings

Table 3. 15: Main methods used for analysis of QD. Based on (Wolcott 1996, Gibbs 2010, Gregory 2009)

In order to make an accurate decision of the method for data analyses the researcher have made an exhaustive and thorough analysis of the main methods used in IS research, matching the 'right' method with the research questions and research design of this thesis. Base on the analysis portrayed in table 3.15 the researcher have chosen **Thematic Analysis (TA)** among the other methods for the following reasons which leads the researcher to the selection   and use of this method to analyse data in this study.

- Is not theory bounded: As other methods, such as Grounded Theory (One of the methods most used among academics) and IPA, which are both searching for patterns in the data but are theoretically bounded.

- It has been used among many disciplines: Conversely, IPA for example is a relatively recent qualitative methodology developed specifically for psychology.

- Detailed interpretation of aspects: The thematic analysis describes the data in detail and frequently goes further and interprets various aspects of the topic under study (Boyatzis 1998; Braun & Clarke, 2006).

- Largely used in IS: TA in largely used in IS for those researchers who seek to describe patterns across qualitative data.

- Flexibility: does not have been widely and universal considered as a "branded" method like other methods used for qualitative analysis such as: Narrative Analysis, Grounded Theory, Decision Analysis (DA), Thematic Decomposition Analysis, and Interpretative phenomenological analysis (IPA).

- Ease of use: Thematic analysis is not as dependent on specialised theory as some other qualitative techniques such as Discourse analysis, Grounded Theory or Conversation analysis. As a consequence, thematic analysis is more accessible to novices.

Down to the importance of Thematic Analysis in this research, next section defines the Thematic Analysis method and depicts the steps to follow in this process.

Thematic analysis

Thematic Analysis is a method for identifying, analysing and report patterns or "themes" within data. The thematic analysis organises the data in 'sets' or themes and describes the data in detail and frequently goes further than this and interprets various aspects of the topic under study (Boyatzis 1998; Braun & Clarke, 2006).

Thematic analysis in largely used in IS for those researchers who seeks to describe patterns across qualitative data. However, there is not clear agreement by researchers in the area, on what thematic analysis is, and how can be used, see Boyatzis (1998) and Tuckett (2005). Furthermore the term "Thematic analysis" is a process that many researchers have used in the past as part of other qualitative methods (Boyatzis 1998), and in this sense is not a separate method such as grounded theory or ethnography, moreover it has been often confused or used as an interchangeable term with other methods such as Content Analysis or Decision Analysis (DA), and it does not have been widely and universal considered as a "branded" method like other methods used for qualitative

analysis such as: Narrative Analysis, Grounded Theory, Decision Analysis (DA), Thematic Decomposition Analysis, and Interpretative Phenomenological Analysis (IPA) (Braun et al. 2006).

Thematic analysis is a process for encoding qualitative information in which a 'theme' represents a pattern found in the information which at least describes and organises possible observations, or the most, a 'theme' can infer aspects of the phenomenon under study (Boyatzis 1998). Those themes can be initially generated inductively from the information and prior data, or can be generated from theory or prior research. There are primary 3 different approaches to developing themes which are; theory driven, prior data or prior research driven, and **inductive or data-driven**. Table 3.16 describes the three different approaches in thematic analysis.

Stage	Theory-driven Approach	Prior-Research-Driven Approach	Data-Driven Approach (Inductive)
I	Deciding on sampling and design issues	Deciding on sampling and design issues	1. Deciding on sampling and design issues. 2. Selecting subsamples
II	1. Generating a code from theory 2. Reviewing and rewriting the code for applicability 3. Determining the reliability	1. Generating a code from previous research 2. Retrieving and rewriting the code for applicability to the raw information 3. Determining the reliability	1. Reducing the raw information 2. Identifying themes within subsamples 3. Comparing themes across subsamples 4. Creating a code 5. Determining the reliability
III	1. Applying the code to the raw information 2. Determining validity 3. Interpreting results	1. Applying the code to the raw information 2. Determining validity 3. Interpreting results	1. Applying the code to the remaining raw information 2. Determining validity 3. Interpreting results

Table 3. 16: The different approaches in thematic analysis from (Boyatzis 1998) **P.44**

Moreover the process of thematic analysis can be summarised in three processes: *data reduction, data display and conclusion/verification* (Huberman et al. 2005). *Data reduction* refers to the filter of 'relevant data' among all the 'raw data' that appear in the text-based data from the field, this practice involves the main activities of data analysis which are "coding" and "organising" the data; *data display* is the major activity in the data analysis process which refers to the assembly of the information that permits conclusion drawing and action taking; finally *conclusion and verification* refers to final written report containing the conclusions of the analysis and the verification of the findings.

In this study, thematic analysis has been chosen in order to make sense of the large amount of related material, such as Interviews, observations, interactions, notes and behaviours. The choice of use thematic analysis in this study has been explained previously in this chapter, moreover this analysis has proved to be useful for qualitative analysis in the IS domain. This method has especially assisted the researcher at the early stage of the project to formulate their problem area and to

create the foundations for the design of the project and support knowledge sharing and communication among participants.

The literature in qualitative analysis underlined the importance of the organisation and coding of the data. Coding is the process of organising a large amount of data (raw data) into smaller segments of classified data (relevant data) which is the main function of the data reduction process. The coding process can be from pre-established 'themes' emerged from theory or data-driven, in both cases, a good code scheme should prevail as top of the activities.

According to Boyatzis (1998) a good coding system has at least five elements.

- o A label
- o A definition of what the theme concerns
- o A description of how to now when the theme occurs (flagging the theme)
- o A description of any qualifications or exclusions to the theme.
- o Examples (positive and negative) to eliminate possible confusion when looking for themes

A qualitative research process, especially using Action Research, does not have a linear course of actions; moreover, it has a cyclical nature that makes the data collection and data analysis process proceed simultaneously which can be difficult and confusing. Hence, a step-by-step approach is crucial for the researcher in order to structure the analytical process (Boeije 2009).

Consequently the "Spiral of analysis integrated into the qualitative research process" described in Boeije (2009) have been selected for the analytical process in this research.

Traditional vs. Computer assisted methods

The dynamic, intuitive and creative process of data analysis, include the inductive reasoning, thinking and theorising process; this process can be carried out manually or computer assisted depending of the circumstances and the researchers' preferences, many researchers consider computers a essential tool, thus use specialised software programs for data analysis, conversely still some researchers prefers more traditional methods such as: entirely manually, printing hard copies and make notes with colourful pencils, or use traditional software such Microsoft word to make notes ands comments over transcriptions. Normally the choice of using a computer aided data analysis or a manual process will depend of the preferences of the researcher, the size of the project, the funds and time available, and the inclination and expertise of the researcher.

However, the whole process of data analysis needs to be completed in both methods, although the use of computer-assisted qualitative data analysis (CAQDAS) can make these activities much easer,

still have some limitations (Bailey 2007, Boeije 2009). Many of the activities of the process of data analysis can be conducted with the use of a software package developed for this purpose, however still some of the core activities need to be performed manually such as: the *coding of data,* the *identification of themes* and the *interpretation of data*, among other activities (Boeije 2009).

In this study, a combination of '**traditional'** and '**computer assisted' data analysis** process has been used as follows; the use of CAQDAS, especially "**QSR NVivo"** has been used mainly to speed some activities in the data analysis process such as data reduction. However the activities related to coding, searching for themes and interpretation of the data requires a thorough analytical scrutiny of the data, which the artificial intelligence of the different CAQDAS available up to date, still cannot perform this task.

The use of NVivo software in this research involves the following activities:

- o Storage: keeping text in an organised database
- o Data reduction
- o To making notes in the field
- o Writing up or transcribing field notes
- o Editing: correcting, extending or revising field notes
- o Attaching keywords or tags to segments of text to permit later retrieval
- o Search and retrieval of data: making available for inspection
- o Connecting relevant data segments with each others
- o Writing reflecting commentaries on some aspect of data
- o Graphic mapping: creating diagrams, charts and matrices

Additionally the activities of data analysis performed in a traditional fashion were:

- o Content analysis
- o Conclusion drawing and verification
- o Interpret, display data and test or confirm findings
- o Theory building: developing systematic, conceptually coherent explanations of findings, testing the conceptual framework
- o Preparing interim and final reports

Finally the entire description of the data management and data analysis methods used in this study are presented in the appendix B.

3.9. The role of the researcher

The role of the researcher needs to be stressed largely for two reason; first, to have a common understanding between the researcher and the researched (Client) roles and responsibilities in the project and second, to clarify to the reader the relationship and responsibilities of the researcher (Janesick 1994, Janesick 2000).

Due to the nature of this study, the role of the researcher has changed thoroughly through the research process. For instance the researcher's role is to some extent different from the Case Study to the AR. Moreover, the researcher may require the adoption of different roles at various stages of the research process, such as; planner, leader, catalyser, facilitator, teacher, designer, listener/observer and, reporter (O'Brien 2001).

In this research, Case Study and Action Research have been used as part of the research strategy; therefore the role of the researcher has changed accordingly. In interpretative research, particularly Case Study, there are two roles that the researcher can assume; "outside researcher" and "involved researcher" (Walsham 1995a). The outsider observer usually do not have a direct involvement in the activities of the research, and act as an observer of the phenomena, while the "insider" or "involved researcher" is usually a member (permanent or temporally) of the organisation under study. Hence, in this study the researcher acquired a role of **outsider researcher** in the analysis of the multiple case studies. However, the **involved researcher** is the major role in this research for the duration of the Action Research process and cycles.

The role of the researcher in AR differs from the Case Study in two fundamental aspects: First the researcher becomes part of the team and collaborates directly the project and second, the participants have a shared input into the process (Herr et al. 2005). Predominantly in AR, the role of the researcher is linked to the typical involvement of the researcher (Baskerville et al. 1998; Charles et al. 2007). As explained in section 3.6, a Canonical form of Action Research has been used in this study; hence, a **collaborative involvement** has been taken for this study, since the researcher has a predominant role in this research as co-worker between the study subjects.

3.10. Ethical issues

The researcher must pay close attention to the ethical issues among the people involved in the subject under study, particularly in AR, which engage open communication with the people implicated (O'Brien 2001). Hence, there are some principles to assure the ethics of this work, thus a review of the work of Winter (1987), Zeni (1998) and Löfman et al (2004) was useful for delineate a number of principles, or a guidance to follow in order to assure and corroborate the ethics of the work. The ethical principles adopted in this research are summarised below:

- o Seeking permission or access. Assure that relevant persons, committees and any individual involved have been consulted and accepted in advance by all.
- o Explanation of the nature and purpose of the research.
- o Participants who do not wish to participate or want to exit the research at any time must be respected.

- o Confidentiality and anonymity. Permissions must be obtained before making any observations, interviews or document analysis. Protection of the identity of all participants and the confidentiality of the data must be agreed with all participants.
- o The development of the work must remain accessible and open to all participants. Therefore, participants must be allowed to influence the work.
- o The role of the researcher. This point has been discussed in prior section.

Additionally, there are certain ethical aspects that the researcher must consider, such as; carried out the research in honourable and responsible way, do not disadvantage anyone involved by doing the research and, respect other participants' opinions and rights. Finally, since part of this research has been done in the United Kingdom, the "data protection Act 1998" was considered, furthermore the researcher had received an ethical approval from the Research Ethics Committee of Brunel University (see appendix D).

For the reason of the ethical grounds mentioned above, a confidentiality agreement has been signed with the main organisations of this study, and the name of these entities cannot be published at the time of completion of this thesis, for that reason a "fake" name have been used, unless is stated.

3.11. Summary

This chapter presented the various research approaches that have been selected for this study. This chapter begin presenting the ontological and epistemological assumptions of the **interpretative research methodology** which have been used as the basis of this research. The nature of the *qualitative* **research** approach is described too, and the qualitative research process is explained in order to justify its relevance to this research. Furthermore, the research design is presented, divided in three phases with particular objectives on each phase.

Qualitative research was selected and was discussed in detail and the use of a combined approach using the **Case Study** and **Action Research** was in-deep described as the main methods for collecting and analysing data. Moreover the different methods for gathering data were explained, together with the use of each one in this study. Finally the selection of a **Thematic Analysis** approach for organising, coding and analyse data was presented.

The summary of the different choices that were made, regarding the research approach used in this study is presented in table 3.17 below.

Research Approach	Used in this research
Research Assumptions	Interpretative
Strategy	Canonical Action Research / Case Study
Role of researcher	Observer-active / Collaborative involvement
Data gathering approach	Qualitative
Data gathering techniques	Observations, interviews, interpretation of documents and Archival records
Data Analysis	Thematic analysis
Validation	Data and Theory triangulation / Principles of CAR

Table 3. 17: Research approach used in this thesis

Chapter 4:
The empirical context – Action Research (Cycles 1 & 2)

Azael Serrano
Brunel University

Contents

Chapter 4: The empirical context - Action Research (cycles 1 & 2)

4.1. Introduction

Previous chapters have highlighted the importance of a series of sequential steps needed to be completed in order to develop a new e-Business venture in the SME domain. Developing a framework that enables SMEs to understand these relationships, the information needed to support organisations in taking appropriate decisions, and the identification of the challenges faced in each phase are determinant factors that organisations need to take into consideration to deploy an e-Business solution. Progressing with these premises as foundations, this research focuses on the process of the creation of a SME *dot-com* company and seeks to develop a framework for the start-up process looking at the key aspects that SMEs need to consider when embarking into this type of new ventures. Consequently, this chapter establishes the research conditions and the research settings; presenting the background of the research, the description of the project, roles of participants and the collection and organisation of qualitative data. Furthermore, the adoption of Action Research for the development of the framework for the start-up process within the SME context is presented, together with the activities undertaken during the five canonical research phases of the first two cycles in the organisation under study are presented.

The e-trade project consists of **four Action Research cycles;** each cycle has five phases of enquiry besides the qualitative analysis. The qualitative analysis involves the examination of several interviews, meetings, on-site observations, and other documents collected during four cycles in a period of two years. The project started on May 2009 with a series of talks between *The Owner* of the initiative and the researcher, the project formally starts in June 2009 after signing the 'client-research' and 'confidentiality' agreements and formally finished on May 2011 with the evaluation of the fourth cycle; however still some data was collected until late July 2011 with the purpose of gathering final insights from the SME-MX team about their experiences of the deployment of the e-trade project.

In this chapter the activities undertaken during the **first two cycles** of the CAR process within the organisation under study are presented. This chapter is divided in two main sections. The first section describes the general settings of the organisations under study, the overview of the e-trade project and the role of the researcher together with all the participants in this project. The second section explains the activities undertaken across the five phases of the Canonical Action Research process, from a period of May to November 2009, which covers the first two Cycles of the project.

4.2. Background of the research: The e-trade project

This section describes the implementation of Action Research in the development of a framework describing the start-up processes to create a *dot-com* company and the identification of the challenges that the SME under study faced during this journey. The description of the company as well as the description of the project along with the role of participants is described in detail.

Note: As part of previous arrangements with the organisation under study, confidentiality agreements have been signed in order to protect the "idea" and conceptualisation of the e-trade project. Therefore the real name of the organisation and the project cannot be used and it has been changed in this thesis, moreover the names of the participants are also changed.

4.2.1. The company under study

The organisation under study will be referred as "SME-MX". SME-MX is a Mexican SME established in 1995, and has built a successful Strategy in the Mexican mass retail market through an innovative approach to provide professional buyers of the main retail companies, studied marketing programs, products, services and solutions that impact not just customer satisfaction & loyalty but traffic. The organisation is supported by traditional directorates, however as many SMEs, SME-MX is a small organisation with only few departments or business units, such as Sales and Retail, Purchasing and Finance.

SME-MX acquired the experience from working in the area of marketing of products, mainly but not limited, to electronic products, acting as a marketer or wholesaler of those products. SME-MX operates primarily in the metropolitan area of Mexico. However, their operations normally expand to other states within the country as some of the retailers are local-base in different regions of the country (e.g CHEDRAUI a chain of supermarkets in the central-west area of Mexico). The table below shows the actual situation of SME-MX.

SME-MX at a glance	
Year funded	1995
Annual turn over	$35,500,000 - £1,613,636*
Number of employees	7
Founder	*The owner*
Revenue (1st December 2010)	$1,694,000 - £77,000*

Table 4. 1: Company facts (SME-MX)*exchange rate £1 = $22*

SME-MX has a sister company "SME-MX2"; SME-MX2 is a Business to Business (B2B) Bartering company which was established in 2001 as a strategic partner to deal with the slow moving inventories from SME-MX, this resulted in an extensive understanding of the B2B Bartering Industry being capable of operating efficiently in this environment with more than 500 transactions. This has led the SME-MX2 Founder and Partners to design & explore the possibilities of bartering into the masses with the help of information & communication technologies along with social networking marketing strategies.

4.2.2. Description of the project

The founder of SME-MX has a solid conviction that the current economic model based on currency may have limitation for people that have no access to cash. The owner has worked with the bartering industry for over 10 years with the firm intention to activate the most original way of transaction and acquisition "bartering" as an alternative of cash. As a consequence of this experience, the e-trade project emerges, not as a part of the current business of SME-MX but as a new aside project to dealing with the problematic of low money flow which is currently a determinant for most companies in developing countries, as is the case of Mexico. As a consequence SME-MX is driving the e-trade initiative and will provide the necessary resources for the deployment of this *dot-com* business initiative.

The aim of e-trade is to design and implement an e-Business solution for a Customer to Customer (C2C) environment to help its users to exchange products/services without the need to rely on cash or credit. The novelty of this model against its competitors lies in the flexibility of the trading transaction. Current trading models, both traditional and *dot-com* have focus on bilateral trade, which is limited to a one-to-one, product-for-product transaction. In this way, users can only trade products with one user at a time, and only trade the products they have which might ends, obtaining something that the user is not really looking for. E-trade, on the contrary, will allow its users to exchange their products in a one-to-one basis but not necessarily with only one user. The most innovative aspect of e-trade is in the mechanism used to achieve this flexibility, however, must be kept in confidentiality until the project is deployed. Regardless of this restriction, this information is not necessary to understand the main objective of this research which is the identification of the steps necessary for development an e-Business *dot-com* initiative, and the understanding of the relationships between Strategy and Business Models.

The owner of SME-MX, with a solid business background, has raised the attention of professionals of bartering and academy along with other players about the project idea. SME-MX believed that taking part in this research would provide them with insights and would support the quest to design

and implement an e-Business solution. SME-MX, as with the majority of the SME, lacks of technical knowledge and its financial resources are limited. Therefore the benefit from SME-MX approaching the Academia is the transfer of knowledge at a low cost. For the researcher, providing practical grounding for the researcher's PhD was an obvious benefit, and that also allows the researcher to demonstrate "knowledge transfer in action" as part of the university research objectives.

Length of the project:

The project started in early May 2009 with the approach of SME-MX to Brunel University, followed by the Client-researcher agreement signature, subsequently the project formally started with a series of meetings held in the client premises in Mexico City during July 2009. The whole project last for 2 years, from May 2009 to May 2011 covering 4 cycles of Canonical Action research (CAR), each of these cycles encompass five phases of enquiry as described in the CAR process (see chapter 3) and the length of each cycles are shown in the table below:

Cycle	From	To	Duration
Cycle 1	18th May 2009	25th August 2009	3 months
Cycle 2	1st August 2009	30th November 2009	4 months
Cycle 3	1st December 2009	10th August 2010	8 months
Cycle 4	15th August 2010	12th May 2011	9 months

Table 4. 2: Length of each Cycle within the e-trade project

At the end of each cycle, the researcher presented a report of the actions conducted and the reflections of the findings and researcher's recommendation to either continue with the project in another cycle until both parties (the researcher and the organisation) have decided no further actions need to be taken, or exit the project. The Figure below presents the duration of each phase of the CAR process. Cycles 1 and 2 is further discussed in this chapter and Cycles 3 and 4 in chapter 5
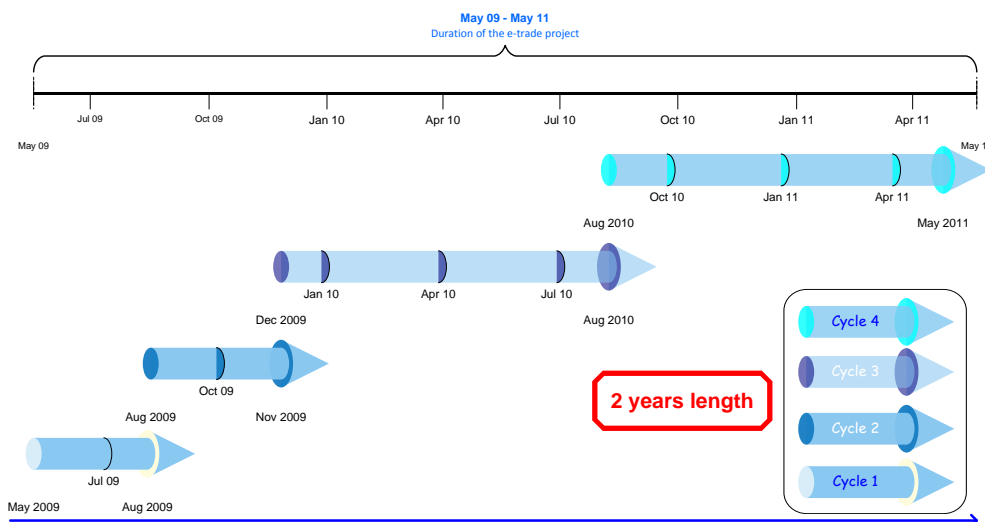
Figure 4. 1: Length of the e-trade project

4.2.3. The roles of participants

Action research emphasises the collaboration between researchers and organisations. The role played by the researcher and the organisation varies massively depending on the level of involvement between the participants, e.g. researchers and practitioners (Grønhaug et al. 1999). Thus the level of involvement needs to be clarified before the start of the Action Research Process. The following section describes a brief explanation of the different teams and persons involved in the project.

The e-trade project consisted of two teams; the researcher, representing Brunel University and the client, which is basically the company under study, namely SME-MX. However, as the study progresses and the project evolve, more participants were incorporated to both teams. Moreover, external participants were involved in this research, therefore is necessary to describe and differentiate all the participants involved in the research. Below is a complete description of all the participants and their roles, segmented in teams and in order of appearance in the project.

➢ SME-MX. In total, including the Owner, six members of SME-MX participated in various stages of the project and played different roles. Some of these players participated briefly and thus have limited contribution to the project and to the research. On the contrary, others were very helpful and participative fully during this research. The six members of the SME-MX team are presented below.

   o The founder of SME-MX *(from now onwards known as The owner)*. *The owner* is an experienced entrepreneur; president & founder of SME-MX, and specialises in looking for innovative Business Models within consolidated industries.

   o *Beri* has just finished a certified course in branding and therefore was involved in the branding and image of the e-trade concept but only during the first cycle. *Beri*'s intervention was very short and shallow, however, some of her contributions have an impact on the study, and hence she is included.

   o The first project manager from now onwards known as "**PM1** or **Project Manager 1**", *PM1* was incorporated to the SME-MX team in August 2009 and he participates in the second cycle. Although his participation was short, some relevant interventions are further described in the respective cycle.

   o The second project manager will be called "**PM2** or **Project Manager 2**". *PM2* was the more experienced member of this project with 23 years of executive business career in transnational companies such as GoodYear and 3M. *PM2* played an important role in the project; his knowledge and enthusiasm, and his project management skills were essential for the project to move forwards. *PM2*

participates in the 3rd and 4th cycles of the project. *PM2*'s role in the project was appointed as the project manager (*PM2*), champion or coordinator of the project, and during the 4th cycle *PM2* was also appointed as the "Business Innovation VP" of SME-MX.

- o The third project manager participating in the project will be called "**PM3 or Project Manager 3",** The *PM3* participated also as a Project Manager of the project. *PM3* has taken the place of *PM2* when the later exits the project in cycle 3. *PM3* participates during the 3rd cycle and make some contributions to this research as is explained later in chapter 5 during the intervention of the third Cycle.

- o Also a personal assistant and junior researcher was hired at some point of the project and will be called "**PA (Personal Assistant) or research assistant**". *PA* has a short participation in the project during the last cycle (cycle 4). *PA* was recruited as PA by *The owner* and *PM2* and had clerical roles for the project such as reporting and consolidating data. *PA* had some experience on developing Web applications which made her suitable for this position.

- ➢ Brunel University. The researcher has the responsibility of representing Brunel University as part of this project. The researcher main responsibilities for the project were to lead the development of the Business Model as well as in the design of the e-Business solution that will support the Business Model. In this way the researcher had benefited from a considerable amount of information acquired throughout the deployment of this project. As part of the Brunel University team four more participants were collaborating in some stages of the project. The Brunel team is composed by:

  - o "**The Researcher**", the researcher has worked in the area of SME, particularly the e-Commerce and e-Business domain from the start of his professional career, back in 1998. Past experiences working closely with SMEs have given the researcher the opportunity to witness in practice the limitations and difficulties that SMEs face. Past work experiences and the interest to explore this area, inspired the researcher to conduct this research. SME-MX was the perfect opportunity to investigate in real life the process to create a new *dot-com* venture.

  - o A Senior lecturer from Brunel University actively participated in the project and will be referred as "**Academic1** and **IT Consultant**" in this study. The role of *Academic1* was twofold as he was participating directly in both teams; the SME-MX team (IT consultant) and the Brunel team (Academic1). *Academic1* was originally appointed

as a solution architect, working directly with SME-MX as an IT consultant and assisting the project with the design and deployment of the software-systems. *Academic1* participates along the four cycles of the CAR, however during the fourth cycle *Academic1* decides to leave his post as IT consultant, but remain until the end of the project as *PM2*'s personal IT advisor.

o Also a colleague with expertise in the area of Business Model development with focus on telecommunication industries participated in the project and the name in this study will be "**Academic2**". *Academic2* was invited to participate in the third cycle of the project to assist in the Business Model selection and deployment.

o Also a master student helped with the collection of requirements and the elaboration of use cases. This person is referred in this study as "**Academic3**". *Academic3* has recently finished his postgraduate degree on MSc in Information System Management and has interest in web 2.0 technologies. *Academic3* participates in the project only in the third cycle in the elaboration of Use case diagrams and capturing system requirements.

o Finally a final year undergrad student participated in the project helping in the developing of a prototype tool to aid on the capturing of the Business Model data at the end of the forth cycle. This person will be known this study is "**Academic4**".

➢ Vendors: SME-MX needed assistance in the development of the software, the web domain, and general aspects regarding the functionality of the enterprise portal. As a result three vendors were contacted during the duration of the project.

o **Sienna** is a Nearshore software development firm based in Los Angeles (US) with a nearshore development in Monterrey (Mexico) specialising in Microsoft technologies. The first person contacted in this company has played two roles in this project: first as a software vendor (aka "**Developer1**") and subsequently as project manager ("**PM4**"). *Developer1* is responsible for corporate Strategy and development at Sienna, with areas of specialty including software development, project management, Microsoft technologies and software architecture. *Developer1* participated in the third cycle; afterwards, at the beginning of the fourth cycle, *Developer1* was replaced in the post with "**Developer2**" taking the same functions and role. *Developer2* has experience in process improvement and management, operations management, technical architecture and solution design.

o **Minimoko** is a London-based branding and design studio which works very close with Micro, small and medium companies assisting them in the process for construct strong brands that differentiate them from their competition and make them successful. Minimoko was represented in the person of "**Harry**". Harry is creative thinker at Minimoko and will be referred as "**Branding Leader**".

o **Zonnect** is a company based in Madrid (Spain) created for the development of high organisational technologies for the correct development of software in specialising companies that gives coverage both to managerial and professional targets. The areas of expertise of Zonnect covers the definition and management of requirements, change management, project planning, risk management, project tracking, quality process management and metric and process indicators. The key person working on the e-trade project is referred in this research as "**Developer3**", *Developer3* has a bachelor in Computer Science by the Polytechnic University of Madrid, also he has been directive and partner of important enterprise groups, as well as professor of the University Carlos III of Madrid and software Engineering research. Zonect participates only in the third cycle, particularly involved in the 'Facebook game' and the proposal to the EU for funding the e-trade project.

➢ **Consulting Firms**. At the early stages of the project, *The owner* contacted a consultant with experience in programme and project management to assist him in the assessment of the project and advises on Project management, which will be presented as **PM Consultant1**. Also at the final stage of the first cycle, SME-MX decided to search for professional support in the development of the project and approached some of the most known consultancy companies such as PriceWaterhouseCoopers and Deloitte, amongst others. Due to confidentiality agreements, the name of the consulting firm can not be mentioned and will be called as "**Consulting-X**" and it was represented by **PMConsultant2**. Consulting-X was hired for the area of e-BM development and project management.

The following table presents a summary of the roles of participants in the e-trade project, the time they enter and exit the project, and the cycles where they participated.

SME-MX					
Role in the project	**Participants's name used in this thesis**	**Duration in the project**		**Cycle intervention**	**duration in the project**
		Enters	**Exits**		
Owner and CEO of SME-MX. Leader and champion in the e-trade project	**Owner, Champion, Director, Entrepreneur**	All project		all cycles	2 years
Branding of the concept	**N/A**	20 May 2009	07 June 2009	cycle 1	1 month
Coordinator/Project Manager @e-trade	**PM1, Coordinator 1**	17 August 2009	28 October 2009	cycle 2	2 months
PM @ e-trade and VP of Business Innovation at SME-MX	**PM2, Coordinator 2**	From 27/Nov/09 to 30/Dic/09	From 27/Aug/09 till the end	cycle 3 & 4	10 months
PM @ e-trade	**PM3, Coordinator 3**	12 April 2010	03 August 2010	Cycle 3	4 months
PA of SME-MX and Coordinator/Researcher @ e-trade	**PA, Assistant**	17 August 2010	15 November 2010	Cycle 4	3 months
Brunel University					
Role in the project	**Participants's name used in this thesis**	**Duration in the project**		**Cycle intervention**	**duration in the project**
		Enters	**Exits**		
Researcher, Consultant, WEB 2.0 Advisor	**The researcher**	All project		all cycles	2 years
IT Consultant @e-trade / PM2's IT advisor & researcher @ brunel	**IT Consultant, Academic 1**	10 May 2009	30 April 2011	all cycles	2 years
BM Consultant	**Academic 2**	15 November 2009	14 April 2010	Cycle 3	5 months
Use case development	**Academic 3**	13 May 2010	05 August 2010	Cycle 3	3 months
Programming a prototype for the "BID"	**Academic 4**	14 January 2011	13 April 2011	Cycle 4	3 months
Sienna					
Role in the project	**Participants's name used in this thesis**	**Duration in the project**		**Cycle intervention**	**duration in the project**
		Enters	**Exits**		
Responsible for sodtware development @ e-trade	**Developer 1, PM4**	11 March 2010	25 March 2011	Cycle 3 & 4	1 year 1 month
Responsible for sodtware development	**Developer 2**	02 April 2011	12 May 2011	Cycle 4	1 1/2 month
Zonnect					
Role in the project	**Participants's name used in this thesis**	**Duration in the project**		**Cycle intervention**	**duration in the project**
		Enters	**Exits**		
Contacted for the development of the Facebook game @ e-trade	**Developer 3**	15 April 2010	10 July 2010	Cycle 3	3 months
Others					
Role in the project	**Participants's name used in this thesis**	**Duration in the project**		**Cycle intervention**	**duration in the project**
		Enters	**Exits**		
PM Consultant, project leader & advisor	**PM Consultant 1**	03 December 2009	31 March 2010	Cycle 3	4 months
PM consultant and advisor	**PM Consultant 2**	13 April 2010	10 July 2010	Cycle 3	3 months
Image and branding consultant	**Branding leader**	31 March 2010	30 May 2010	Cycle 3	2 months

Table 4. 3: Role of participants in the e-trade project (in order of appearance)

4.2.4. The collection and organisation of data

The data management is a process intended to explain how the data is acquired, validated, stored and processed, hence this section explains how the data was collected and organised during **the four Action Research Cycles** of the e-trade project.

Data collection and organisation of data during the e-trade project

The researcher has collected a large amount of data during the duration of the e-trade project. The instruments used for this purpose are interviews, meetings, working groups, field notes, emails, documents and observations. This data was organised into three datasets: **Interviews, Field Notes and Documents**, each of them contain different types of data. Table 4.4 describes the datasets, and the quantity of data obtained for each type during the entire project, and the contents of each dataset is explained as follows.

Data Set	Data Type	Quantity of Data
Interviews	Audio files from: Interviews, meetings, working groups, workshops, planning meetings, Skype meetings.	52 hours and 3 minutes of Recorded material
Field Notes	Text documents from: meetings minutes', observations on-site, observations in meetings and working groups, emails, researcher notes'.	85 Notes
Documents and Archival Records	Business documents from: Power point, Word documents, Excel sheets, PDF diagrams and graphics. In form of; presentations, Reports, plans, models, and Business documents	140 Documents

Table 4. 4: e-trade Data sets, data types and quantity of data from the entire AR

Interviews: During the execution of this study a total of 52 hour and 3 minutes were recorded from interviews, meetings, working groups and teleconferences, table 4.5 summarises the organisation of the recorded material documented and analysed during the four cycles applied in this study.

Cycle No.	Recorded Material	Time Recorded
Cycle 1	1	00:59:49
Cycle 2	5	01:00:49
Cycle 3	53	31:01:45
Cycle 4	16	19:00:18
TOTAL	**75**	**52:02:41**

Table 4. 5: Record Material & Time recorded in the e-trade project

Table 4.6 describes the dataset 'interviews' divided in the different types of recorded material used to collect data, and also presents the time recorded with each participant or group of participants studied in this research. The first column refers to the participant of the "interview" dataset, second to fifth columns presents the time recorded among the different types of recordings; Discussions, Interviews, Meetings and Workshops, last column presents total time recorded among each participant. The researcher was present and recording each of these events.

Sum of Duration (Mins)	Technique	Column1	Column2	Column3	Column4
Participants	Discussions	Interviews	Meetings	Workshops	Grand Total
Academic2				03:04:36	03:04:36
Academic2, Academic1	01:30:04				01:30:04
The owner	03:23:08	04:18:01	04:33:50		12:14:59
The owner, Academic1	00:01:54		02:41:40		02:43:34
The owner, Branding leader, Academic1			00:59:35		00:59:35
The owner, PM3	00:26:29				00:26:29
The owner, PM3, Academic1			00:38:13		00:38:13
The owner, PM2		00:58:45			00:58:45
The owner, PM2, Academic2				00:10:00	00:10:00
The owner, PM2, PM Comsultant1				01:06:14	01:06:14
Brunel Team	01:51:34				01:51:34
Academic1	01:29:20	00:59:49			02:29:09
Branding leader		00:40:47	01:11:33		01:52:20
Branding leader, Academic1	00:19:25				00:19:25
PM3		00:43:00	00:35:15		01:18:15
Developer1		00:18:55	00:07:19		00:26:14
Developer1, PM3		00:11:17			00:11:17
Academic3, Branding leader		00:29:02	00:34:46		01:03:48
SME-MX team				02:03:54	02:03:54
PM2	04:43:55	07:53:29	03:56:52		16:34:16
Grand Total	**13:45:49**	**16:33:05**	**15:19:03**	**06:24:44**	**52:02:41**

Table 4. 6: 'Interviews' per participant in the e-trade project

Field Notes: In addition 85 observations, annotations, emails and notes were produced, saved and analysed during the four cycles. These documents and data were captured in form of: field notes, meetings' minutes and meeting notes, emails and notes from observations. Table 4.7 present the organisation of these files.

Cycle	Field Notes
1st Cycle	8
2nd Cycle	12
3rd Cycle	25
4th Cycle	40
Total	**85**

Table 4. 7: Number of Field Notes captured in the e-trade project

Documents: Additionally, 140 documents and archival records were produced in the project under study, these documents and the different versioning of them has been recorded in form of; MS word documents, Power Point presentations, Excel sheets, Visio diagrams, PDF files and some graphical representations in JPEG or GIF format. The number of documents reviewed per cycle is presented in the table 4.8.

Cycles	*No of documents*
Cycle 1	24
Cycle 2	18
Cycle 3	43
Cycle 4	55
Total	**140**

Table 4. 8: Number of documents and archival records from the e-trade project

The data analysis process and the use of thematic analysis followed in this study are explained in chapter 3. Moreover, the appendix section presents a section with information regarding the data reduction and theme development techniques' used in this study and the results of the data analysis (**see appendix C**).

Next sections are structured and divided around five subdivisions each of those describing each phase of the CAR Process, starting with the Diagnosis and the identification of the problem, followed by the preparation of actions to be executed as a result of the diagnosed problem. Hence, the subsequent two sections cover the intervention of the researcher in the e-trade project, and the evaluation of this intervention. Last, the learning and reflection of the outcomes from the each of the cycles performed in the project is described.

4.3. Cycle 1: Exploratory cycle - Understanding the project

Dates:	*18th May to 1st August (4 months)*
Participants:	Owner, IT consultant/Academic1, *Beri*, Researcher
Data collection:	8 observations, emails and notes; 1 interview; 24 documents and archival records

Table 4. 9: 1st Cycle facts

One of the main characteristics of a SME relates with the unstructured thinking of their owners and entrepreneurs. SME-MX was not the exception; the researcher's impression about *The owner* of SME-MX was that *The owner* has an unstructured way of working, making difficult for the researcher to draw together the real needs of the project. The problem specified by *The owner* at the start of this cycle, resulted not to be "the real" problem of this project therefore, thus the researcher and the client agreed to kick-off the project with an exploratory cycle to identify a problem that has not been clearly defined at this point.

The first cycle labelled as "Understanding the project" is detailed in the next section. This cycle had a length of approximately four months, starting in early May with a series of informal talks which ended with the Client-researcher agreement signed at the end of May 2009, and formally started in June with a series of planned actions presented to the client to be executed during June and August 2009. This cycle concluded with a report delivered to the CEO of SME-MX with a series of requirements needed for the start of the second Action Research cycle in order to achieve the objectives of this research.
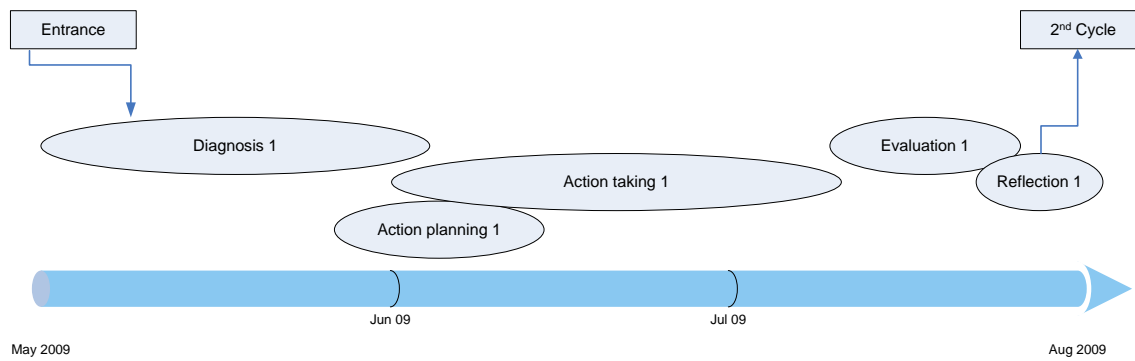
Figure 4. 2: The e-trade project - Cycle 1 length (4monthys May-Aug 09)

This section is structured around five subsections each of those describing each phase of the CAR Process, starting with the "Diagnosis and the Identification of the Problem", followed by the "Action Planning" which describes the actions to be executed as a result of the diagnosed problem and a description of how the data was collected and organised. The subsequent two subsections cover the "Intervention" or "Action Taking" of the researcher in the e-trade project, and the "Evaluation" of this intervention. Last, the researcher presents the "Learning and Reflection" of the outcomes from the first cycle of the project and recommendations for SME-MX. Figure 4.2, shows the timeframe of the phases during the first cycle of this research.

4.3.1. Diagnosis 1

During this phase a detailed understanding of the problem and the primary source of those problems were critical to determine the subsequent planning actions and deciding an appropriate intervention. Thus the first step, after establish a research-client agreement, is the identification of the problem and the causes of it.

The identification of a problem area

The project starts with the approach of *The owner* to the *IT consultant (also known as Academic1)* with the intention to obtain some help, information, and advises for the e-trade project. This approach was possible due to the previous friendship between *The owner* and *IT consultant*, also the fact that *The owner* has been constantly attending professional development courses at a major education institution in Mexico, allowed him to recognise the value that academics could bring to this project. Thus *The owner* approached Brunel University seeking advice, as he knew *Academic1* years back, and therefore, there was a favourable level of trust between them. In addition *The owner* has been aware of the research work performed by *Academic1* in the IS domain, which facilitates the approach between both parts.

The owner approached *ITconsultant/Academic1* mainly in search for advices in the area of software development and low cost labour hand, The owner comments *"...Initially I approach the universities with the purpose of finding cheap labour hand at a lower level of this project (e.g. programming). I did not have an idea of the value that my project brings to the universities and vice-versa. It was a pleasant surprise to see we both gain from working together".*

At the beginning of the project, Academic1 is incorporated to the project as an IT consultant in order to leverage the first challenge of *The owner*; 'lack of IT knowledge'. However, after the first couple of telephone conversations between *The owner* and *Academic1* in early may 2009. *Academic1* realised that the problem of SME-MX was more complex that originally appears, and it was not only the IT design needed. Furthermore *Academic1* soon understood that it was nothing in place at this stage, there were no documents backing-up the idea, nor a consolidated Strategy to follow, therefore the project will need more resources in more areas than *Academic1* originally thought. *Academic1* concluded that this project could benefit Brunel Researchers in certain areas such as start up process, SMEs, Business Models and Web 2.0. As a consequence *Academic1* decided to bring the project to Brunel University as he though could be good opportunity for researchers and master students to study very close the start-up process of a SME in the real business context, and helping in this way to overcome the limitations of resources that SME-MX has.

Academic1 and the researcher's first approach were in mid May 2009. *Academic1* was aware of the research areas of interest of the researcher which were very close to the problem areas initially identified in the project, thus a series of talks between *Academic1* and the researcher took part during may with the purpose of explain the e-trade project and include formally the researcher into the project. To this end, the researcher got formally involved in the project on the 7th June 2009, after the confidential agreement was signed; hence the collection of data started from May 2009, however some interviews were performed at this stage to understand previous meetings between *Academic1* and *The owner*.

The initial assessment of the researcher about the project was that, despite *The owner* has previous experience managing and creating new ventures, he does not have experience and knowledge in the IT/e-Business area, and therefore he did not know where to start or what to do. Also the series of conversations between *Academic1* and the researcher concluded that the aim of this project will be the development of an e-Business solution more specific a *dot-com* initiative. These first findings lead to the first challenge that SME-MX faced at this point; the limitation of human and financial resources and the lack of knowledge to develop an e-Business initiative as well as the need of information in the area of software development.

As part of the diagnosis of the e-trade project, the researcher, *Academic1* and *The owner* agreed a visit to Mexico to assess the e-trade business initiative, gather some requirements, and clarify some business issues. Consequently, a visit of *Academic1* was arranged to SME-MX Premises at the end of May 2009 to hold a series of workshops as part of the diagnosis and planning phase of this cycle.

In order to understand the project and evaluate the requirements of SME-MX, the researcher, *Academic1* and *The owner* spend several video-conference meetings during June 2009 to understand the project and analyse the actions that needed to be taken. The outcomes of these meetings included specification of the drivers of the e-Business initiative, main goal, the objective of the initiative, basic functionality of the proposed e-Business initiative, and implications in terms of value, profit and initial investment. As a result of those meetings, *Academic1*, the researcher and *The owner* have brought into light the real set of problems that SME-MX was facing at this stage. These are summarised below:

a) Identify the process needed to develop a *dot-com* company.
b) Identify how, and which web 2.0 technologies can help in the development of the e-trade project.
c) Capture software requirements as part of the software development.

Towards the end of this phase (diagnosis), the researcher and the organisation under study concluded that the aim of the study would be primarily to develop a practical approach to indicate the steps needed for the development of a *dot-com* company. The focus of the research was to deliver a credible foundation and recommendations on how to develop an e-Business initiative, which in turn, leads to the development of a start-up *dot-com* company according to SME-MX requirements. From the researcher position, it was also intended that the results would provide valid inputs to other SMEs involving into the e-Business domain.

4.3.2. Planning 1

During the planning phase, the intended sequences of actions were planned; these actions are oriented to solve the problem area established in the diagnosis phase and need to consider alternative actions to solve the problem detected. Hence a construction of an outline plan was undertaken from the collaboration of *The owner*, *Academic1* and the researcher. Initially a cross functional team was formed, which includes *The owner* and *The IT consultant* representing SME-MX and dealing with the marketing, software development and Strategy issues, and the researcher and *Academic1* representing Brunel University, the first one with experience in e-Commerce/e-Business initiatives and Web 2.0, and the second with experience in software development and Information Systems in general.

The main issues highlighted in the diagnosis phase were further analysed in a subsequent meeting between the Brunel Team and *The owner*. The outcomes of this meeting were summarised in the meeting's minutes, emphasising the Action Plans to be implemented in the e-trade project. Also during this meeting *The owner* let the team know about his previous experience working directly in the creation of firms and projects. The insights *The owner* brought into light were helpful and rich of information regarding the activities needed to perform in order to design and start-up a company, which is the main aim of the e-trade project.

The extracts of the meeting minutes containing the action plans and the person responsible for each action were in Spanish and the transcripts were originally written in Spanish too, however a translation of the relevant outcomes is provided below.

The first problem diagnosed; a) Identify the process needed to develop a *dot-com* company, it was further decomposed into the following objectives:

> ➢ *A review of the existing process for the creation of a dot-com company, as well as a review of the process followed by similar organisations is essential to understand the process that e-trade must follow to succeed.*

> ➢ *After reviewing the existing processes for the development of a dot-company, propose a framework to be use by SME-MX.*

Moreover web 2.0 technologies are an important part for the development of the new *dot-com* initiative as the researcher specifically highlighted. "*Web 2.0 technologies cannot be separated from the development of a dot-com company in today's world, as the processes supplements each other*". Thus the second problem; b) Identify how, and which web 2.0 technologies can help in the development of the e-trade project, was broken down into two main objectives captured as part of the meeting minute as follows.

> ➢ *An analysis of the web 2.0 technologies will be provided by the researcher, highlighting the main uses of such technologies and a classification of them in order to fully understand the properties and characteristics of the web 2.0.*

> ➢ *Reviewing existing web 2.0 technologies used for e-Business initiatives and assist SME-MX in the selection of suitable web 2.0 technologies according to the characteristics and requirements of the e-trade project.*

Finally, the last problem detected c) Capture software requirements as part of the software development, was also divided into the following objectives.

➢ Propose a mechanism to capture system requirements.

➢ Begin with the capture of systems requirements.

Table 4.10 summarises the five action plans agreed by the team to be undertaken during in the first cycle of this project.

No. Activity	Description	Participant(s)	Deliverable	Date
1	Business understanding (initial workshops in Mexico)	*Academic1* and *The owner*	Report/presentation	May 2009
2	Review and present the latest start-up processes	Researcher	Report	June 2009
3	Propose a framework for start-up a *dot-com* company	Researcher	Framework	June 2009
4	Review and presents the web 2.0 technologies	Researcher	Report	July 2009
5	Capturing system requirements in the form of use cases	*Academic1*	Use Case diagrams	June - August 2009

Table 4. 10: Team activity plan (cycle 1)

Additional activities and responsibilities have been assigned to the researcher as part of the researcher-client agreement previously signed with SME-MX. These activities cover the creation of reports and individual deliverables, and mark the end of a cycle and help the client's decision of start other cycle or exit the project. These extra activities are the final result of the activity plans and the relevant reports were presented to SME-MX.

4.3.3. Intervention 1

This section explains how the implementation of the action plans was achieved and the duration of each set of activities performed during the first cycle. Theoretically the intervention is expected to be linear, however some aspects of the intervention needed some iterations before the actual intervention was complete. As previously mentioned each of the activities planned is related to one or more individual deliverables which are presented at the end of the evaluation phase.

 The activities performed during this phase together with the specific deliverables are shown in table 4.10. Additionally the researcher outlined "theoretical" objectives for each of the action plans in order to gather rich data to be analysed in order to add value to this research and to provide valuable insights to the theory in the area of start-up process and IS. These research objectives' were stated as follows

➢ Develop an initial framework for the start-up process.

➢ Mapping the commercial uses of web 2.0 technologies.

➢ Identify the main challenges arisen from this cycle and external factors affecting this development

The narration of events occurred during the intervention phase and a description of the action plans implemented are presented below:

1) *Activity 1: Business understanding (initial workshops in Mexico)*

During the first visit to Mexico, *Academic1* was appointed to attend a series of meetings and workshops with *The owner* and the SME-MX team, the visit to Mexico happened at the end of May 2009, during this period *The owner* and *Academic1* held a number of meetings with the intention to clarify doubts about the e-trade project, to determine the status of the project and to capture system requirements.

In total ten meetings were held between *The owner* and the *IT consultant* during a period of two weeks and the main aim of those meetings were to fully understand the functionality of the project and comprehend *The owner*'s idea. Additionally *Academic1* has the intention to collect information related to the project, and also it was a good opportunity to clarify some business issues such as size of the project, market target, project scope and understanding user requirements. Also during these workshops and meetings, *Academic1* meet *Beri* and the SME-MX team and identify possible collaborators in the project.

Deliverable: *Academic1* sent an email in early June 2009, just after the visit to the client, containing the meetings' minutes and the outcomes of those meetings. The main discussions of this report are summarised in the bullet points below.

o *"The important thing here is to define those points which involve follow your idea: define the what (Infrastructure-value configuration) the how (Offering-value proposition) and the Customers (Target customer, distribution channel, etc)"* *Academic1*.

o Perform an initial competitor's analysis to detect similar websites or portals offering similar services (direct competitors) and locate websites that could represent future competitors.

At the end of the visit to SME-MX premises, *Academic1* proposed to move the activities of the project towards the development of a more complete Business Plan (BP), hence the researcher and *Academic1* rushed to present a BP based on shallow research in the area and sent it to *the owner* in an email. This BP contain the following steps: **Infrastructure** (Core capabilities, Partner network and

Value configuration); **Offering** (Value proposition); **Customers** (Target customer, Distribution channel, company's marketing, distribution Strategy and Customer relationship); and **Finances** (Cost structure and Revenue).

2) *Activity 2: Review and present the latest thinking of the start-up processes*

The focal task performed during the first intervention in the e-trade project was the exhaustive literature review investigating the start-up process. Previous experiences of the researcher looking at the steps needed for developing an e-Business solution, particularly in the SME domain, have brought some interesting observations to this research. However, the case of the e-trade project involve a research from a different perspective because previous researcher's work was particularly done for brick-and-mortar SMEs already established, but with no e-Commerce presence, therefore the start-up process is needed to be explored in detail from the *dot-com* perspective.

Hence, the researcher made an exhaustive literature review of the phenomenon and the outcome of this study is presented in the appendix section, appendix B, also a report was presented to SME-MX in this phase as part of the deliverables. However, to help the reader to understand the context of the research, the table 2.6 in chapter 2 summarises the main steps involved in the start-up process as reported in the literature.

As part of the report presented to *the owner* related to the literature in the start-up process, the researcher has classified those steps into three main phases: concept, planning and implementation, as shown in figure 4.3 and the appendix section (appendix B).

| Conception | | Planning | | Implementation | |

Webster (1976)

Pre-venture stage	Organisation stage	Financial jeopardy	Introduction of the product	Squeezing out partners	Outcome stage
Venture idea	Set up operations	Prototypes and channels established	Produce the product	Gain control by the entrepreneur	Survival

Carter et al. (1996)

Search for facilities and equipment	Search for and obtain financial support	Formed a legal entity	Prepared a team	Acquire facilities and equipment	Devoted full time to the business
Look for facilities and equipment	Ask for funding	Apply for licences / patents	Organise team	Bought facilities / equipment	Prepare plan/develop models
Invest own money	Get financial support	Form the legal entity	Hire employees	Rent facilities / equipment	Devote fulltime / save money to invest

Shook et al. (2003)

Entrepreneurial intent	Opportunity search and discovery	Decision to exploit	Exploitation activities
The development of intentions to create a new venture, based on perceptions of feasibility and desirability.	Search for and discover the business opportunity	Decision to exploit based on risk propensity, motives and attitudes	Finding the resources
Previous career experiences, entrepreneurial roll models and social support	Information/knowledge of the entrepreneur	Physiological attributes and cognitive processes	Planning, networking, selling. Locus of control
Propensity to act upon opportunities	Past experiences		Carrying out the activities / opportunity exploitation activities

Carrier et al. (2004)

Business idea	Market needs	Identification Business opportunity	Feasibility	Search for support	Venture creation
The initial vision or idea is generated	Determine the needs of different potential customers for the products	Identify opportunities, propose innovative solutions to market	Develop prototypes, write a business plan, or find contracts	Gather all needed resources	Formal/legal constitution of the firm and first sales

Veciana (1988, 2005)

Gestation		Creation		Launching		Consolidation
Childhood		Look for a business opportunity		Create a team		Survival
Antecedents and professional knowledge		Create a solution: configuration of the business idea		Obtain and organise the means		Squeezing out partners
Incubator		Evaluate the opportunity. Write a business plan		Develop the product/service		All under control
Precipitation condition		Formal/legal constitution of the firm		Find out financial aid		
Decision of creating a new venture				Launch the product/service		

Petrovic, et al. (2001), Osterwalder and Pigneur (2002), and Osterwalder (2007)

Planning level	Architectural level	Implementation level
Strategy development	Planning and defining the Business Model	Implementation / Business Processes
ICT weight	E-business opportunity and change	E-business process implementation and adaptation
Strategic objectives	Conceptual and architectural implementation of the business strategy	Implementing the strategic objectives
ICT strategic objectives	ICT planning	ICT implementation

Awayne (1973) and Serarols (2008)

Concept (or gestation)	Planning	Implementation
Idea and new venture set up	Resources needed to produce a product/service	The plans are ready and the firm begins to operate
Entrepreneurs background	Refine the business opportunity	Put into practice the plans
Identification of the business opportunity	Plan activities to execute the idea	Creation of the team and Gathering resources
The precipitation condition	Business plan	Obtain financial aid
The incubator		The product or service is launched

Figure 4. 3: Start-up process in three phases

The figure and table presented above, represents the start-up process from a general perspective. This means that the steps outlined above are extracted from the general literature, mainly from the perspective of the Business school and social sciences, hence a closer look into the IS domain was necessary. Regrettably there are not many studies looking at the start-up process within the IS literature, nonetheless the literature in IS appoints to the business logic triangle depicted in the studies from Osterwalder et al. (2002). The BLS from Osterwalder and Pigneur (2002) presents the steps that, ideally, any organisation has to follow from top to bottom in order to succeed in the elaboration of a company or project, as show below in figure 4.4.
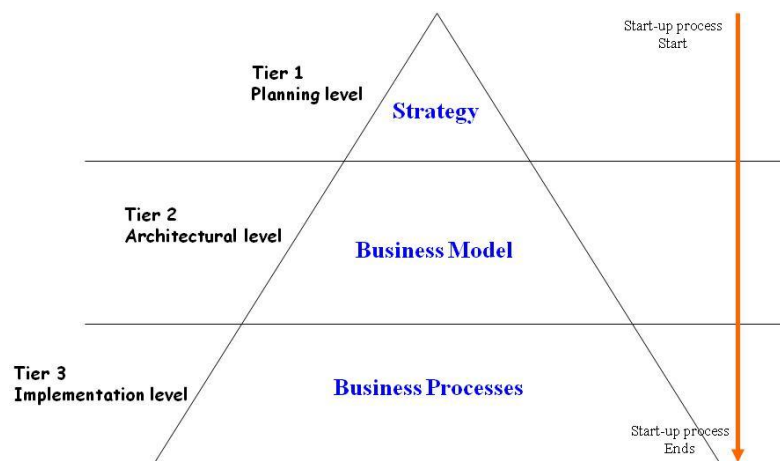
Figure 4. 4: the start-up process and the BLS adapted from Osterwalder and Pigneur (2002) and Osterwalder (2007)

Osterwalder explains that "The business logic" of an organisation basically consists in three tiers which are interconnected and linked in many aspects of them. A basic explanation of the levels of the business logic was presented to SME-MX and also covered in chapter 2 of this dissertation.

Researchers looking at the start-up process have highlighted and make it evident that the most important step, after "having a brilliant" business idea, is the planning stage. In this stage the entrepreneur need to gather information about the market, competitors, sector etc. information that together with a course of actions or Business Plans will shape the business process needed to start operations of any business. The planning stage seems to be the most important phase of the process, in this stage the entrepreneur needs to acknowledge the market needs and find his *niche* in the market. In this phase also various business scenarios or Business Models can be tested. In the case of the e-trade project, this vital information was partially covered. *The owner* has some market studies and previous experience trading products in a B2B basis, thus he has the vision of the business defined but he has nothing written down in formal documentation.

The results of this step show evidence of the importance of the planning stage in any type of venture. Thus the planning phase needs to be studied in detail to find common elements in the literature, and to be considered at the e-trade project. Due to the nature of the project, the researcher focused on the study of two main streams or areas for research: The Business School/domain needed to be considered alongside with the literature in the IS domain. As a result, both trends have emphasised the elaboration of a "plan" which encompasses the various elements needed for that reason.

During this phase (intervention), some confusion among participants emerged. The researcher noticed the indiscriminate use of some concepts and words such as Strategy, Business Models and Business Plans which in repeatable cases were used to define the same set of actions. Despite of such confusion, both streams have emphasised the need of a Business Model and a Strategy Plan/Business Plan as compulsory step for the creation of a company. Thus the next action during this cycle was to make an analysis of the main steps for the start-up process and propose an initial framework to start the e-trade project. This framework is disused in the next section.

3) *Activity 3: Propose a framework for start-up a dot-com company (from idea to implementation)*

As a result of the meetings carried out during the Diagnosis and planning phase, the researcher become conscious about the need of the identification of the **process needed to develop a *dot-com* company.** The research done in this area was analysed and as a result, a preliminary Framework for the start-up process was proposed based on the literature findings (see figure 4.5).
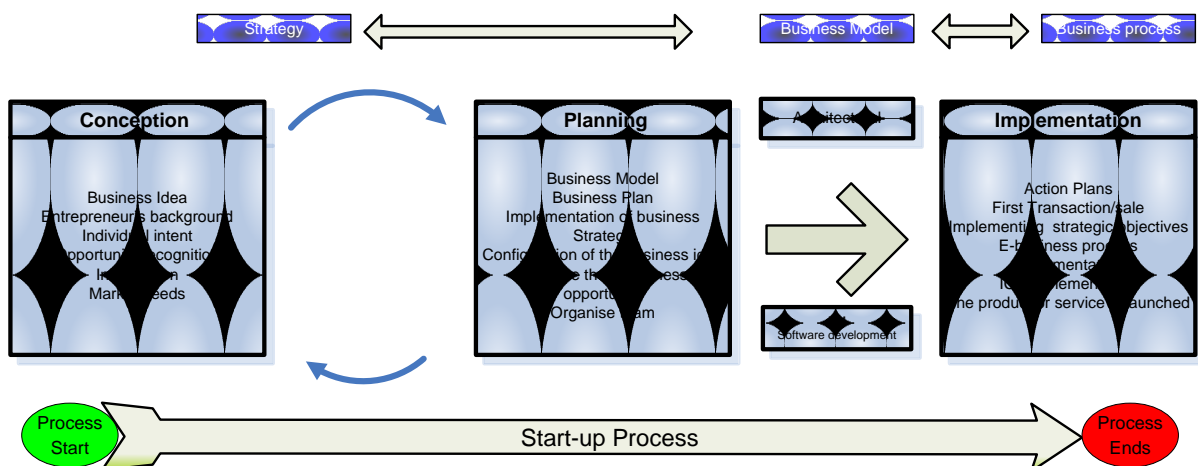
Figure 4. 5: Start-up process – Conceptual framework from literature

The initial framework proposed, contains three main linear steps that organisations need to follow: Conception, Planning and Implementation.

The **conception** stage is where the idea of the new venture is outlined, therefore the main component of this stage is the business idea, that essentially is one of the most important factors for succeed in the creation of a new venture. Also during this stage other factors play an important role defining the success of the project: the entrepreneurs' background and the individual intent are factors to be considered together with the Opportunity recognition, the initial entrepreneur vision and the market need. Furthermore, there are other activities to be performed at this stage related to the setting up a company such as; legal requirements, patents and copyrights, company name, domain, among others.

The **planning** stage is very important; it follows the conception of the idea, and precedes the implementation. More importantly, this phase outlines all the activities carefully and systematic planned and tested before actually perform an activity at the implementation level. Although is not an easy task to organise the main or common elements of the planning stage and set-up a new venture. However, the studies concerning the stages of the business logic system had helped entrepreneurs and academics to understand better the sequence of actions needed for the planning stage for the start-up process. Furthermore Osterwalder locate the Strategy at the planning level and it is the starting point for the Business logic system.

The **implementation** phase marks the end of the start-up process. During this phase all the activities considered and tested in the planning phase are actually performed. This phase leads with the real operation of the business and spot the end of the start-up process with the first transaction made or with the first sale done.

After both the researcher and the client have agreed the steps to follow and accepted the initial framework proposed, the immediate next step was to adapt the framework to the e-trade project's context. Initial analysis from conversations with *The owner* expresses that a mayor part of the conception stage has been done; the business idea is backed up with *The owner*'s background and the opportunity recognition, thus in 'theory' the roots of the Strategy were defined. Hence, the natural next step was the elaboration of a Plan.

At this point *Academic1* has provided *The owner* with an initial Business Plan to start gather important information for the business. This initial Business Plan contains the steps which *Academic1* considered the most important, moreover *Academic1* in his email makes some observations on each of the components and subcomponents to clear the concepts and highlight the importance of those.

Infrastructure	
Core capabilities:	The capabilities and competencies to execute a company's Business Model.
Partner network:	The business alliances which complement other aspects of the Business Model.
Value configuration:	The rationale which makes a business mutually beneficial for a business and its customers.
Offering	
Value proposition:	The products and services a business offers. Quoting Osterwalder (2004), a value proposition "is an overview of… product and services that together represent value for a specific customer segment. It describes the way a form differentiates itself from its competitors and is the reason why customers buy from a certain firm and not from another".
Customers	
Target Customers:	The target audience for a business' products and services
Distribution channel:	The means by which a company delivers products and services to customers. This includes the company's marketing and distribution Strategy.

Table 4. 11: Components of the first BP used in the e-trade project and notes from *Academic1*.

The first version of the BP presented to *The owner* did not considered the Mission and Vision values which *The owner* and *Beri* have emphasises previously. At the beginning both *Academic1* and the researcher were reluctant to include these values into the Business Plan context as it seems to bring no significance for the software development, which it was the main task of *Academic1*, however the persistence of the client to include these values was considered and the researcher incorporated these values to the initial Business Model together with the core values and goal, These four values were added and presented to the owner in a document as part of the deliverables and reports of each activity. Shortly after, the researcher realises the importance of these values and why *The owner* has emphasised the inclusion of those values to the BP/BM. Although those elements are not part of the Business Model explicitly, they become important aspects of the Strategy, and further discussed in the third cycle of this study.

The mission, vision, goals, principles and philosophy, were brought to the team in a document created by *Beri*. *Beri* was, at some extent, working in the project mainly in the branding, image and creativity area, *Beri* produced a document entitled 'Manual de fundamentos' (manual of fundamentals) which targets what the organisation is planned to be and the goals that the organisation need to pursue to achieve the desire future, emphasising that the branding and image needs to be aligned with the principle of the e-trade initiative.

Deliverables: From this task two deliverables were reported to *The owner*,

o The outcomes from the literature review on the start up process and the proposed framework. (which has been discussed in the appendix B and figure 4.3 respectively)

o An initial Business Plan structure from *Academic1* which later on evolves to the BM structure reported by the researcher in the next cycle. (Discussed above table 4.11)

4) Activity 4: Review and presents the web 2.0 technologies (and their commercial uses)

The researcher presented a report with a detailed description of state-of-the-art web 2.0 technologies used at present. This report is divided in two sections, first a classification of those technologies was performed according to the literature in the field. The second part of the report was dedicated to analyse the business uses of such technologies, together with an initial proposal of the uses of such technologies among the e-trade project. However, the Web 2.0 technologies were not really important for *The owner* at this stage. Although *The owner* showed real interest at the begging of this research and wanted to know how this technologies could support the e-trade project, at this point in time *The owner* decided to postpone this activities until the definition of the business is clarified. *The owner* mentioned "*we will take this subject into consideration once the software development starts*", therefore the web 2.0 uses were postponed for the next phase of the project.

A web 2.0 report was produced by the researcher as part of the deliverables and sent to *The owner* at the end of this activity. This report can be seen in the appendix A in the appendix section of this research.

5) Activity 5: Capturing system requirements

The capture of the initial system/software requirements started during the first visit to the client premises at the end of May 2009. On these meetings *Academic1* explain to *The owner* that he will apply a software modelling technique called "use case" to capture the requirements of the project. This modelling technique helps to describe the interactions between the users (actors) and the functionality that the software system offers. 'Use cases' is a common technique among designers and developers to capture user requirements.

The person responsible for capture requirements was *Academic1*. *Academic1* invested some of the time of the initial meetings developing the use cases with the aim to better understanding the functionality that the e-trade project requires.

The capture of the requirements by means of use cases was one of the activities that required several iterations between the *ITconsultant* (*Academic1*) the owner of the idea (*The owner*) and the

134

Brunel team. These iterations have started from the beginning of the project (May 2009) and took part during all the phases of the entire e-trade project. These iterations were necessary to ensure that the software will be aligned with *The owner*'s idea of the e-trade project, therefore regular revision and additions were made during the total duration of the project.

Use Cases were created at this stage explaining some of the main functionality of the e-trade project. The basic use case structure used to capture requirements is presented in figure 4.6 together with an example of the basic functionality of "trading products".

Use Case Name: Enter account application	
Primary Actor	Clerk
Supporting Actors	Credit scoring system (or company)
Pre-conditions	Logged on and authorised by system.
Trigger	Clerk requests to enter a new application.
Basic Flow	1. The system prompts the user to input applicant's details 2. If the applicant is a pre-existing customer then the clerk requests the system to 'search for a customer' (use case invoked), otherwise the details will be inputted. 3. The clerk submits the applicant's details. 4. The system requests the user to select a product type. (The 'search for a product type' is invoked) 5. Depending on customer type and product type some conditions can be redefined/overridden. In this case the system asks the user if conditions need to be changed at the account level ('Customise product' use case is invoked) . 6. The system confirms that all the details submitted are valid, creates a new instance of an applicant and sends the application off for credit scoring.
Alternate Flows	4.1 ' Enter combined account details'
Post-conditions	Applicant and application records created and application sent off for credit scoring.

Figure 4. 6: Use case No. 3 "Friendly trader"

Other activities

The owner requested another activity to be performed during this cycle, and it was not planned in the planning stage. *The owner* wanted a research on e-currency as part of the project. As a result of the confidential agreement signed between Brunel and the client, the researcher can not explain in full the role of the e-currency within the e-trade project. However, the currency or e-currency takes a mayor part of the Business Model for the reason of this currency will be the differentiator among competitors and the facilitator among users. Thus the importance of an investigation in this topic was necessary, also *The owner*, *Beri* and *Academic1* were working in the name of the currency as part of the branding stage, *Beri* has highlighted the importance to have a 'sticky' name according to the target market. In the case of this study the e-currency will be named as @quids.

As requested, research on e-currency was performed and a report including the limitations and constrains of the uses of e-currency was created by the researcher and presented to *The owner*.

4.3.4. Evaluation 1

The evaluation phase aims to study the consequences of the implementation of the actions planned in previous phase; these actions are compared with the objectives and expectations from the e-trade project, and also involved the evaluation of the intervention of practitioners and the researcher. This section is divided as follows: first, the evaluation of the intervention is reviewed according with each of the actions planned, followed by a general assessment of the first cycle of the e-trade project, which leads to valuable insights concerning the challenges that SME-MX faced during the deployment of the e-trade project and has been the starting point for the second Action Research Cycle.

The evaluation phase comprises the analysis of the activities performed during the implementation of the Action plans; this section centres on evaluate the intervention of the following activities completed during the first cycle:

1) Business understanding (initial workshops in Mexico)
2) Review and presentation of the latest thinking of the start-up process
3) Proposed a framework for the start-up process and proposing a BM to this aim.
4) Review and presents the web 2.0 technologies: Classification and use of these technologies.
5) Capture software requirements

Each of the above activities was accompanied by a deliverable, which normally takes the form of a report. These reports facilitate the assessment of those activities. The first activity evaluated is the

visit to the client premises with the end of attending a series of meetings and workshops in SME-MX premises. The outcomes of the visit are discussed below:

a) *Visit to Mexico to clarify business issues and capture systems requirements; the employ of Use cases*

The first visit to the client overlaps two phases of the CAR cycle, the diagnosis and the intervention phase. The visit was intended for capturing requirements as part of the intervention phase, but it was useful as well to examine closely the client and the project as part of the diagnosis phase. Despite the workshops and meetings were programmed to explain the main functionality of the e-trade portal, it facilitated the understanding of the e-trade project and the diagnosis of the "real problem" that SME-MX was facing at the start of the project.

During the visit of *Academic1* to SME-MX, *The owner, Academic1* and *Beri* held seven meetings and workshops designed to start with the capture of system requirements and to clarify some general business issues and doubt that *Academic1* and the researcher had about the project. The main reason to visited Mexico was to start capturing systems requirements and to clarify particular aspects of the project in order to facilitate the software development. Thus, *Academic1* commenced with the capturing of the requirements from the first meeting. Nonetheless, *Academic1* start questioning *The owner* in some important aspects of the business, that it was expected to have the answers. The main observations made by *Academic1* related to the capture of systems requirements and highlighted in the meeting minutes, were:

o *A definition of the sources of income is needed to design the use case of this section, moreover is necessary to decide whether the user will be charged or not. The design of these requirements will change depending if the user will have free registration or not, this information is needed to develop the "log in" and "sign in" use cases.*

o *Some basic functionality need to be clarified, such as: login access and home page, among others.*

o *A "n" number of iterations are necessary for the accomplished of this task*

During this step, several iterations between *Academic1* and *The owner* were necessary to shape the main functionality of the software; this particular activity took place not only during these meetings, but within the entire intervention of Brunel within the project.

The visit to Mexico was especially necessary to understand the real needs of the project which were not necessary the capture of system requirements, as previously *Academic1* has contemplated. Despite *Academic1* was told to start with this task, he (*Academic1*) soon after discovered that

capturing system requirements was far out of the scope, for the reason that the project was indeed only a project in the very initial stage. To start gathering requirements is necessary to have well defined the main functions of the system which is was not the case of the e-trade project. It was easy to identify that the project was in the conception stage still, therefore there were still open questions to be answered in order to capture system requirements and to advance in this task. However, despites *Academic1*'s warnings of the implication of continuing this way (e.g. ill defined requirements), *The owner* insisted in this task and some requirements were captured in form of use cases.

- o A significant behaviour from *The owner* was noticed at this stage. Despite not having defined completely the idea, and still not knowing which kind of website he wants to build, *The owner* already wanted to search for software developers, hence the rush and persistence of *The owner* to capture the system requirements. *The owner*'s idea was to build the website in no more than 6 months and start operations as soon as possible. *The owner* really though at the beginning of the project that he needs only software development. This behaviour have confused *Academic1* and the researcher, *Academic1* mention *"he surprise me when he told me to search for developers, I have mentioned that it was important to start from the construction of a Business Plan, besides I didn't see any Strategy in place, but he give me confidence with his actions and I though he had a good idea of how going forward, but he has not being able to put it in paper"*

As conclusion of this activity (first visit to SME-MX premises) important information was detected from this visit, and is presented as follows:

- o Status of the project: The project was in the very initial stage 'conception' thus there were still many issues to be clarified in terms of the idea and the functionality of the project, also the information that was available was very messy and with no structure.
  The initial *owner*'s idea for develop the software in 6 months, was not reasonable, nor realistic.
- o Capturing systems requirements: The Brunel team let *The owner* know about the team concerns related to some of the functionality of the e-trade portal. Also *Academic1* outlined the problems and restrictions to develop some of the functionalities of the portal because there were still some important issues *ill-defined*, therefore can not be completed.

Additional conclusions were drawn from these meetings and workshops and are presented here, in no particular order.

- No structure, neither control (storming ideas all the time but unstructured)

  It was evident the lack of control and structure in the project. The lack of control was observable from the moment of organising meetings. The initial meetings were characterised for a strong lack of structure, there were always executed without a proper agenda or at least a list of topics to cover during the meetings. The meetings were very unstructured and it was difficult to preserve control of the outcomes of those meetings because must of them were like sessions of brainstorming, 'a bunch of ideas but nothing concrete'. The researcher was expecting some structured information related to the development of the project but was not the case. This is a common mistake among SMEs.

- No documentation to back up the idea

  The visit to the client helps *Academic1* to realise that there were no documents supporting the idea. *Academic1* and the researcher had reflected on this and direct them to propose the first Business Plan to be used in the project. *Academic1* explains to *The owner* the importance of having documented the idea, and *The owner* acknowledge the use of Business Plan as he had used this document in previous ventures. Therefore, both agreed with this task, and as a result, SME-MX starts to document the project and saved the different versions of documents to see the progress of the project.

- Poor marketing research

  After questioning *The owner* about the target market, size of the market, etc. the researcher realise that this task was done in a superficial way and needed to be properly done. This reflexion was pointed out to *the owner* in subsequent meetings.

- Restrictions of time for this project due to other business related activities

  Another restriction detected at this early stage was the time devoted to the project. *The owner* has to concentrate most of the time in his main sources of income 'SME-MX' and SME-MX2. *The owner*'s core business was taking much of his time, leaving for the e-trade project limited time allocated, which was a mayor constrain to progress as expected.

- Poor awareness of web 2.0 technologies and use.

  Although *The owner* showed high interest in web2.0 technologies and how he (*The owner*) can use this technologies in benefit of the e-trade project, it was noticeable that *The owner*'s perception of such technologies was not fully understood, and *the owner* was not really aware of the impact and benefits of such technologies can bring to a website or particularly a project like the e-trade project. For example, the owner has barely used Facebook, so it has little knowledge of its whole functionality.

b) *Review and presentation of the latest thinking of the start-up process, and the Presentation of the main steps for start-up a dot-com company.*

The preliminary analysis gained from the first visit to Mexico helps the researcher to elucidate the real situation of the e-trade project. It was noticeable that the project was lacking structure, and it seems that the *The owner* was notoriously disorganised at this stage. *The owner* was attempting to build and document the e-trade idea but the disorganisation on the early stage of the project made this task very difficult. During the planning phase, the researcher explained to *The owner* the importance of follow a process, or steps, to guide the entrepreneurs' actions in the process of starting-up a firm.

It was also beneficial that the researcher gained a deep understanding of the culture and political environment of SME-MX through several meetings held at the early stage of this project. The researcher's perception of SME-MX was of an organisation that was high on drive, energy and commitment, but low and sometimes lacking of governance, structure, processes and organisation, even that *The owner* has the desire and commitment to improve, it was often difficult to align *The owner*, the researcher, and the rest of the organisation to make this happen.

During this activity the researcher presented a review of the start-up process and the results emphasises three levels that organisations need to accomplish. The literature describes these levels as sequential steps that contain a number of operations or task that need to be executed to start a business, from the conception of the idea to the implementation of the operational plans.

The conclusions of the literature about the start-up process leads the researcher to the Business logic system which defines three levels (also called tiers and stages), which ideally any organisation has to follow from top to bottom to succeed in the elaboration and planning for start-up a company or new project. The first level (conception level) involves the development of the business idea followed by the elaboration of the Strategy as a main step to develop an organisation or project, the second level (architectural) implies the creation of the BM, which it will help to implement, provide shape and find gaps or inconsistencies on the Strategy, also is the main platform to understand and develop the business processes. The final level (Business Process) it refers to the implementation of the BM, which means, how the company will operate and how the processes are linked to the BM, and therefore to the Strategy. This action ended with a document reporting the finding from the academic literature and the proposed framework derived form this analysis. And it is discussed in next section.

This particular action do not required the involvement of the client or a direct intervention of the researcher, therefore the evaluation of this action is the framework presented as such. However the researcher noticed the following: Despite the literature describe the start-up process to be linear, this could be interpreted to be iterative. An experienced researcher could infer the iterative nature of these processes, but this is not clear for the inexperienced one. The outcomes of this research at this point in time have already depicted the need of several iterations between the conception and the planning stage. This supports the need to explicitly describe the iterative nature of this process.

c) Presentation of a start-up framework and Business Model

At the end of the planning phase the researcher presents to *The owner* a conceptual framework for the development of the e-trade project. The outcomes from the literature review provides the researcher with an initial framework containing three stages or steps that organisation need to perform from top to bottom. The understanding of these levels of stages of the start-up process, have played a central role for the e-trade project. To this end, having very clear the idea of the project's aims and objectives is a critical step in this process. More specifically, to have a clear identification of the sources of income, together with the target market and a strong value proposition is said to be essential. SME-MX was partially aware of the start-up steps needed and it lacked of strategic direction. It became evident that *The owner* did not have a clear vision of this process. With the incorporation of the researcher, it becomes clear that the e-trade project have no direction. As part of the outcomes of the first interview between the researcher and *The owner*, the researcher become aware of the way of working of *the owner*. The first impression of the researcher about *the owner* was described as follows; *"…The owner knew some of the initial steps to start-up a company but he was not really aware of the whole process and the documents needed"*.

In order to clarify *The owner*'s doubts in the process, the researcher focused on the activity of mapping the e-trade project within the framework. This action had the aim to identify and locate the project within the three stages of the framework. The researcher compared the start-up process framework from the literature with the process that *The owner* was following, the result of this analysis positioned the e-trade project at the end of the "Conception" level of the framework and highlight the lack of a Business Plan, making easy the next action to be performed, the creation of a Business Plan or Business Model. Figure 4.7 locates the e-trade project within the initial start-up framework.
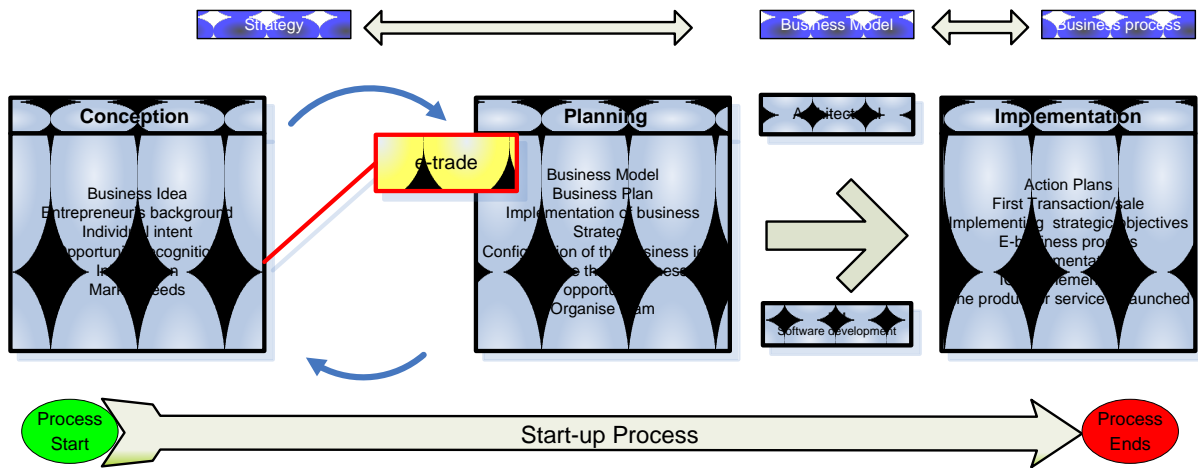
Figure 4. 7: positioning e-trade within the start-up framework

The broad aim of proposing a set of recommendations for the development of an e-Business initiative particularly for *dot-com* companies was critical in persuading SME-MX to take part in this study. SME-MX was not aware of the way collaboration between Higher Education Institutions and SMEs could be conducted. This poses the question whether SMEs, Education institutions and government institutions, are doing their best in communicating the opportunities presented in such collaborations. This issue is partially addressed in this research; however, it has not studied in full for the reason that is not the scope of the current research. However, this information could help colleagues' researchers with interest in this topic.

BP and the selection of a suitable BM for e-trade

At the beginning of the project (20 may 2009) *Academic1* provides the team with a preliminary Business Plan to alleviate this problem and continue with the task as planned. This first attempt to build a Business Plan corresponds to the need of filling up some gaps that were important for the project. *Academic1* explains to *The owner* in an email dated 20 May 2009 the importance of a Business Plan and the importance of start in a structured way. *Academic1* wrote "*My opinion is that we move to develop a more complete Business Plan… The important thing here is that we must begin to define those points that involve follow your idea of define the "what" (Infrastructure – value configuration) the "how" (Offering - value proposition) and Customers (Target market and distribution channel)*".

However the Business Plan proposed was still lacking of some vital information that organisations need in order to operate, especially a *dot-com* initiative. Further analysis at the "Planning level" was useful to identify and justify the use of a Business Model. It was found that there is an interchangeable use of the terms BM and BP in both, literature and practice, which has added

confusion between *The owner,* the PM on duty, and Academic1. A Business Model may mean the same than Business Plan for some people whereas for others a Business Model and a Business Plan are complementary but different. To some authors the main difference between a Business Model and a plan lies in the fact that the model is used to achieve long term objectives and represents the way an organisation generates revenue (Afuah et al. 2003; Alt et al. 2001), and the plan is generally made to achieve short term objectives and deals, mainly but not only, with marketing strategies (Pinson 2008; Tianjin 2009). The researcher assumes the position that Business Models and plans are complementary but different, and from this point onwards these definitions will be used consistently throughout this dissertation. This terminology was also agreed to be used with *Academic1*. Although he raised the need to clarify this point with *The owner* and the PM in turn, his request was overlooked and the confusion about this terminology continued thought all cycles.

Based on these definitions, the Brunel team decided to start with the development of a Business Model, which seemed to be the best option to structure the development of the business idea behind e-trade. At the end of this cycle other six concepts were considered to be added; Vision, Mission, principles, philosophy, slogan and policies. Initially these concepts were not included in the Business Plan as the aim was to develop a software solution. In software development terms, those concepts add little to the development. Considering that the project idea is at the development phase, however, it seemed sensible to add these concepts to the Business Model. This aspect is further discussed in the next cycle of this research.

The outcomes from this action plan have cleared the panorama of the e-trade project and have been useful to position the project within the conceptual framework (see figure 4.7). Moreover, they strongly suggest the need of using a Business Model to analyse in detail the business idea.

d) *Review and presents the web 2.0 technologies and the use of web 2.0 within the business framework.*

A report was presented to *The owner* and *Academic1*. This report consist of grouping, explaining and detailing the web 2.0 technologies available up to date and an analysis on how these could be used in the context of e-trade. However the report was not used at this stage as *The owner* was still not positive of the uses of these technologies and not aware of the importance to consider web 2.0 at the moment of developing the software.

Despite the researcher's efforts to include the development of web 2.0 technologies together with the elaboration of the Business Model, *The owner* had other priorities in the agenda such as Market Research and software development. Also *The owner* consider these technologies as a "must have"

in the e-trade portal but not as "important" to be considered at this stage of the project. The researcher concludes from this that *The owner* was not really aware of the scope of web 2.0 and the importance of implementing this tools from the initial stage of the project and the importance of include such technologies in the elaboration of the Business Model.

e) *Capture software/system requirements*

The capture of software requirements is a task performed alongside the entire project. The Brunel team decides to make use of a technique called "use cases" which is widely used among software developers. This particular task required several iterations between the interested parties until both, the client and *Academic1* were happy with the outcomes. It was particularly necessary the interaction between of *The owner* in this process and *Academic1*, as nobody else knows more about the project than him, and only *The owner* knows what he wants.

At the point of the intervention with use cases, *Academic1* found some gaps in the information needed to continue with the elaboration of the use cases and capturing requirements. These findings were discussed with *The owner* at some point during this activity. However, there were still some inconsistencies in some processes and questions unanswered. Moreover, soon after the end of this cycle the researcher and *Academic1* become conscious that not only some questions were unanswered, also it was found that the Strategy of e-trade was not developed in full and some aspects of the Business Model well poorly defined such as; the value added of the e-trade project and the definition of sources of income which is part of the value finance. Hence was difficult to capture requirements and design the software. Many problems started to emerge from this action, as *The owner* considered these two points to be separate from each-other. He (*The owner*) insisted *"value added was not necessary to be defined in order to develop the software"*.

The task of capturing requirements facilitates the Brunel team to find some inconsistencies or gaps between the functionality of the project and the system requirements. As a result of the initial requirements captured, the Brunel Team become aware of one main problem of the project which is the definition of the sources of income as mentioned above. This is a major problem since this particular strategic decision, will shape the functionality of the e-trade website and thus the software development, moreover the Strategy decision of defining the sources of income shapes the value finance element of the Business Model and the Financial plan section in the Business Plan, which are the 'petrol' of any organisation. Quoting *Academic1* "*If you can not define where the money will come from, you cannot design the functionality*". *Academic1* explains that the basic functionality of the system can be captured and designed, but knowing the sources of income is a

144

vital part of the systems because all the system need to be created surrounding the basic way of generate income, furthermore the system design need to be aligned to the main purpose of the e-trade Portal.

Another important action was detected at this stage, *The owner* insisted to complete the software design and to start operations as soon as possible, despite researcher's advises to not do so and even with the gaps founded in the Strategy. This behaviour is common from "first time" entrepreneurs. Finally, the need for a project manager and leadership was evident. *The owner*'s leadership style was too messy and without structure, thus the information was disorganised and confused without a clear plan.

The last phase of the cycle deals with the identification of general findings and the reflection on the activities and outcomes from previous phases of the Action Research process. This phase helps the researcher and the SME-MX team to decide whether or not proceed into an additional cycle or exit the project. The outcomes from this phase must contribute to both theory and practice, and thus are divided accordingly.

4.3.5. Learning and Reflection for Practice 1

The following reflections were part of the outcomes from the execution of the first cycle within the organisation under study.

➢ The need for a more structured approached emerged as main part of the project. The project was too messy and only in the mind of *The owner*, the need for documentation was a priority in the project.

➢ The e-trade project was at the end of the "conception" stage of the start-up process, therefore more planning was necessary. The Business Plan proposed was not enough to alleviate the problem as it was not considering the e-Commerce factor and value creation element.

➢ A Business Model seemed appropriate to solve this problem. Thus a Research to select a Business Model to help on the Strategy was planned.

➢ The BM seems to be the connexion between the Conception and the Implementation phases, and the elaboration of it will help to answer some of the strategic questions.

4.3.6. Learning and Reflection to theory 1

Theory does not really apply in the elaboration of the first cycle, mostly because the first cycle can be seen as the identification of the 'real' problem. It is more of an understanding phase. Hence little reflections to theory can be derived. However, some directions as to how to develop

a dot.com initiative were derived from this cycle. For instance, based on the findings of the literature in the area and the discussions with SME-MX during this cycle, a conceptual framework has been developed. This framework will be tested and adjusted in the following cycle.

4.4. Cycle 2 "Assembling the team and project kick-off "

Dates:	1st August to 30th November 2009 (about 4 months)
Participants:	*The owner*, *Academic1*, Researcher, *PM1*
Data collection:	12 observations, emails and notes; 4 (1:49 hrs) interviews; 18 documents and archival records

<div align="center">Table 4. 12: cycle 2 facts</div>

The second cycle starts after the end of the first cycle, although, both cycles overlap for short a period of time. Some of the diagnosis points of the second cycle were derived from the evaluation and reflexion phases of the first cycle. The main objective of the first cycle consisted in a deep examination of the e-trade situation and the design of the activities needed for the development of a *dot-com* initiative. Therefore, the conclusions from this cycle were useful to establish the research objectives and to clarify the 'real' diagnosis of the project which is used in the second cycle.

The second cycle begins with the full integration of the researcher in the project and initiates with a thorough literature review in the areas of start-up process and Business Models, which was identified and revealed in evaluation (1). The second cycle has a length of 4 months and covered the actions performed throughout the intervention of the researcher during the months of August to September 2009; Figure 4. 8: Cycle 2 lengthshows the five phases of CAR in this cycle.
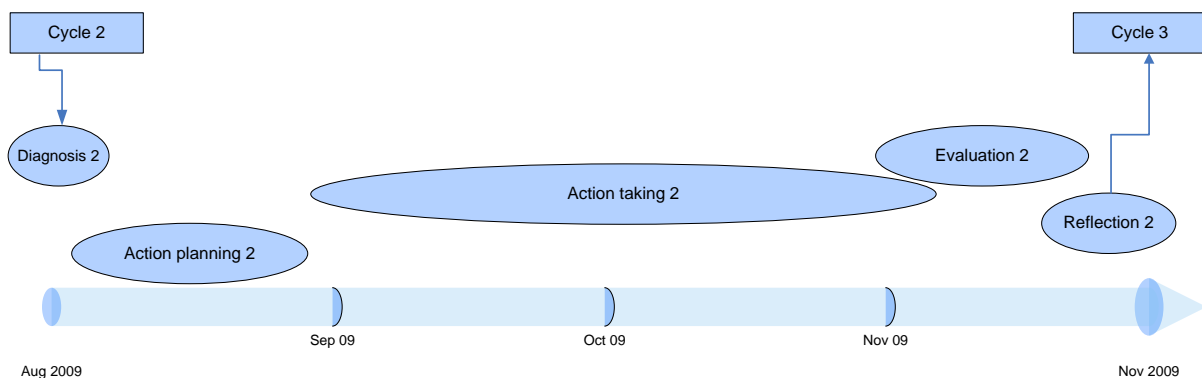
<div align="center">**Figure 4. 8: Cycle 2 length**</div>

4.4.1. Diagnosis 2

As a result of the academic analysis in the start-up process, the researcher have highlighted three stages or phases for start-up a firm; *Conception, Planning* and *Implementation*. The latest

assessment of the project, position the e-trade within the conception stage, consequently the understanding of the researcher was that the conceptualisation of the idea has been done, hence the researcher focused on the planning phase of the start-up process. At this point the researcher encouraged *The owner* to put his ideas and strategic decisions into a document which will help SME-MX to better understand the business process and to clarify the Strategy together with *The owner*'s ideas, thus the Business Model become a priority in the activity list.

A initial perception of the researcher about the founder of the e-trade project, describes *The owner* as a very enthusiastic entrepreneur, with a good idea "in his mind" but the researcher perceive *The owner* as person who is not capable to put in paper his ideas, which coincides with literature on the entrepreneur area, defining a entrepreneur as unstructured, interactive persons. Thus the need to document the idea was a primordial step in the project. After a discussion with *The owner* about this topic, we both agree that the first action to be done is the proper documentation of the project, *The owner* propose the use of a Business Plan, which is a document that *The owner* has been using in his current and previous business projects. Conversely, the researcher was proposing the use of a Business Model accordingly with the Business Logic system framework presented in chapter 2 and in figure 4.4. However at this stage *The owner* agrees to develop a Business Plan as part of the initial steps to be performed in the project. However, this BP soon evolves into a more comprehensive Business Model which is later analysed.

The immediate outcomes of the diagnosis phase pointed at academic research needed in the areas of Business Plan, Business Models and e-Business Models, also the relationship between the BM and software development was needed in this stage. These research and potential problem areas were discussed as follows.

Identification of the problem area

After the end of the evaluation phase a meeting was especially programmed in the first week of August 2009 to discuss the next actions in the e-trade project, the participants of this meeting. *Academic1*, The researcher and *The owner*, realised the importance of clearly define the objectives of the project and to write down the possible action plans to follow during the subsequent months. The main areas discussed in this meeting intended for the diagnosis of the problem, were initially discussed in the evaluation and reflection phases from last cycle. However during this meeting, *Academic1*, the researcher and *The owner*, presented and discussed on a case by case basis the problems and the sources of those problems, in order to approach each of them in a structured way.

The outcomes of this meeting direct the research towards the analysis of the following problems areas.

a) *Need for a PM dedicated to the project.*

It was noticeable that SME-MX did not have the resources needed to cope with the growing project. For instance, initial discussions about how and who will feed the model generate the first problem of communication and leadership. The need for a **project manager** emerged at this point for the first time, and after some observations, the researcher noticed that nor *Academic1* neither *The owner* have the time necessary to manage a project of this magnitude. Both (*Academic1* and *The owner*) have other commitments and activities to perform aside of the e-trade project, which leave them with limited time and commitment to be the Project Manager (PM). More importantly, it was evident that communication problems were raised between *The owner* and *Academic1*. Although this was a very important task where the ideas of the project will be written down an analysed in detail and thus the involvement of *The owner* was necessary, this was not well understood. Therefore the need for a full-time project leader-coordinator (PM) become visible during this period and becomes the major objective for *The owner*.

b) *The need for research in the BM domain and the call for a Business Model suitable for SME-MX requirements.*

The researcher utilise the first cycle as exploratory research to identify the problem which was not clearly defined and to produce the 'working hypothesis" provisionally accepted as a basis for further research. Figure 4.9, presented the working hypothesis based on the findings from the literature review in the area, and results in the initial conceptual framework which presents a statement of expectations to occur during the start-up process, from the conception of the idea to the implementation of 'action plans'.

After a revision of the working hypothesis and have located the e-trade project within the conceptual framework (see figure 4.7) the researcher indentified the need of a Business Model which fits the ideas that *The owner* has for the business and his requirements. The problem that SME-MX faced at this stage was the lack of knowledge and expertise in developing e-Business initiatives. Although, *The owner* has experience developing and creating firms or new projects within different firms, the experience he has is primordially in traditional brick-and-mortar business types. *The owner* comments during the initial meeting of this cycle; *"I have already try to create a dot-com company, but I have to tell you guys, that I did not succeed"*, when he was questioned to think about the reason of failure he adds *"well mainly I did not have the experience and the appropriate*

knowledge to manage the business… and there were some wrong managerial decisions”, The owner adds… *“However, there were other factors that affect the success of the business which were not related to the development of the website, but external factors related to the country's economy were more crucial for the project”*. This experience leaves *The owner* loosing some of the investment made. Despite *The owner* claim to had developed some projects that have extended over the Internet, the researcher discern with *The owner*, for the reason that the business he was describing was a brick-and-mortar e-Commerce development, and it was not similar to this project which is a pure e-Business *dot-com* initiative. In this case the entrepreneur (*The owner)* has no experience developing e-Business initiatives, neither developing a *dot-com* firm which in the roots are similar to traditional brick-and-mortar business, but the technology applied employ different concepts, therefore need to be treated separately.

After the review of the Business logic system framework, the lack of a Business Model was detected and pointed out to *The owner*. Moreover further analysis from the meetings held between the researcher and *The owner*, resulted in the awareness of the lack of Strategy or not well defined Strategy as other possible problem which soon after becomes a major problem. However, *The owner* was confident about starting from the **selection and development of the Business Model**, and the process by itself will give him some answers related to strategic aspects and detecting possible **sources of income** which at this stage were ill defined. At this stage the researcher was convinced that *The owner* has very clear in his mind that the business idea will succeed, and he (*The owner*) has the Strategy 'somehow' defined, but hidden in his mind.

As a conclusion of this discussion, two outcomes about the logical sequence to start up an e-Business initiative were detected: first the position of the e-trade project within the framework which leads to the second: the need for a Business Model as part of the planning stage.

  c)   Populating e-trade BM with business data (developing the Business Model)
The initial talks about the Business Model created some confusion to *The owner.* It became evident that this task could not be performed by *The owner* on his own, unless the terminology described in the Business Model were 'translated' into a language that could be easily understood by him. In addition to the terminology, *The owner* presented some limitations in the use of English language, as the majority of the information was in English. As a result, it becomes obvious that this particular task needed to be developed with additional participants from SME-MX that could understand and control its development. This participant should have the ability to understand the concepts dealt with the Business Model and to be able to communicate those to *The owner*, which leads to the following point: the appointment of a PM for the project.

d) *Software Design and Development*

The owner has shown an urge for developing the software (portal), and to go into operations as soon a possible. The initial expectations of *The owner* were to develop the website and having his first transactions in 4 to 6 months from the moment of the conception of the idea. The expertise of Academic1 in terms of software development is considerable, and thus he was able to visualise that the deadlines set by The owner were unrealistic. This action strongly suggested that *The owner* was not really aware of the implications of developing an e-Business initiative neither a *dot-com* company. Although *The owner* was advised that the software development plan was not feasible as he wishes, as leader an champion of the project he overlooked those suggestions, and the software development continues at this stage.

e) *Web 2.0 and the uses among dot-com companies*

Web 2.0 has been present since the beginning of the project, the owner is quite interested into these technologies and how it can be use of benefit of the e-trade project. regardless the researcher have already make an analysis of these technologies, it seems that the owner is still not fully aware of the advantages and uses of such tools, furthermore, the owner wanted to know how other *dot-com* firms have been used this technologies, therefore web 2.0 still remain as a problem area to be deeper analysed.

f) *Applied Research vs. Academic Research*

The owner become aware of certain gaps in his Strategy which were related to the BM that needed to be clarified to enforce his idea of the business and to progress in the project. As a result of *The owner*'s concerns, some other research-applied activities (such as marketing research, e-currency research, among others) were required in order to obtain valuable data to be used in the improvement of the Business Model and the Strategy development.

The owner, however, had a misperception on the way the university was involved in this project. He believed that universities could help him with this kind of research at a no cost. These activities do not have any academic value therefore the researcher needed to be very careful at this stage, making clear the type of research that can be done to not convert this AR into a simple IT consultancy (Davison et al. 2004). The researcher let *The owner* now about the type of research that academy can bring to the industry specifically to the e-trade project, and therefore the type of research, that the researcher can produce for the benefit of this project.

Theoretical objectives: Additionally the researcher has outlined theoretical objectives in order to understand the phenomena under study and to add some valuable information to the IS domain particularly in the start-up process. These theoretical objectives contain two main targets:

i. Identify and classify the Business Models according to the e-trade project needs, by means of e-Business Models, Business Models for SMEs, and Business Models for start-ups, additionally review the exiting frameworks or models related to the start-up process and the relation with the BM.

ii. Identify the main challenges from the development of the Business Model and general findings of the cycle

The conclusions of the diagnosis phase were documented in the meeting minutes dated on 5 August 2009 and previous meetings related to find the problems of the e-trade project.

4.4.2. Planning 2

The main problems detected in the diagnosis phase were further discussed and analysed by the researcher and *Academic1* in subsequent meetings. A report prepared by the Brunel team was presented to *The owner* for revision and acknowledgement of those activities. These were further discussed in a telephone conference dated on 10 August 2009. The six broad problem areas settled in the diagnosis phase were discussed and summarised into the following aims for action and intervention:

1) Research on BM and the call for a BM suitable for e-trade characteristics.

2) The appointment of a coordinator or PM was necessary and urgent.

3) Software design and development - Capturing business data for the BM, and continue capturing system requirements in the form of use cases

4) Contact software developers

5) Report on web 2.0 technologies (benchmarking)

6) Other activities: Applied research vs Academic research (Market research, benchmarking).

Consequently as part of detecting the main problem areas and related activities, *The owner*, *Academic1* and the researcher approved the following activity plans to be undertaken from August to November 2009. The action plans were confirmed into the six activities and their respective deliverable, as shown in the table below.

No. Activity	Description	Owner(s)	Deliverable	Date: Prog/exec
1	Appointment of a Project Leader, coordinator or PM	*The owner*	N/A	ASAP (17 Aug)
2	Review and propose a Business Models accordingly to the characteristics of the e-trade project.	Researcher, *The owner*, *Academic1*	Report	August 2009
3	Populate the BM with e-trade business data.	Researcher, PM1, *The owner*, *Academic1*	1st draft of the e-trade BM	Aug - Nov 2009
4	Capturing business requirements in form of Use cases and software design.	PM1, *Academic1*	2nd deliverable of use cases	Aug - Nov 2009
5	Report on web 2.0 technologies and benchmarking on these technologies.	Researcher	2nd Report on Web 2.0	Sep 2009
6	Other actions (Market research)	*The owner*, Researcher	Reports	Sep 2009

Table 4. 13: Team activity plan cycle 2

Additional information was taking into consideration to validate the initial theoretical findings and to plan specific aspects of the Data collection. This was reported as;

- o Final documentation in the form of a report containing the Business Model used, challenges arisen from the implementation of the Business Model and further recommendations for the implementation of the BM.
- o Challenges in the implementation of actions planned and further challenges of the cycle.

4.4.3. Intervention 2

The activities performed during this phase were summarised into six separate specific actions and the corresponding deliverables, as illustrated in table 4.13.

Additionally, **Theoretical objectives** were planned with the aim of analyse the start-up experience and gather theoretical information of this process. The research objectives for this cycle are.

- o Theoretical information on the main challenges involve in the selection and modification of the Business Models within the SME context.
- o Challenges in the implementation phase (conceptual framework)
- o Revision of the conceptual framework
- o General challenges of the cycle
- o Identify actions performed during this cycle
- o How the Business Model was populated with data
- o Identification of different versions of the Business Model

The intervention during each of the activities is reported as follows.

1) Appointment of a Project Leader, coordinator or PM

Previous to the integration of the PM, there were some communication problems between *The owner* and the Brunel team, both *Academic1* and the researcher have some difficulties to communicate certain aspects of the Business Model to *The owner*, such as, the importance of the value proposition and the relations with the software development. It seems to be a technology-language barrier between the two teams which made more difficult to accomplish certain task or defining some elements of the Business Model. As a consequence the need for a project manager emerged at this point.

The owner decided to search for a project coordinator/manager and '*PM1*' was appointed as a PM of the e-trade project at the end of August 2009. *PM1* has previous experience leading projects in companies such as Microsoft and his previous experience in some e-Business initiatives was one of the main reasons to be appointed as a PM. Additionally, *The owner* has past experiences working together with *PM1*, thus it was a level of trust between these to participants. With the incorporation of *PM1,* the SME-MX team grow to three members: *The owner*, the owner and founder of the project, Bery, helping with the branding and image and *PM1* as the project coordinator.

The incorporation of a PM partially solved some of the communication issues between the Brunel team and the SME-MX team, and the incursion of *PM1* as PM into the project alleviates one of the main challenges facing in the initial stage of the project: the organisation, alignment and structure of the information generated at this stage.

PM1 formally enters the project on the 17 August 2009 with a "kick off meeting". During this meeting the new PM produce a power point presentation named "presentacion portal de intercambio" (Trading portal – presentation). This presentation has the intention to validate and confirm with the team, the aim of e-trade, the organisational chart (roles of participants), and to agree on the Strategy and steps to follow to start-up the e-trade initiative.

Unfortunately for the project, *PM1* last in the position only three months, however during this period he brought sort of control in the project. *PM1* has started in August and exits the project on October 2009, the motives and consequences of his exit are further explained in the evaluation phase of this cycle.

2) Review and propose a Business Models accordingly to the characteristics of the e-trade project (Presentation of the latest thinking on Business Models and e-Business Models)

153

A thoroughly research has been done in the area of Business Model. This research is presented in chapter two of this study. However, a brief summary is presented in this section in order to highlight the main implications and challenges arisen from this intervention.

The first conclusion outlined in the analysis of the literature is the vast amount of different Business Models available in the literature. Most of the existing BM differs on the main elements and subcomponents. This diversity of BM made difficult the selection of the appropriate BM according to the e-trade characteristics. The literature shows a considerable amount of studies attempting to classify BM. Particularly in the area of e-Commerce BM, different authors have attempt to classify e-Commerce Business Models based on similar characteristics and other classification criteria, see (Rappa 2004, Rayport et al. 2002, Applegate 2000, Afuah et al. 2003). However there is still not a common definition generally accepted in the academic community. Moreover different schools of thought use indiscriminately the term Business Model and often is confused with Strategy and/or Business Plan (Porter 1996).

A common understanding of the definition of the BM was needed at this stage, in order to align efforts among the e-trade team and to unify criteria in terms of the concept used. From the pool of definitions existing in the literature, the researcher conclude that a common definition of the Business Model could be close to the one described by Rappa in his study; "*A Business Model is the method of doing business by which a company can sustain itself--that is, generate revenue. The Business Model spells out how a company makes money by specifying where it is positioned in the value chain*" (Rappa 2010). This definition was used for the reason that it was a simple but comprehensive definition of what the Business Model is, and what it does. Besides, this definition covers the two main elements of a BM: (a) what the business does and, (b) how the business makes money doing these things, which are two main questions to be answered for those interested in initiate this kind of ventures. However the definition itself may not help entrepreneurs to build the BM, thus a revision of the main elements and components was performed during this research.

The revision of the main elements to be contained in a Business Model was challenging and demanding, the literature presents different studies attempting to identify the elements of the BM thus making this task complex. It was found that there is not a universal identification of the main components that need to be considered when implementing a BM.

Although there is research done in the area of e-BM from different perspectives, this research found that there is limited information in the area of BM related to SMEs, and more specifically, for start-ups in the *dot-com* domain. The researcher and The Owner analysed different Business Models

currently used or academically approved, in order to chose the most appropriate BM for the e-trade project and modify accordingly to the needs of e-trade. The next subsection describes an ad-hoc version of the Business Model suitable for the needs and characteristics of the e-trade project.

Selection of a BM for e-trade

The Project champion on duty (*PM1*), *The owner*, *Academic1* and the researcher agreed to make an comprehensive review to the Business Models which will lead to the selection of "one" Business Model that matches the requirements of the e-trade project.

As explained in chapter 2, the Business Models in the literature are designed for well-established organisations with a well-defined Strategy looking to incursion into e-Business initiatives by modifying just part or all of their existing Business Model. The report presented has confused the SME-MX team due to the variety of Business Models and partially due as well to the unexciting standardisation of the concept and the misuse that some scholars and practitioners have done. The e-trade project, however, does not build upon an existing model but it is a new model itself. E-trade is a new *dot-com* initiative and thus, it does not have a well-defined Strategy.

At this stage *The owner* let the team to be aware that he did not have the time necessary for review the huge amount of information related to Business Models and he decided to step aside of this task. Basically *The owner* left the selection of the Business Model to the researcher, despite the researcher's advise for involvement in this process as a significant part of the project.

An initial Business Model was proposed in august 2009 as part of a report in this subject. The BM selected contained certain similitude in some components to the first Business Plan proposed by *Academic1* at the end of last cycle. The BM presented to the client has been build upon a preliminary BM, based on the e-Commerce BM of Rayport and Jaworski (2002). This BM contains four main components summarised as follows:

- o **Value proposition**--market segments, customer benefits and unique resources
- o **Online offering**--ordering scope, products, processes, and their mapping
- o **Resource system**--select and align company resources
- o **Revenue models**--a variety of ways to earn money in e-Commerce solutions

Rayport's model seems to be appropriate for e-Commerce initiatives as one of the components refers to the online offering, however this BM was created for brick-and-mortar established firms, thus this Business Model still not consider the full characteristics of the e-trade project. As a consequence the researcher enhance this model adding to components ad-hoc to the characteristics of this initiative, and based on a similar work presented in the studies of (Radovilsky 2005). The

resulting BM was selected and presented to *The owner* for approval in a separate report. The report containing the components and elements of the Business Model was presented to *The owner* on the 16 of June 2009, following by the first draft of "data population" of the Business Model for the e-trade project on the 16 of July.

The Business Model selected for this venture needed to achieve certain characteristics especially for e-Commerce/e-Business initiatives, but at the same time need to be useable by any SME looking to develop an e-Commerce Business Model, regardless of the sector and the type of e-Commerce i.e., B2B, B2C, and C2C. Hence, in order to adapt the BM to the e-trade characteristics, two components were added to the original Rayport's e-BM based on Radovilsky's (2005) research, Radovilski substantially improved Rayport's (2002) taxonomy of BM by adding two new components, cost model and value creation. These two components make the e-Commerce model development more comprehensive and embrace all types (sectors) of e-Commerce. Furthermore the researcher also improved some components by incorporating, the supplier processes in value-added e-Commerce offerings and web 2.0 in the supporting resources.

The initial **e-Commerce Business Model** proposed contains five main components: value proposition, Value added-ecommerce, value creation, supporting resources and revenue and cost models, as shows the figure bellow. Each of these components contains subcomponents that accomplished the aim of the component; each component is designed to aid the development and elaboration of the BM and to asses the BM. Figure 4.9 presents the BM proposed in this stage, additionally table 4.14 presents the definitions of the components and subcomponents of the BM.
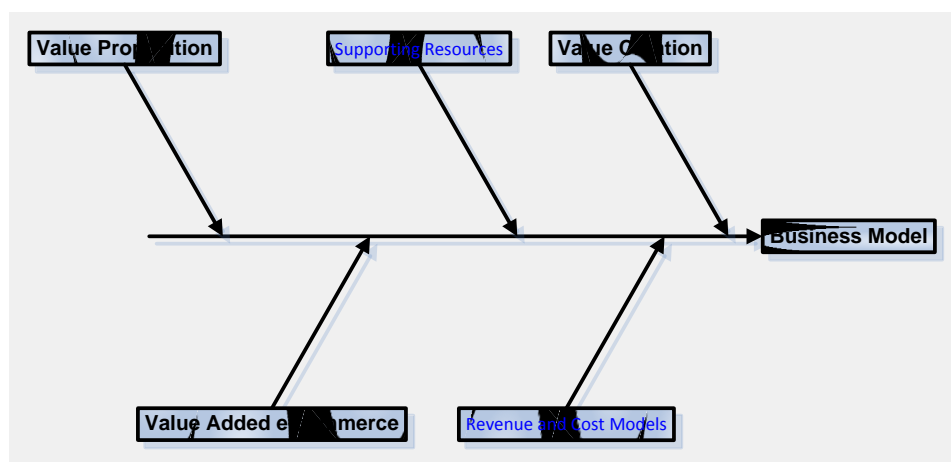
Figure 4. 9: Components & subcomponents of the first BM proposed for e-trade

The components and subcomponents of the BM proposed are:

COMPONENTS

Value Proposition	**Who are the customers and what will be their benefits?**
target market	Who will be using these e-commerce solutions
core customer benefits	The target market may be represented by end consumers
Value-added E-commerce	**represent a set of e-commerce products/services, processes and their relationships required to fulfil the value proposition**
product/service offerings	a model presented by Alter (2002) is used to describe these offerings utilising three dimensions: degree of digitization, degree of tangibility, and degree of customization.
e-commerce processes	An e-commerce process is a related group of online activities that use information and other resources to deliver value to customers (end consumers, business customers, or suppliers)
relationships between products/services and processes	Describes the relationships between the product/services with the e-commerce process
Supporting Resources	**What are resources that support the value proposition, e-commerce products/services and processes?**
add value to e-commerce development and differentiate the company from competitors	These unique resources could be: e-commerce technology, brand name, quality of products and services, distribution network, supplier network, buyers' and sellers' base, personnel, integrated software, ERP system, outsourcing, and other resources.
Revenue and Cost Models	**Describes how a company will generate revenue/profit through e-commerce to build and sustain competitive advantage.**
Revenue Model	Product, Service, or Info Sales, Transaction Fees, Subscription Fees, Advertising, Affiliate Fees, Licensing Fees.
Cost Model	Direct or Indirect, Material/Resource Cost, Cost Due to Paper Environment, Administrative Expenses, Quality Cost.
Value Creation	**It represents potential/expected monetary and non-monetary results of utilizing an e-commerce business model.**
monetary results	Revenue enhancement through volume growth and price differentiation, Cost reduction related to cost of goods sold and operating costs. Asset intensity reduction through reducing the cost of working capital and/or fixed assets
non-monetary value creation	Improved quality of products and services, Faster delivery schedules, Improved customer satisfaction, Global outreach of products, services, and information, Permanent access to information

Table 4. 14: Components and subcomponents of the fist BM, based on Radovilsky (2005)

3) *Populate the BM with e-trade business data*

In order to have a better understanding of the project, it was necessary to clarify the main functions of the e-trade initiative. Furthermore to facilitate the definition of the 'target' market and the benefits to be a 'user' of the website, it is necessary to understand the general functionality of the e-trade project, thus the project in 'general terms' is described as follows:

The users (target market) should use the portal to acquire products or services without the need of cash. The trade will be product to product or through a virtual currency (e-currency), which will be called "@quids".

To understand the exchange of product in the portal, the following scenarios were defined and described, for example:

o When users want to exchange product for product with the same value in '@quids'. Here a direct exchange between the two users happens (bilateral).

- When users want to share product by product but with a different value in @quids. In this case the difference of values in @quids must be deposited in the 'bank' of the user with the highest value. In order to make the exchange. the user must:

    - a. Acquire @quids in the portal for the difference in value for the desired product, or

    - b. Repeat the process of exchange with other products, and add @quids in the virtual bank account until the user has a balance equal to or greater than the desired product.

Figure 4.10 presents the traditional bartering vs. the bartering proposed in the e-trade project.

Option (a)

Traditional bartering options

Option (b)

E-trade options
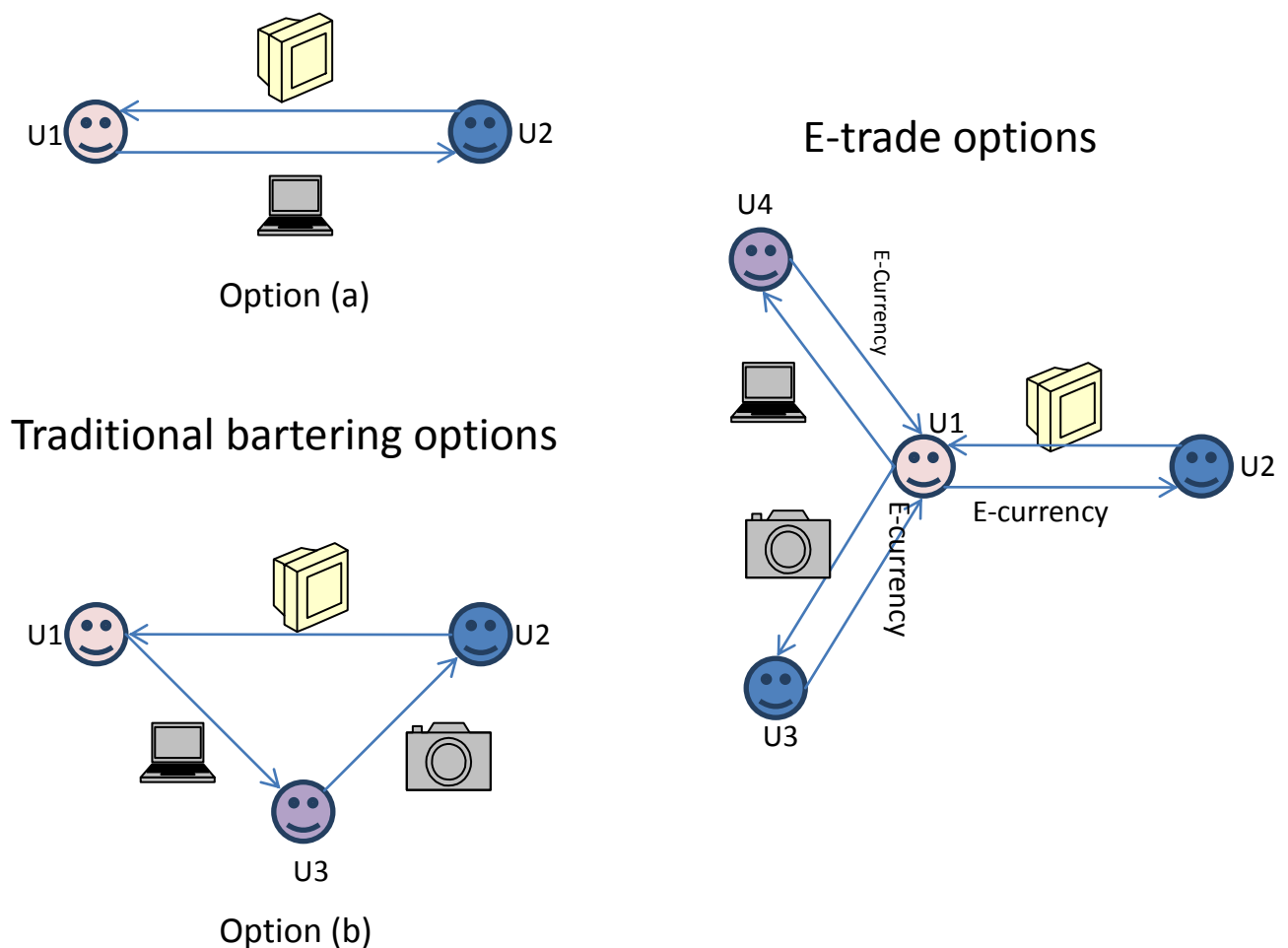
Figure 4. 10: Traditional bartering vs. e-trade bartering

Once having full understanding of the e-trade project, the team directed the efforts to the population of business data to the BM. One of the main difficulties to capture business data from the e-trade project into the BM was a problem of understanding of some 'technical names'. The language used to define each of the components of the Business Model had a level of abstraction that was difficult for *The owner* to visualise the value of developing this model. Trying to overcome

this problem the researcher delivered a comprehensive report about the Business Model, detailing and describing each of the components of the Business Model in more layman terms. *The owner*'s doubts were partially dissipated. In this document the BM is illustrated by sections and in each section the elements or components are fully explained.

The team worked in a first round to capture business data, and as a result the first deliverable was ready in August 2009, however this BM was an incomplete document because still was information that only *The owner* could provide. In other words, the BM needed to be validated by *The owner* or other participant of SME-MX.

With the incorporation of *PM1* in middle August 2009, the team continue working in the BM development. However *PM1* was not entirely convinced with the form that team were advancing, and he (*PM1*) wanted to give the project a 'Fresh start'. As a consequence the proposed Business Model was changed back to a Business Plan in October 2009. Although the name of the document was changed (e.g. Business Plan) for *Academic1* and the researcher the proposed contents of the Business Plan were very much aligned to the previously proposed Business Model. This issue highlights once more, the confusion that different terminology may bring to a project: for *PM1* this was a Business Plan, whereas for the Brunel team was a Business Model.

4) *Capturing business requirements in form of Use cases and software design*

During this period the basic functionality of the e-Business solutions for the project was also developed in the form of Use Case diagrams and corresponding descriptions. The Brunel team in combination with the team of SME-MX held meetings twice a week. The main outcome of these meetings was the implementation of the dissemination of the model. This particular task was not linear and several iterations were also required.

The Use case development continues together with the progress on BM/BP during the entire cycle. However at the beginning of the second cycle (Aug 2009), *the owner* has contacted vendors to develop the system. This was a surprise for the Brunel Team. Even though *The owner* had mentioned his urge to develop the system in previous meetings, it was expected this process to be lead by Academic1 as he was leading the requirements capturing through use cases. *The owner* had a couple of meetings with a software development company, namely Sienna, *to* ask for quotations for software development. This highlighted once more that *The owner* had a particular idea about software development. It was evident that this task was seen separate from the Business Model development and from capturing user requirements. It is evident the lack of communication between *The owner* and the rest of the team.

5) Report on web 2.0 technologies and Benchmarking

A second report on web 2.0 technologies was produced by the researcher and it was sent to *The owner* in Sep 09. The report was a summary of the initial report presented in the first cycle with the incorporation of a general benchmarking of the uses of this technologies and then more specifically for the *dot-com* sector. Moreover the report includes an explanation of the relationship between such technologies and the BM proposed in this cycle. The rationale behind the decision to add the web 2.0 subcomponent into the BM is explained next.

The original element 'Resource system' defined in (Rayport et al. 2002)Rayport and Jaworski (2002) BM, which consist in the selection and alignment of company resources', was customised by the researcher adding other supporting resources in order to support the value proposition and the e-Commerce products and services. Thus web 2.0 technologies fit within this element and were added to the model by the researcher as a subcomponent, in order to add value to the e-Commerce development and differentiate the e-trade project from competitors.

6) Other Activities

As part of other activities planned in previous stage, the researcher and the owner develop a report regarding the similitude and differences of e-trade against its competitors and also a study of the market, respectively. These reports are further explained in the evaluation phase of this cycle. Moreover during the beginning of the second Cycle, *The owner* expresses the desire of having a document summarising the e-trade project. *The owner* wanted an 'executive summary' to aid him in the search for investors. This particular document was an unfinished milestone mainly due to the fact that Brunel team did not understand what *The owner* was requesting. At this time Brunel team was working in the Business Model, which was unfinished, and it was thought to be the first priority. It was later that the researcher realised that *The owner* was requesting a "Business Case", which is further explained in the evaluation phase of this cycle.

4.4.4. Evaluation 2

The evaluation of the individual activities performed during this phase is presented in this section followed by the evaluation of the entire intervention of the researcher in the cycle.

First a review of the main activities performed during the cycle is analysed and evaluated as follows:

1) Appointment of a Project Leader, coordinator or PM

It was evident the need of a project coordinator in order to handle the incremental number of tasks resulting from the project. It was also apparent to be a technology-language barrier between the

160

two teams (Brunel and SME-MX) which made more difficult to define some elements of the Business Model. The incorporation of *PM1* as a coordinator of the project in middle august 2009, partially alleviates the communication problems. However the role of *PM1* was not really clear during his participation of the project. Sometimes he was acting as a coordinator/project leader and sometimes his role was unclear, thus the project was still lacking of direction. *The owner* was the direct responsible for the confusion on *PM1*'s role, the type and characteristics of *The owner*'s leadership make him to be involved and direct everything, despite knowing his limitations of knowledge and time. The remuneration schemes for *PM1* were not clear, leading to his premature exit of the project in late October 2009.

Previous to the incorporation of *PM1* into the project, the researcher and *Academic1* were working in the capture of business data into the BM, and have presented some advances of this work to *The owner*. When *PM1* formally enters to the project on the 17 August 2009, he was not aware of the research done to this point. The Brunel team, particularly the researcher, presented the advances of the model to the new PM.

PM1 explains the team his desire to have a 'fresh start' for the project and as a result *PM1* produces a Business Plan to be discussed during the kick off meeting. This BP has not considered the advances done in the BM, neither addressing the concerns pointed out by the researcher. However, the BP proposed introduced some interesting concepts such as; Strategy, Vision, Mission and marketing. This document (BP) is further analysed and evaluated later in this section (Populating the BM). The inclusion of the Business Plan proposed by *PM1* brought once again some confusion to the project in relation to the concepts Business Plan, Business Model, and Strategy. It was noticeable at this stage that the concepts BP, BM and Strategy were used arbitrarily during this cycle, and normally referring to the same sort of actions.

The appointed PM (*PM1*) quit the project just after 3 months on duty. *PM1* was questioned about the reason for walking out the project and commented: *"basically I have quit due to lack of vision in the project… I can not see future for me in e-trade but also my remuneration scheme agreed with The owner was not clear and it does not go with my expectations and needs"*. Later the researcher noticed that *PM1* was not hired by SME-MX, instead *PM1* was invited to be a partner in the e-trade project, sharing the risk but not receiving a monthly salary. As *PM1* let us know, he needed salary and SME-MX was not prepared to hire personnel, hence both parties decide to break before the end of the second cycle in October 2009.

After the resignation of *PM1*, *The owner* took over the PM role again; hence same problems of communication emerged for second time. *The owner*, the researcher and *Academic1* decided for the sake of the project to look for another PM as soon as possible. Thus *The owner* looks for another PM as recommended but this task was not accomplished for the rest of the cycle.

2) *Review and propose a Business Models accordingly to the characteristics of e-trade*

The output of this task was the first BM proposed and presented to *The owner* and *Academic1* at the beginning of the cycle. This BM, as explained before, it was a combination of different BM presented in the literature, in which the researcher have combined the elements and add two subcomponents to fit with the e-trade requirements.

The outcomes from this activity confirmed the findings of different researchers on the field: it was found that there are a variety of views about how to define an e-Commerce Business Model (eBM). According to Rappa (2010) *"Business Models are perhaps the most discussed and least understood aspect of the web. There is so much talk about how the web changes traditional Business Models. But there is little clear-cut evidence of exactly what this means."*

During this task, it was also found that the proposed BM was still not covering all the aspects needed for the development of the e-Business initiative that SME-MX needed. For example, the proposed BM was still not covering different areas related to the economic aspects of the business. Hence the need for a BM tailored to "*dot-com*/e-Business" emerged. The researcher concludes that there is still the need for the selection of a more robust BM; moreover a better understanding of the components and elements was necessary.

3) *Populating the BM with e-trade business data.*

The main challenges in the project started from the implementation of this particular task and identified at this stage. For instance the collaboration between Brunel and SME-MX has not been always straight forward and has faced one main challenge from its conception: "*communication*". *Academic1* comments "*communication between IS-literate and SMEs owners has proved to be difficult. We want to be structural and objective whereas they are more generic and disperse. It took me some time to understand the main idea of this project and more importantly, the way to communicate with them (SME-MX)*".

It was found that a considerable amount of time was spent on understanding the most efficient way to communicate the ideas in both directions. To alleviate this problem, *Academic1* and the researcher attempted the use of several techniques for communication, for example Use Case

diagrams to help with the conception of the functionality of the proposed software solution. The lack of knowledge on the area of IS design from SME-MX did not help to solve this problem. *Academic1* comments "*I tried several ways to communicate my interpretation of the problem and the functionality of the system. My first approach was the use of Use Case diagrams. Although this helped somehow, still were some problems of communication*".

During this phase the communication problems were partially solved and some advances were made in relation to the specification of the e-Business solution (software). However, the more the Brunel team advanced its knowledge about the project the more doubts emerged and thus they were brought during the meetings. This caused confusion to *The owner* since he believes the development of the model was rather linear. *Academic1* comments "*The owner gets frustrated when I am asking the same question again and again. They (entrepreneurs) seem to believe that the development of the Business Model will be linear when it is clear is not*" *Academic1* adds "*the fact that the strategic objectives are not well defined poses questions to the rest of the Business Model, and therefore to the system specifications*".

After a careful analysis of the Business Model, it was evident that some decisions needed to be made at the strategic level to give direction to the project. Although this is a point evident in the literature (see Osterwalder et al. 2002), in practice some resistance from SME-MX to work in this area was still present. Despite the fact *The owner* is now more aware of this relationship, he (*The owner*) still would like to see more tangible results (e.g. software). Regardless of all these problems, the BM was partially developed (45%), and some of the system functionality was captured (50%). Furthermore during this phase the researcher pays particular attention to identify the changes in the structure of the Business Model and the content for additional analysis.

These problems continued and it was asseverated by the fact that *PM1* enters to the project and disregards almost everything previously done and related to the BM. The incorporation of *PM1* as a project coordinator alleviates some problems of communication between the two teams, although still the problems related to the Strategy were not solved. *Academic1* comments: "*my expectations with the incursion of the PM were that he was going to be able to put some order to this chaos. However, the PM was introduced to the project without informing him of the previous work and working plans. I assumed this was done by The owner but it was clearly not the case when we have the first meeting with the PM.I was happy to have a PM but a bit disappointed he had overlooked the work done by the Brunel team*"

PM1 has proposed the use of a Business Plan instead of the Business Model that the team was working on. Despite the researcher's opposition to this action, *The owner* agrees to have a fresh start and work with *PM1*'s BP. This BP contains small parts of the BM used but there are hidden in the BP format; although *PM1* includes the 'use cases' produced, those models were still not validated by *The owner* of the project.

The Business Plan proposed was still without a formal structure and it seems to be more like series of asseverations and description of actions rather than a Business Plan. The BP produced by *PM1* took some aspects of the information contained in the original BM elaborated by the Brunel Team; but at the same time *PM1* did not consider some important information regarding some components of the BM such as the value creation component and some important subcomponents like the core customer benefits. The BP proposed by *PM1* includes seven components; Executive summary, the organisation, Products and services, Target market, Operations, and Phases and milestones. The figure below shows the differences between the BM and the BP, also the elements of the BM used in the BP document are highlighted in red.

Figure 4. 11: A comparison of the BM vs. BP used in the e-trade project

Despite the omission of essential information from the BM, the BP took account of additional information not considered before, such as marketing research including the swot analysis and the organisation component. This information was helpful to discover some strategic answers that the Brunel team was looking for, and it was needed to progress in the development of the BM.

As a final observation from this task, the researcher considers the change of a BP as a step backwards in the development of the e-trade initiative, and let the team know about his disagreement and concerns, thus a discussion of this topic was necessary to retake some of the

concepts of the BM which were needed to continue with this research. Conversely, this discussion never took part, because the unexpected exit of the project coordinator. *PM1* withdraw from the project at the end of October 2009, after that *The owner* took the PM role again and thus problems of communication arose again.

4) Capturing business requirements with Use Cases and software design

The capture of system requirements in form of use cases continue during all this cycle. At the end of this period a second deliverable of Use Cases was produced, with a progress of 50% of completion. Although several iterations were required between *Academic1* and *The owner* for the capture of system requirements, still *The owner* was not clear about the relationship between IS design (use cases) and the Business Model. *The owner* wanted to divide Strategy with software development. *The owner* could not see the importance and relevance of the relationship between the Strategy definition and the software development. *Academic1* comments *"…actually, my initial approach with them (SME-MX) was to help them to design the software system, but to do so, it is necessary to know the overall Strategy that is defining the software system. However, The owner always wanted to divide Strategy with software development; a situation that I tried to clarify, unsuccessfully, with the owner and the MP at many times"*.

The fact that *The owner* was already consulting software developers during this period was the tipping point that helps the researcher to observe The owner's understanding of the what the BM was doing for this project and its relationship with the software development. It seems that *The owner* was not fully aware of the importance of this relationship or that the team has failed to transmit this point. *The owner* has an inclination to develop the software as soon as possible, even though, everything needed to do so was ill defined (e.g. Business Model, plans, requirements, etc). With the lack of a PM in place, this was a communication problem that it was difficult to solve. To avoid confrontations, *Academic1* decided to continue capturing those requirements that were somehow clear at this point and to wait for a new PM appointment to continue with this process.

5) Report on web 2.0 technologies and benchmarking

At the end of this cycle, a second report was delivered. This report was a compilation of the previous report with a benchmark study covering the commercial uses of web 2.0 technologies, and more importantly, it included a fit of web 2.0 technologies within the Business Model. At this point, a frustration could be perceived in The owner's attitude. *He* was looking to include a widely recognised expert in the area if web 2.0, some sort of a "guru". Consequently, this report was to some extent overlooked by the SME-MX team. *The owner,* however, soon realised that to have an

expert in the area, the SME-MX team will need to invest a considerable amount of money in salaries for this person. Thus the search for this guru was abandoned.

   6) Other activities

The term Business case appears during this phase for the first time. *The owner* wanted to look for investors and possible partners, in order to share the risk. Thus *The owner* needed a document containing important facts of the project. *The owner* made clear that he does not wanted a Business Model for this purpose, he mentioned that the information of the BM was not enough and at the same time too much to convince people to participate in the project. What *The owner* needed was a kind of summary of the main attributes of the project, which later on, it was found in the literature to be described as a Business Case. This particular deliverable was an unfinished milestone for this cycle, however, a research in this area was planned in order to understand better its fit in the project.

4.4.5. Learning and reflection for practice 2

Level of IT literacy of the entrepreneur

SME entrepreneurs that seek to invest on *dot-com* companies need to have a broad understanding of how technology operates to communicate with the project stakeholders (e.g. analyst and solution architects). SME limitations emerged here such as lack of knowledge as to where and how to look for information. Lack of knowledge on technology, but particularly to the IS field. It seems to be very difficult for them (SME-MX) to understand the role that technology plays on organisations, and specifically for this case, the role of technology on e-Business/*dot-com*. Technology is perceived as a tool rather than a business enabler. This is linked to the communication process. The lack of knowledge particularly in the IS field from most of the entrepreneurs cause more conflict as they do not know what IS is, and how IS works and help organisations to integrate business and IT.

The lack of expertise in IS/IT found in SME has been constantly reported in the literature and the e-trade project was not the exception. One way to alleviate this problem is to seek collaboration with Higher Education (HE) bodies as it was the case for SME-MX. Collaboration between SME and HE bodies benefit both and needs to be exploited in more depth by all stakeholders. Although in the e-trade project this collaboration alleviated some of the problems of the expertise required in the IS field, the lack of knowledge in IS/IT from the project's owner still presented some barriers to enable proper communication.

Communication

Communication is one of the most reported issues in any IS/IT project and in the e-trade project has been a main issue of concern. Communication between the IS team (*Academic1* and The Researcher) and the SME-MX team (*The owner* and *PM1*) has been a problem. In addition to this challenge, simple terminology (e.g. Business Model vs. Business Plan or business case) created confusion that had significant impact on the project progression and timescales. During this project it was found that at the time a project manager was appointed for the project, most of the communication issues were resolved. Thus, to avoid communication problems we also advocate the appointment of a PM as early as possible. Communication with the entrepreneur (*The owner*) was difficult as they work in different levels of abstraction. *The owner* works in a very high level and was not interested on the detail whereas *Academic1* and the researcher work in a structured way. This created many problems at the time of communication. Also the relationship between *Academic1* and *The owner* (long friendship) was affecting the communication process. Hence the researcher suggested to have an intermediary (e.g. the Project coordinator or PM) to help on the communication and control aspects of the project.

Communication is recurrent problem in the project and it was presented again during this intervention. It was found that a considerable amount of time was spent on understanding the most efficient way to communicate the ideas in both directions. To alleviate this problem is recommended the use of several techniques for communication, for example Use Case diagrams to help with the conception of the web development. Also it was necessary to expend some time explaining the concepts and elements of the BM until they were fully understood. Whereas in this project, the lack of IT/IS knowledge was a huge barrier affecting this process.

The owner looked for other actors to develop what he calls "Business Plan". This comes from *The owner*'s frustration that the BM proposed by Brunel was not delivering what he wanted (apparently). This is also linked to the communication problems as *The owner* involves people without communicating to the rest of the team. *The owner* sees himself as the "director" of the company and as such, *he* did not have the need to communicate strategic decisions to the rest of the team. All new players were consulted only by *The owner* but not with the rest of the team.

Project Management/Management Style

SME are used to work in an ad-hoc basis and thus project management skills are basically not present. The e-trade project identified that one of the positions that need to be defined from the conception of the project is the project manager or coordinator. Hence the lack of a formal PM in

this project has been the reason of many of the problems of communication described in other sections. Thus, it is strongly advised that for these types of projects, the project manager needs to be appointed from the conception of the project and if possible, s/he should be IT/IS literate.

Lack of Human Resources

Another limitation of SMEs reported in the literature and repeated in this project is lack of resources. Thinking of Human resources at this stage of the project is not a major concern among entrepreneurs. Despite of the urge for a PM in the project, it was difficult for the owner to hire and retain human capital. As a consequence the PM withdraws due to lack or unclear rewarding mechanism as he was not hired but invited to participate as "partner". *The owner* has to look for a PM but cannot afford it or wants to save money as well as sharing risk. At this point, it can be deduced that *The owner* was not prepared to spend money, unless necessary. Entrepreneurs tend to spend only in the basic organisational functions such as finance: hiring an accountant, marketing; advertising and, operations; buying equipment necessary for the running of the business. Thus, for an entrepreneur the value of hiring a PM was not seen as a necessary expenditure. Furthermore, *The owner*'s rewards mechanisms were not clearly defined and the idea was still not developed in full to attract partners that work for shares rather than for a salary.

Strategy Definition, Business Models and Business Plans

The new person appointed for the PM Job was told to develop a Plan instead of a Business Model. Hence, *PM1* did not see value in the previous work about the BM that the researcher and *Academic1* had been working on. At the end of the cycle it was evident that this action was a step backwards in the development of this *dot-com* initiative.

Populating the BM with e-trade business data was a process that needed several iterations between both teams, however at the end of this cycle the BM was populated only at 45%, and the main reason for not progressing as desired in this activity, is due to Strategy decisions that were not taken yet. Thus it was impossible for the researcher to advance in this activity until the direction of the project was clear. The BM have some advances in the areas of Value Proposition and Value Added e-Commerce, however still Value Creation and Revenue Model were areas with little or no progress at all.

Web 2.0 Technologies

Research in web 2.0 technologies: web 2.0 has been in the glimpse of many researchers in recent years with studies in social media, Customer relationship management (CRM), and learning

environments among few others. However, the researcher believes that this type of technologies can be use on benefit for organisations in many ways and not only monetary benefits, such as market research, testing models and promotion among others. In this case, the entrepreneur has made poor use of these tools and do not fully understand how companies can benefit from web 2.0, moreover, the owner was not aware of the advantage and scope of these technologies, consequently, more actions were needed in this area in order to awake the owner's interest in this area.

4.4.6. Learning and reflection to theory 2

In terms of reflexions about theory, the first implications that can add value to the IS literature was the identification and classification of the different Business Models according to the e-trade project characteristics. To this end, the researcher have made a classification of the BM based on the following aspects; e-Commerce e-Business Models, Business Models for small and medium enterprises and Business Models for start-ups, furthermore a review in the literature was performed to find and compare existing frameworks (see chapter 2).

Additionally, the identification of the main challenges appearing during the implementation of the Business Model is further discussed in this section, but first a revision of the actions performed during this cycle is presented.

Role of IT in dot-com initiatives

The relationship between technology and e-Business plays a central role at the moment of developing a business initiative. However this relationship is even more significant when creating a *dot-com* company. Having a *dot-com* company is very different to create a normal company in the fact that, the technology is the business itself. In the case of *dot-com* company, IS does not work separately providing technology to the business, instead, it is the essential part of the business for the reason of the technology delivers the business itself, and it is not a separate part of it. For example *dot-com*panies such as Facebook, Google or Yahoo (just to name some); use the technology in form of website or portal (Facebook.com, google.com) as the business itself and the main source of income comes from the technology (website).

As previously mentioned, there is plenty of information in the literature related to the BM, however the information available normally targets brick-and-mortar businesses, just a limited amount of information is related to e-Business and more specifically to *dot-com* companies. Therefore the main challenges in the e-trade project so far are two; first the selection of the BM by itself is a complex task and thus the use of a BM is complicated, especially for a SME with limited knowledge and

resources. Furthermore the Strategy, the BM development and technology in *dot-com* companies are much more interlinked than in traditional brick-and-mortal businesses, consequently it is more difficult to organise.

Strategy Definition, Business Models and Business Plans

After a careful analysis of the Business Model, it was evident that some decisions needed to be made at the strategic level to give direction to the project. Although this is a point evident in the literature; see (Osterwalder et al. 2002), a clearer understanding of the relationship between Strategy and Business Model was needed.

During the elaboration of the BM the researcher pays particular attention to identify the changes in the structure of the Business Model and the content for additional analysis. The changes on the BM observed were further analysed at the end of the project in order to develop a comprehensive framework describing the start-up process. The first changes on the BM were made by the researcher. First the researcher improved some components of the BM by incorporating, the supplier processes in value-added e-Commerce offerings and web 2.0 in the supporting resources. Furthermore, concepts like Vision and Mission were closely analysed for a possible incorporation into the BM.

There is a considerable amount of research in the Business Model domain. However there is still confusion in the use of this term. Moreover the massive variety of BM existing in the literature complicates the selection of a BM according to the characteristics of the project under study. Although there are still opportunities to contribute in the BM domain, it is difficult to contribute in this area due to the limitations of this research.

Identify actions performed during this cycle

Research in start-up process: As previously mentioned in chapter 2 and this chapter, the start-up process presented in the literature seems to follow a linear process thorough various stages until the first operation or sale is done. The start-up process coincide in certain aspects or steps used in this process. However, the information available in the field is mainly referring to brick-and-mortar business types, which in theory developing a *dot-com* initiative must follow a similar process, although in practice developing a *dot-com* initiative differs in many aspects from a traditional brick-and-mortar business, for instance the technology plays a crucial and essential role in this types of initiatives and needs to be treated separately.

Capturing Requirements

The Communication problem is recurrent along many areas of the e-trade project, and to communicate the requirements of the project was challenging. Particularly the action of gather requirements (software and Business requirements) has been difficult to achieve with non- IT literate persons such as *The owner*. Use cases were not effective so other mechanisms needed to be derived, or other structures needed to be on place. A solution of this problem could be leaving aside *The owner* and trust the development to others; e.g. *IT Consultant.*

Revision of the conceptual framework

The initial framework proposed depicts a linear process for start-up a firm, and the focus of the framework was towards the main stages that a SME need to accomplish to initiate a business initiative, however at the end of this cycle, the focus of the framework has change, paying particular attention to the planning stage and the importance of the BM, thus the researcher propose a revision of the BM and the relationship with the conceptual framework.

At the end of this cycle, the researcher has compared the start-up process from the literature with the e-trade process, and the results points to changes in the conceptual framework. However still a profound analysis is needed and it is further discussed in the third cycle of the e-trade project in chapter 5.

Chapter 5:
The empirical context - Action Research (cycles 3 & 4)

Azael Serrano
Brunel University

Contents

Chapter 5: The empirical context - Action Research (cycles 3 & 4)

5.1. Introduction

This chapter describes the final two cycles in the organisation under study and is structured in two sections: section 5.2 describes the third cycle of AR within the e-trade project detailing each of the phases and section 5.3 outlines the fourth and final cycle corresponding phases. This chapter ends describing the main outcomes of the project.

5.2. Cycle 3 – Business Model development and "the PM parade"

Dates:	1st December 2009 to 10th August 2010 (8 months)
Participants:	*The owner*, *PM3*, *PM2, Academic1*, Researcher, *Academic2*, *Academic3*, Sienna (*PM3* & *Developer1*), PM Consultants (*PMConsultant2* & *PMConsultant1*), Zonnect (*Developer3*), Minimoko (*Branding-leader*)
Data collection:	25 observations, emails and notes; 53 interviews, workshops and meetings (31:02 hrs); 43 documents and archival records

Table 5. 1: Cycle 3 facts

The third cycle lasted a period of 9 months, from 1st December 2009 to 10th August 2010 (see Figure 5.1). The main activities within this cycle concentrated on the selection of the Business Model, and on the clarification of the different business documents used. During this period new participants emerged in the project, not all of them have actively participated in the project, but where mentioned or have, at some extend, contributing during the meetings thus need to be mentioned in this study. Conversely others participants have made high-quality contributions to the project; as the case of *Academic2* adding knowledge into the BM domain, and *PM2* bringing to the project; knowledge, control, coherence and management.
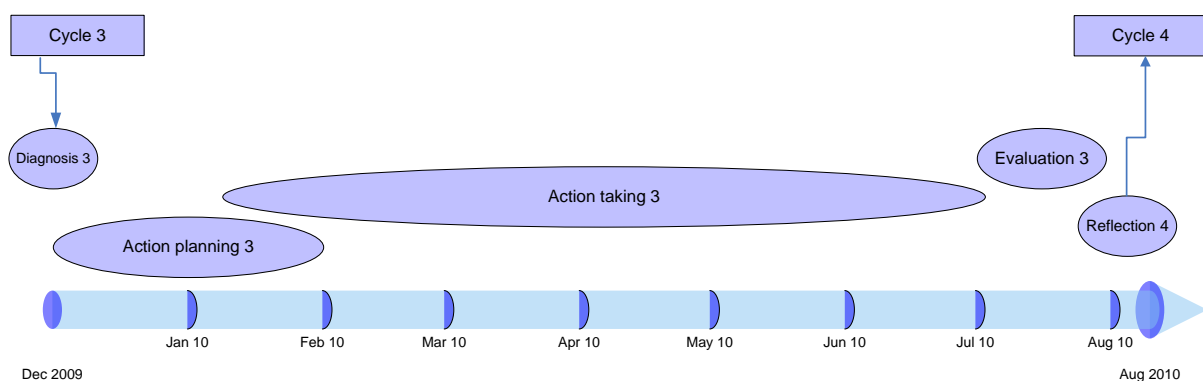
Figure 5. 1: Third Cycle Length

5.2.1. Diagnosis 3

The diagnosis phase overlaps in some parts with the evaluation and reflection phases of previous cycle, for the reason of both phases happened at the same time and also are naturally interconnected. At the end of the second cycle both parties, the researcher and the client were not yet convinced of the outputs of the project, moreover some difficulties and areas for research arisen in previous cycle that need to be studied and clarified. Furthermore, the objective of the project, which is the development of a *dot-com* initiative, has not been accomplished yet. As a consequence the Researcher and *The owner* agreed to continue with other cycle in order to overcome the challenges found and to create a framework for the start-up process. With this intention, the researcher and SME-MX carefully studied the project situation and identified a series of problem areas to be further analysed. The problem areas identified during this phase are described next.

The identification of a problem area

The diagnosis phase started in early December 2009. The phase formally started with a teleconference meeting between the Researcher, *Academic1* and *The owner*. After this meeting the team maintain close communication, at least once a day to discuss the problem areas that are still remaining in the project and to find courses of action. During these meetings the researcher made notes of the conversations and endeavours to analyse the sources of those problems. The outcomes of this analysis detected four broad problem areas to be investigated, and the rationale of these problems is presented as follows.

Problem 1: The selection of a robust Business Model was necessary

With the withdrawal of *PM1* as a PM of the project at the end of the second cycle, the Business Model gained stronger relevance again. Consequently, initial research presented a vast amount of information in the area and made clear the need to still investigates in detail the BM, Moreover, still the BM selected was not containing the elements needed for a *dot-com* initiative, such as the e-trade project, thus the selection of a robust BM according to the characteristics of the project was proposed.

Academic1 and the researcher had a discussion regarding the BM, to soon realise that the first Business Model proposed had some gaps that needed to be addressed. There were many models declared to be oriented for e-Business, almost all of them have some similarities in their components. However, different authors are still naming the components with different names or adding and deleting some elements. Although the first e-BM proposed by the researcher and the Brunel team comply with the characteristics of e-Business, still the BM proposed in previous cycle was developed for companies already established, and still this model is considering only brick-and-mortar companies

who want to enter into the e-Commerce domain. Therefore the need to choose a comprehensive BM according not only to the SME-MX needs but a model that can be used for any organisation disregarding the size, sector or nature of the business was exposed.

The attempts to populate the BM with business data have aided the researcher to identify the need to move from a generic BM to an e-Business Model which will be oriented to the *dot-com* characteristics. However, this research area is relatively unexplored in the literature particularly in the IS domain, and it seems to be a gap in the literature in this specific area (*dot-com* and start-up BM). For that reason it was decided to try to find a compressive BM which can be used regardless of the size or sector of the business. Also *The owner* made evident the need for a detailed explanation of all the elements of the BM as it seems to have some "complex" terminology.

Also, the need to analyse the web 2.0 technologies was still present. Despite previous efforts clarifying this technologies, apparently still was confusion on how this technologies will be used and how they will fit into the BM and BP.

Problem 2: The project moves from only SW development to BM-SW (The relationship of Software development with the BM)

Whilst the project was still in the diagnosis phase, another PM was appointment to the project. "*PM2*" enters the project at the end of November 2009 and still manage to participate in the diagnosis phase of this cycle. Hence the first indications from *PM2* was to continue with the elaboration of the BM but at the same time the software development must continue, hence this relationship need to be studied and was selected for further analysis.

After several meetings held with *The owner* and the new PM (*PM2*), it become evident that the project has changed and it was not any longer a software development project (as *The owner* and *Academic1* believed initially was, see cycle 1).

Therefore the main challenge at this stage was to explain to *The owner* that the software development need to be hand in hand with the development of the BM and further Strategy, especially when it comes to *dot-com* initiatives.

Problem area 3: Confusion in the documents used in the project to document the business data

During the meeting held between the SME-MX team and the Brunel team, the researcher realised that has been some confusion on "the names" of different terms and business documents that both, SME-MX and Brunel have been used during the workshops and meetings. For example some

conversations about the same document such as the Business Plan, sometimes was confused with the Business Model or even with the Strategy; therefore this confusion needed to be clarified.

During previous cycles the Brunel team and *The owner* have been producing many documents with the aim to have the project written down in a structured way, however it was noticeable that sometimes *The owner* was confused with the terms of such documents. At this stage the project was disseminated into a BP from *The Owner*'s point of view and a BM from the researcher's point of view. This lead to the identification of the documents used by *The owner* in his previous business initiatives and the documents used within the e-trade project, as a conclusion of this, a thorough analysis need to be done related to the business documents used, and to clarify which documents will remain in use during the development of the project.

Problem 4: Software design: The capture of software requirements through Use Case diagrams

At this stage *The owner* was still trying to see some tangible outputs related to the software development, therefore the software development continued during this stage and was included into the diagnosis phase as *The owner* requested.

Despite the impetus and anxiety of the owner to develop the software and start operations as soon as possible, the incorporation of *PM2* as PM of the project has helped the researcher to make *The owner* aware of the importance of the BM as the right choice to start the project. The BM took high importance in this cycle, mainly because *PM2* was convinced that the BM concept was the right choice to start-up the project, consequently this action alleviated the anxiety of *The owner* for some time, however the capture of system requirements continued during this cycle.

The broad problem areas detected in this phase were summarised into three main objectives to facilitate the planning of actions:

- o The selection of a robust Business Model tailored to the need of the e-trade project
- o Review of the current business documents used in SME-MX and their practical use for the e-trade project as well as the relation with the BM
- o Gather requirements for software development and the fit within the BM framework.

5.2.2. Planning 3

The planning phase of the third cycle involves a set of planned actions for each objective stated in previous phase. Each of the objectives settled were reviewed by the team and during this revision a set of actions was planned for each objective which results in the following activities:

a) *The selection of a robust Business Model.*

Previous meetings and discussions between both teams (Brunel and SME-MX) had made clear, some gaps and misunderstanding with some elements of the previous BM used at the early stage of the project. Also during this period it becomes evident that the project needs a BM tailored to the needs of the business. Thus the researcher highlighted the need for a BM that has to be now for a *dot-com* company, and needed to be more oriented towards e-Business (*dot-com*).

As part of the intervention phase a comprehensive Business Model was chosen for the e-trade project and is further discussed in a series of workshops held in the UK, prepared only for this purpose. These workshops are further described in the intervention phase of this cycle. However an agenda has been previously made to be achieved during the workshops.

b) *Workshops in England to meet the whole team and define the BM:*

At the end of the diagnosis phase (November 2009) the researcher informed to SME-MX about the temporary incorporation of *Academic2* to the project. *Academic2* had the specific task to explain and clarify the BM and its components. The researcher considered that the best approach to clarify the confusion presented at the end of the second cycle was to set-up a series of workshops especially for this purpose. For that reason a series of 5-day workshops were programmed, commencing on the 1st December 2009. During the workshops the themes to be touched were settled as follows;

- o W1: "the Business Logic System (BLS) brief" an explanation of the 3 tiers of the BLS was programmed with the aim to understand the link with the three phases of the start-up process; Conception, planning and implementation. *Academic2* was called to present the BM "V$^{4"}$ together with the components and subcomponents.
- o W2: Clarification of documents; Review of the definitions of the Business Model (BM), Business Plan (BP) and Business Case (BC) in order to agreed a mutual definition.
- o W3: Analysis of the data necessary for the BM development and the relation of the BM with software development.
- o W4: Populating the BM with e-trade business data.
- o W5: Review the advances on Use Case created.

c) *Review of the current business documents used in the industry and their practical use for the e-trade project*

The incorporation of *PM2* as PM of the e-trade project was beneficial in many aspects for the project and the visit to London was a good opportunity to know *PM2*'s thoughts about the confusion of this documents. Therefore the researcher considered a good opportunity to use part of the time during the visit of the SME-MX team to Brunel to make clear these terms during the workshop. Therefore the researcher assigned this topic in the agenda for the 3rd workshop as follows: *A thorough analysis needs to be done, reviewing the existing business documents used by SME-MX and the relation with*

the start-up framework and the business logic triangle proposed in the meeting. Also a definition of the Business Model and the difference with the Business Plan is required.

The researcher knew that after change to a robust BM the understanding of the elements of the BM and the capture business data will need to be explained in detail to SME-MX team, hence other activity was recorded in the agenda as follows; *fill the V^4 Business Model for the project including web 2.0 technologies,* this action was programmed to start in the 4th day of workshops*.*

d) *Capturing system requirements in the form of use cases (Brunel – Academic3)*

The activity of gathering the system requirements and adapting into use cases diagrams was an unfinished action from previous cycles. The systems requirements have been changing as the project is moving forward and towards the definition of the BM, therefore some of the use cases needed to be changed and some functionalities were still to be clarified in order to continue with this task. Hence a revision of the use cases was programmed for the last workshop in England. Consequently the employment of use cases as the technique used to explain the functionality of the e-trade project prevailed as the main source to pass system requirements to software developers.

At the end of the diagnosis phase, just before the workshops, the researcher, *Academic1*, *The owner* and *PM2* agreed the following activity plan to be executed from December 2009, each activity correspond to a deliverable/report.

No. Activity	Description	Participant(s)	Deliverable	Date: Prog/exec
1	The selection of a robust Business Model ad hoc to the e-trade project	Researcher, *Academic1, Academic2*	BM	Nov-Dec 2009
2	5 workshops in England to define understand and adapt the BM to the e-trade characteristics. Also, definition of the roles.	Brunel Team and SME-MX team	Agenda & Meeting minutes	Dec 1st to 5th 2009
3	A review of the exciting documents used by SME-MX was necessary to understand *The owner*'s needs.	Researcher	Report	Dec 2009
4	Populating the BM with data, including web 2.0	Researcher, *Academic2*	Report	Jan 2010
5	Capturing business requirements in form of Use cases	*Academic1, Academic3, PM2*	3rd deliverable of use cases	Dec 2009 – Aug 2010

Table 5. 2: Team activity plan (cycle 3)

Similarly to previous cycles, theoretical objectives were planned at this stage with the aim of analyse the main challenges during this cycle and gather practical information during the process. The research objectives for this cycle are.

- o Investigate how web 2.0 technologies fit within the BM.
- o Identification of the challenges of the actions performed during the cycle.
- o Academic Review of current business documents used in the industry and scholars
- o Revision of the framework (changes in the framework)

5.2.3. Intervention 3

Although the team's activity plan was set-up in previous phase and it was rather simple, the implementation of the action plans was a bit messy, mainly attributable to the incremental size of the project, the incorporation of new players, the limitations of IT knowledge from SME-MX participants, and the unexpected walking out of two PMs (*PM2* at the early stages of this cycle and *PM3* at the end of the cycle). Therefore the researcher attempts to describe, as much as possible, the intervention phase and the actions performed during this cycle in chronological order (as it happens), although following the actions planned, as scheduled. Hence this section is structured as follows: **The first part of this sections covers the activities performed accordingly to the actions planned, followed by a chronological narrative of the events occurred as part of the intervention phase of this cycle.** The chronological narration of events is also included in the Appendix E.

Consequently next section aims to describe the following activities performed during this phase, which were summarised into five separate specific actions and the corresponding deliverables (see table 5.2).

Intervention of the actions planned:

The third cycle begins with the appointment of "*PM2*" as a PM of the project in late November 2009. *PM2* has previously worked with *The owner* in some small projects, and his business background facilitated his rapid understanding of the project, moreover *PM2*'s experience managing big projects in companies like 3M Corporation, have brought plenty of control, order and command to the project which in the judgment of the researcher, *PM2* alleviates the communication problem that the project was facing during the previous cycles.

Also at the end of second cycle (November 2009) the Brunel team incremented the number of participants in the project welcoming *Academic2*, who temporally joined the team and share his knowledge in the BM area. *Academic2* was helpful clarifying the elements of the BM and explaining the perspective of the BM to the members of the team, also *Academic2* contributed to lighten communications problems while explaining important aspects of the BM.

Once the problem of communication and the appointment of the PM ended, the next step in the cycle was the selection of a BM according to the characteristics of the e-trade project, this intervention is explained below.

1. *The selection of a robust Business Model ad hoc to the e-trade project.*

This particular activity has been performed during the end of the second cycle, thus by the time of the diagnosis phase (November 2009), the Brunel team was already aware of the challenges surrounding the selection of a BM suitable for the e-trade needs. A primary analysis of the BM have found no BM made particularly for *dot-com* firms, neither delineates the start-up process, also the variety of the Business Models existing in the literature and the indiscriminate use of such models, made this task more difficult, hence the Brunel Team decided to search for assistance with a specialist in the area.

In early November 2009, the team contacted *Academic2* to participate in the project, *Academic2* is a fellow researcher with specialisation in Business Models, he has been working in this area for the last three years specialising in classifications and taxonomies among other studies within the BM domain. *Academic2* was called to complement the project findings, by doing so, Academic2 proposed the use of the "V^4 Digital Business Model" (see Al-Debei et al. 2008, Al-Debei et al, 2010) as a second version of the Business Model, which is also the version used as for today with small modifications; such as adding the web 2.0 technologies and the adaptation ad hoc to the e-trade project.

Academic2 presented his latest findings in the Business Model area to the Brunel team (*Academic1* and the researcher) in a meeting at the end of November 2009. During this meeting, *Academic2* presents a BM called "V^4 Business Model" which in *Academic2*'s words is a BM specifically made for the "digital world" and it comprises all the elements and relationships needed to develop a strong BM for any kind of initiative.

After careful analysis performed by the Brunel team the "V^4 Digital Business Model" was chosen for two main reasons: first; the "V^4 Digital Business Model" is a summary of current Business Models for e-Business, and encompasses roughly all variables used to develop an e-Business Model, and second; *Academic2* has helped on the development of this model and thus his expertise can assist the project leading the development of this model. The Business Model that *Academic2* presented was called "V^4" in reference to the four values or 'dimensions' that constitute the BM: Value Network, Value Architecture, Value Proposition and Value Finance. The dimensions and elements of the V^4 Business Model have been explained in chapter two of this thesis and also are illustrate in figure 5.2. However the researcher expected to make modifications to the V^4 BM development by customising and changing the BM according to the e-trade project context.
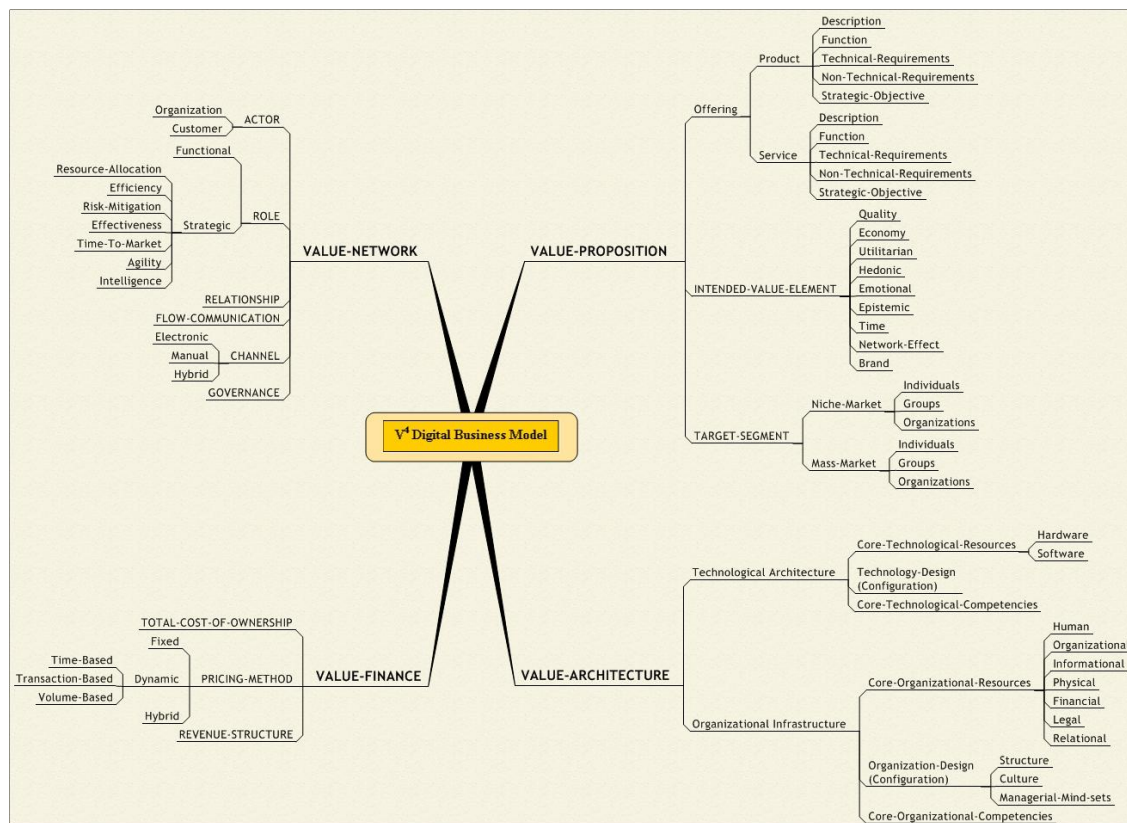
Figure 5. 2: The V⁴ Digital Business Model (source: (Al-Debei et al. 2008) **and** (Al-Debei et al. 2010)

The V⁴ Business Model was accepted by the SME-MX team; *PM2* expressed massive interest in the creation of the Business Model and according to him, "*this should be the starting point*", hence, both teams agreed to be one of the main topics to be touch upon the visit of *The owner* and *PM2* to Brunel University.

The V⁴ Business Model was presented and explained to the SME-MX team (*The owner* and *PM2*) during the workshops conducted in the United Kingdom in December 2009.

2. *Workshops in England with the intention of understand and adapt the BM to the e-trade characteristics*

From 1ˢᵗ December to 5ᵗʰ December 2009, *The owner* and *PM2* visited Brunel University with the first objective to meet the rest of the Brunel team but mainly to review the BM and plan further actions in order to move forward towards the aim of the project. This particular activity (the workshops) overlaps two phases of the CAR process; the planning and the intervention phases, for two reasons, first the SME-MX team wanted to use these workshops to still plan subsequent activities related to development of the e-trade initiative, and secondly the workshops were programmed also to progress in the activities already planned such as the population of the BM and the revision and approval of use cases developed in previous cycles.

The participants of the initial workshop were *PM2* and *The owner* from the SME-MX team; and the researcher and *Academic2* representing the Brunel team. Also "*PMConsultant1*", a former PhD with extensive experience managing Projects and currently working as PM in one of the leading consultancy companies in the field, was invited to participate in the last two workshops in order to contribute to the project, by assessing the initiative and share his knowledge in the area through recommendations and advices related to the e-trade project.

Although the researcher had created an agenda for the workshops, was difficult to stick to the program planned, however some valuable information (not planned) emerged from this activity, thus the activities performed in each of the workshops is presented below.

1st workshop

During the first workshop which lasted 3 hours, *Academic2* was invited to present and explain the V^4 Business Model, however first, the researcher presented the logic behind the BM; The researcher has explained the basic steps needed for the development of a firm, from the Strategy to the implementation, akin to the Business Logic described in Osterwalder (2002). In this explanation the BM was highlighted and the importance of it remarked. Subsequently *Academic2* presented and explained the V^4 BM and a brief on how to connect the Strategy with the BM, as an important aspect of the start-up process. Finally, before the discussion started, *PM2* describes the idea and the business objectives of the e-trade project.

After the presentation of the BM*, PM2* seems to have understood clearly how the BM can help and be use in the e-trade project. *PM2*, after reflecting on the BM and the e-trade project, makes and analogy of the project comparing the development of the project with manufacturing a vehicle, this analogy made evident the gaps in the project, and highlights the strategic decisions that need to be made. *PM2* comments *"the e-Trade project has started building the engine without knowing which kind of vehicle is... and is very difficult to build the engine and some parts of the vehicle, if you do not know which kind of vehicle you want to build, because is very different to manufacture an engine for a 'VW Beatle' than a 'Range Rover'".* The kind of comments and analogies that *PM2* have made, is evidence of his well understanding of the BM and the relationship with the e-trade project.

During the discussion part of the workshops related to the BM many questions started to emerge, one of the main questions that the team was frequently asking, since the beginning of this workshop, was the definition of the sources of income. *Academic2* has questioned SME-MX team several times during the workshop about where the money will be coming from? He (*Academic2*) bring up this questions many times, trying to understand better the project and the fit of it within the V^4 BM. *The owner* continue answering that this particular Strategy decision was not made yet, however *The owner* let us

be aware of his initial targets for the e-trade project, basically *The owner* was interested in a big number of transactions and big number of users registered.

2nd workshop

During the second workshop *Academic2* continued presenting the V^4 Business Model, explaining the dimensions and values and the utility of the model, if used in the project. The presentation was useful for the understanding of the project and to expose the basic business data needed to populate the BM. Additionally, the explanation of the e-trade 'idea' given by *PM2* during this workshop was useful to position the project in the BM. After these briefs (the V^4 BM and the project), the Brunel team reflect on the inconsistencies found on the project against the Business Model; for instance, one of the first inconsistency found was the incongruity between the target market chosen with the Regions and segments in which SME-MX wanted to operate; besides other inconsistencies that were found while reviewing the e-trade project and explored during the workshop. The researcher was trying to raise these issues in the workshop, although aware that will be some questions unanswered at this point.

In the second part of the workshop (afternoon) the need for certain business documents appeared, *PM2* mentioned about the need of a Business Case as part of *The owner*'s requirements. The addition to the BC to the still confuse terms of BP and BM generates more confusion, therefore the differences between them need to be clarified and a common agreement of the definition was needed in order to unify criteria among all the team members involved in the e-trade project. Hence, the last part of the workshop was used to discuss and make clear the differentiation between the most important Business Documents used by practitioners in the planning phase of the start-up framework: Business Model, Business Case and Business Plan.

3rd Workshop

In the third workshop 'PMConsultant1' was invited to participate, *PMConsultant1* has the task to review the generals of the project and to give recommendations on the e-trade project development. However, the main aim established for this workshop was to start filling business data into the BM and explain the relationship of the BM and the software development was relegated at this moment.

The intervention of *PMConsultant1* in the project delay some of the activities programmed for the day. The aim of the workshop, which was to start populating the BM and explain the relation of the BM with software development, was not accomplished in full, instead the day was expending talking about the project with the guest (*PMConsultant1*). Although the aim of the workshop was not cover,

still some useful information was recorded and also written in the meeting's minutes of the day. Some practical fragments of the researcher's notes are presented below and further analysed in the evaluation phase.

Notes of the day (3rd December 2009):

- o We analyse that previous day we were talking about everything but nothing in concrete, we all agree we need to work in a structured way in order to progress in the development of the BM, also *PM2* pointed out something important. *PM2* mention, "*the development of the BM will help us to detect the incongruence that we still have in the project, as happened with the market segment example…*"

- o Additionally *The owner* was talking about the possible competitors for the e-trade initiative, according to him almost all the competitors charge a commission for the services provided, both trading and bartering. This still unfounded asseveration, need to be better investigated, and could lead to a market advantage, and will affect the value proposition dimension of the V^4 BM, as *Academic2* has highlighted. Doing this type of exercises was very useful to start to understand the dimensions and elements of the V^4 BM and the importance of strategic decisions in terms of developing the BM for e-trade

- o The team agreed again that the business has to be created from top to bottom (Strategy to process) although we barely talk about the data needed to fill the BM, however we make clear that this data has to be coherent and well defined… *PM2* describes the project as today with another analogy, using the transportation example, he mention *"at the moment the project looks like we have the tyres but we don't know what we are manufacturing, it is a car?, a boat?, an airplane?, or even could be a horse!… at the moment we have the tyres of a car, the head of a horse and dog's tail"*.

- o The researcher believes that the information acquired from these workshops was rich in data to be use for improve the start-up framework. This particular workshop was useful in terms of gathering data, the day was full of information related to the BM and the development of e-trade. Apart of working in the BM and finding the gaps on the project, *The owner* also talked about an e-Business initiative that he (*The owner*) have developed in the past and also previously commented to the researcher. *The owner* shares with the group; *"…the company took around 1 year to have ready the application (website), but this company fail not for technological reasons (the system was working satisfactory) and it wasn't a matter of money also".* According to *The owner* the main problem or factor for the failure was a matter of management which apparently is one of the main challenges to overcome for many SMEs and specially this project.

Subsequently, the team analysed the e-trade idea from different perspectives, suggesting different alternatives for sources of income together with some examples of successfully established companies, nevertheless at the end of the day, the meeting have converted into a brain storming session leading nowhere. Therefore at this moment *PMConsultant1* suggest making a workshop specifically intended to raise the main issues and gaps in the model in order to build the Strategy and subsequent BM. At the end of the workshop, *The owner* and *PM2* recognise that there are many parts of the BM still missing and needed a deeper analysis, conversely they (SME-MX) insist in the creation of the Business Case as previously requested, however also agreed to continue working with the BM as a starting point.

Workshop 4

The workshop in the forth day was intended to dissipate the doubts of the BM from previous days and also has the intention of starting with populating the BM with e-trade information. Thus the first part of the workshop was used to reflect in the work done in previous days, and how the BM is linked with the Strategy.

The SME-MX team become aware of the importance to finish the Business Model to find out what are all the problems (gaps) with the e-trade project. *PM2* mention during the workshop "*I understand that we cannot build a BM without strong and sufficient information to back it up*". It was noticeable at this stage that the project was still inconsistent, and several doubts have emerged at the moment of populate the BM with the project data.

Additionally at the end of this workshop, the researcher presented a condense report on web 2.0 and explain how this type of technology can aid e-trade to achieve the project objectives. Basically this report contain the uses of social networking sites, blogs, wikis, video sharing sites, hosted services, web applications, mashups and folksonomies, also provides information on how these technologies can be applied in the 'portal'.

Workshop 5

The last workshop in England was intended to review the Use Case diagrams that *Academic1* had created, and to validate the use cases with *The owner* and *PM2* in order to proceed with the capture of the remaining requirements. However *Academic1* have been entrusted with another task and was busy making a proposal for the European Community (EU) to obtain funding for the project, consequently the revision of the Use cases were postponed. As an alternative, the researcher, *The owner* and *PM2* spend the day discussing what is needed for the BM, the discrepancy the project has, and the requirements we have and what is still missing for the elaboration of the BM.

PMConsultant1 and *Academic2* joined the meeting at the second part of this workshop, at this point *PMConsultant1* was asked to help with the elaboration of a Business Case, a document needed for searching possible investors and funding the project. The experience managing projects and creating business cases of *PMConsultant1,* was essential for assigning this task to him. *PMConsultant1* give details of what are the main elements he needs for development a BC, he also highlight what the requirements are needed and what kind of information he needs from *The owner* and *PM2,* which basically were related with the sources of income and financial issues. However *PM2* confirm once again that there is still information not defined yet.

In the last meeting in UK, both teams reflect about the intensive five days of workshops; the conclusion out of this reflection were recorded together with the corresponding notes and the main outcomes are presented as follows.

- o The workshops were very productive in terms of understanding the main steps that the project needs to follow in order to succeed and also the workshops help the teams to make the necessary planning of the activities needed to filling the Business Model with business data.
- o The discussions in the BM area were an "eye-opening" for the SME-MX team in terms of the incongruity found between some aspects of the e-trade project and the BM components, also the need for alignment of the different aspects of the BM with the e-trade proposal.
- o *PM2* positively understood the importance of having a BM and let *The owner* know about his feeling, furthermore PM2 seems well aware about the information that was still missing or was still blurring for the development of the Business Model. Thus they (SME-MX) committed themselves to make a thorough analysis of the project and answer all those 'unanswered questions'; a meeting was schedule especially for this activity.

In addition at the end of the workshop the team agreed to work on the definition of roles of the participants to clarify the contribution of each participant to the project, it become obvious that the roles need to be defined in more detail as many players are emerging and the boundaries between them need to be clarified.

The series of workshops in England were helpful to delimit and define the roles of the players. *PM2* was very helpful at this stage, due to the increment of participants in the project and priory confusion of the roles, it was necessary to delineate roles within the project and determine 'who is doing what' therefore an initial definition of the roles were made as follows.

- o *The owner*: Owner and CEO, however *The owner*'s task were not clear, the team did not know what *The owner* will do, apart of being the only investor in the project, while all the other participants had a very well delineated task.
- o *PM2*: PM and project coordinator of e-trade
- o The researcher and *Academic2* were in charge of defining the BM and populate it according to the e-trade information; also during this task will be a close interaction with *PM2*.
- o *Academic1*, was the IT consultant and was the main contact together with the Researcher in Brunel, also *Academic1* was doing activities related to obtain funding from a European Community project.
- o *PMConsultant1* was asked to help with the elaboration of a Business Case.

After the meeting and with progressing with the project, more participants were included into the list. Those participants were taking part in different stages of the project and are mentioned and further described during their respective time-frame participation. However in order to help the reader to understand the contribution of each participant, a brief description of the new participants is presented below.

- o After the workshops, in mid January 2010 *The owner* was anxious about designing the software, thus some quotations were asked at this point. In April 2010 Zonnect has been identified as a software development alternative and was asked for a quotation, although at the begging was only involved in the development of a Facebook game as part of the project. Also Sienna appears in March 2010 with the same intentions. At this juncture *Developer3* and *Developer1* (*PM4)* were respectively the participants representing these companies.
- o Minimoko enters the scene on April 2010 with the intention to collaborate in the project in the area of branding and image. Branding and image in the development of a *dot-com* initiative seems to be an essential activity needed to be performed together with the project development, and as part of the planning phase of the start-up framework. These concepts were introduced to the project by *Beri* during the first cycle of the e-trade project (See chapter 4, cycle 1).
- o Also *PMConsultant1* came as an emergency player when *PM2* left; *PMConsultant1 took* temporary the PM position at the end of April and until *PM3* takes formally the PM role in July 2010. During and after this period *The owner* seeks advice from a Consultancy company (Consulting-X) and ask for quotation for Project management and develop a BM together with a BP.

3. *Review of the current business documents used by SME-MX and their practical use (part of workshop two)*

The confusion of the business documents used in the e-trade project has been detected since the time when the first BM was proposed, and *The owner* was still calling it Business Plan, this problem was increased when *The owner* requested a Business Case at the end of the second cycle, hence the researcher decided to bring to an end the chaos and misinterpretations on the use and definitions of such documents, hence the workshops in England was a good opportunity to clarify those concepts. The second day (workshop) of the visit of SME-MX to England was partially used to define and clarify these concepts, however still some confusion was presented after the workshops, and the different stakeholders' views as to what are a Business Model, a Business Case (BC) and Business Plan (BP) and their uses continued still after the workshops.

Right before the workshops and before the incorporation of *PM2, The owner* approaches *Consulting X* seeking help in the areas of Project Management and BM development and to help with searching for investors. Consequently *PMConsultant2* request from SME-MX a business case as a requirement for the consultancy services requested. This document (BC) has been requested since the end of the second cycle, however, at the time it was not clear what *The owner* was requesting, until now when the researcher understood that *the owner* was asking for the elaboration of a BC.

The introduction of the business case term brought even more confusion to the project. It created conflict between IS designers (*Academic1*, the researcher and *Academic2*) and the management (*The owner* and *PM2*). *Academic1* comments *"there was a big conflict at the end of this period. I thought The owner has requested me to help on the elaboration of the business case, when what he wanted was the Business Model. I worked two weeks on the development of the Strategy for the business case when this was not what The owner wanted; when we had a meeting to discuss the outcomes, we both were disappointed of the results".* Thus it was essential at this point to make clear differences between Business Case, Business Model and Business Plan, at least for the purposes of communication within the project.

A review of the business documents used in SME-MX was performed at this stage, complemented with the literature available in this area; the researcher presented a report to SME-MX team about the different 'business documents' used for organisations and the similarities/differences between them, more important the researcher presented and gave details to *The owner* and *PM2* about the relationship of those documents with Osterwalder's *(2002)* business logic and the start-up framework proposed, emphasising the BM as a central component of the start-up framework, see figure 5.3.

During the literature revision of the 'business documents', a fourth document emerged from both sides, literature and industry; "Strategy Planning" (SP), this document was not considered at this stage because the understanding of the researcher was that the Strategy was defined, still ill defined but defined, however SP is one of the main component of the start-up framework, as later discussed during the evaluation phase of this cycle.
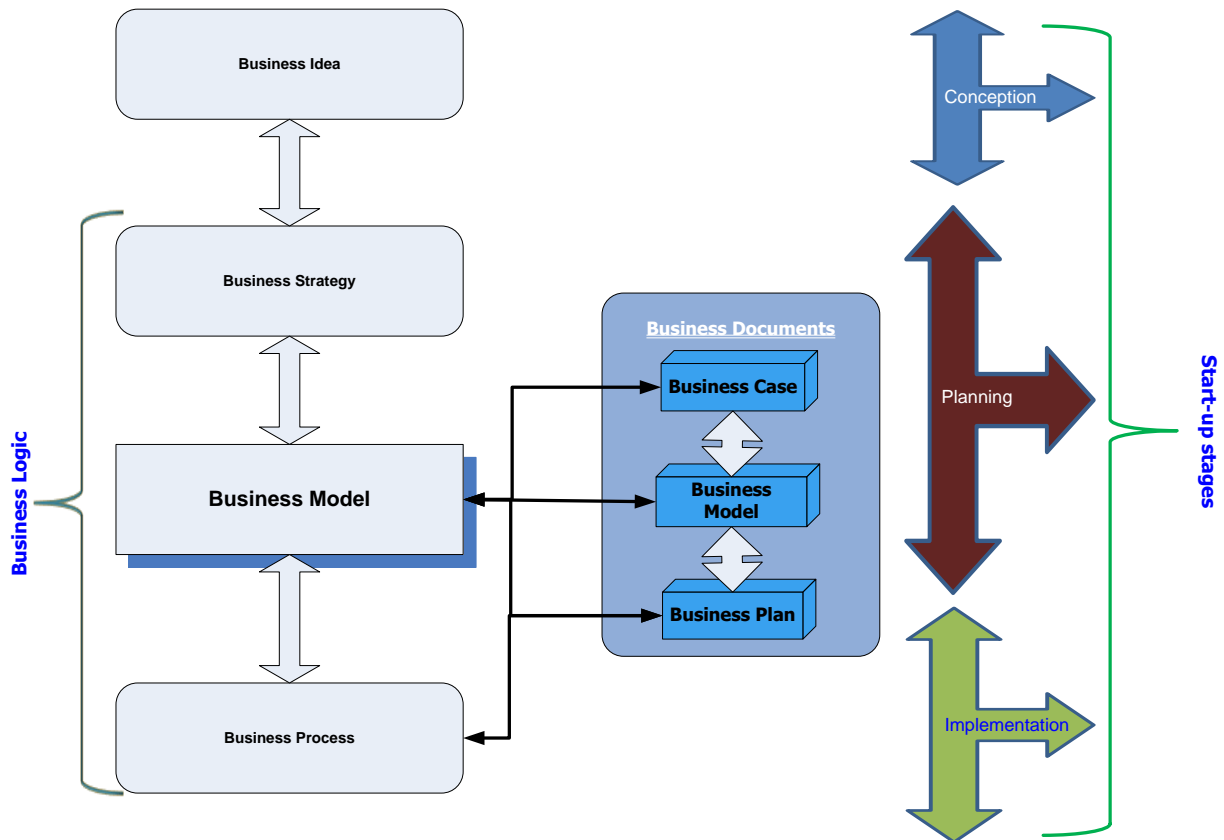
Figure 5. 3: The Business Logic Framework and related documents

The main documents mentioned in both (the literature and the industry), and therefore studied in this phase were: *Strategic Planning*, *Business Plan*, *Business Case and Business Model*. Each document has been presented in the literature review (chapter 2). However, in order to clarify the relationship with Osterwalder's "Business logic", a brief description of the documents is presented at this point, excluding the Strategic Planning document, which is presented in cycle 4. Hence those definitions were used in the project from this moment onwards. Nevertheless, as commented before, this confusion prevails during the entire cycle.

The Business Model have been discussed in previous sections of this chapter and fully explained in chapter two, At this stage is worth to clarify that the Business Model used until the end of the project includes four dimensions (components): Value proposition, Value network, Value architecture and Value finance, together with 14 components and 67 subcomponents. Academic2 argues that the V^4 BM *contains all the elements necessary for the creation of a firm, and therefore* can be seen as the

source to produce the Business Plan and the Business Case documents. The BM is presented in figure 5.2.

The Business Plan consists of a formal statement of a set of business goals, the reasons behind these goals, and the plan to achieve those goals. It may also contain background information about the organisation. The first chapters of a Business Plan include Analysis of the Current Situation and Marketing Plan, Strategy and Objectives (Sharma 2009). Also the Business Plan can be divided into subsections or small Business Plans according with the way an organisation is structured, and how the objectives will be accomplished, the common division of a Business Plan contains at least, and not necessary in this order, the following "plans"; Marketing Plan, Operational Plan, Financial Plan, Management and organisation Plan. A fifth plan can be added in the case of *dot-com* particularly for e-Business initiatives; *'Developers Requirements'* also known as *'Web Plan'*.

A Business Plan contain the action plans that an organisation need to perform in order to pursue their goals and objectives, therefore the Business Plan is a necessary document in an organisation since form the link between the Business Model (the what) and the business processes or action plans (the how).

A Business Case is used to obtain management commitment and approval for investment in business change including projects and programmes, through rationale for the investment, A business case is also used for obtain founds from external organisations such as Banks or to attract business partners (OGC 2010).

The Business Plan and Business Case have a central difference, while the BP is created to explain the action plans to be performed in a project or organisation, the BC is specially created for approval and managing large scale projects or with the objective of seek financial support or new partners. Both documents are created from the conceptualisation of the Business Model, thus the BM provides the necessary information to populate the BP and the BC, however this relationship is not clear, therefore entrepreneurs, such as the case of *the owner*, are likely to be confuse at the moment of define and use those documents.

4. *Populating the BM (adding web 2.0)*

The team start to work in this activity from workshop two on 2nd December 2009 and this activity continued during the entire cycle. During the workshops in England an explanation and revision of the V^4 BM was complete and the team agreed to work on this model, soon after, the first inconsistencies between the BM and the e-trade project started to appeared. Certainly, the revision of the BM during these workshops was a breaking point between the information we believed we had and the

information that we really have. Both teams were now aware of the areas that needed to be improved, and the kind of 'business' data needed to put together in the Business Model.

Also at the end of the workshops, the SME-MX team agreed to use of the V^4 BM as a starting point for the e-trade project and the central 'document' to pull together the e-trade business information. Therefore the team continue working during the rest of December in the development and prototyping of the BM, making good advances in the filling up of data and clarification of concepts in both sides. However, the unexpected departure of *PM2* from the project, affects the development of the BM in terms of pace and progress. Although the development of the BM continues, the progress goes slower and some problems of communication arose again.

Web 2.0 technologies and the relationship with the BM was not referred in the workshops, however the researcher continue with the research in this area and after made evident the relationship of web 2.0 and the BM, in April the researcher propose the creation of a "online game", making use of the web 2.0 technologies in support of the BM and the e-trade project in general. "The Facebook game" is explained in the section 5.2.4.

5. *Capturing business requirements in form of Use cases*

In December just after the workshops, *PM2* and *Academic1* have a session reviewing the use cases completed up to this point, as a result *PM2* was satisfied with the use of Use Case diagrams to capture requirements thus the use of these technique continued, even after *PM2* leaves the project. However, during the short participation of *PM2* in the third cycle, *Academic1* let him aware of the data that was still missing and he (*Academic1*) explained that this is a reason for not advance faster in this activity.

After the departure of *PM2*, *The owner* got anxious again and started to push towards the software development, thus during the months of April and May (2010) *The owner* contacted different software developers asking for quotations, an action that both, the researcher and *Academic1*, disapproved. As a result of *The owner*'s anxiety and the rush for software development, in June 2010 *Academic1* searched for assistance to finalise the capture of requirements and *Academic3* joined the team to work particularly in this activity.

The capture of System requirements continue for the rest of the cycle until an inconsistency appears between Sienna (Software development Company) and the use cases elaborated in the Brunel team. At the end of July 2010 the Brunel team ceased this activity, after Sienna disregard all the use cases created, and delivers a completely different functionality in the first prototype of the project, a situation that generate an uncomfortable feeling in the Brunel team, especially to *Academic1*, who has been working in the development of Use Cases for long period.

As previously mentioned, the intervention of the activities planned was a bit disorganised, and this was more accentuated after the exit of *PM2*, during this period the project lost pace and enter into a state of 'stand by', although, both teams were still working, it was difficult to see real outcomes, mainly because the group was working in different parts at the same time, also the desire of *The owner* to see tangible results direct part of the team efforts to look for software developers.

Consequently a recompilation of the main events is presented in the appendix E, in order to emphasise some particular actions that the researcher considered important to highlight at this stage and to be further analysed in the next CAR phase of the cycle.

Chronological narration of events: The chronological narration of events portrayed a series of events that happen after the workshops in England from early December 2009, until the end of the cycle in August 2010. And the researcher believes that the events described have contributed to this research; particularly certain activities performed during this phase have provided the researcher with valuable data to study the start-up process. However, due to the length of this analysis, this section is presented in the appendix section (see appendix E).

5.2.4. Evaluation 3

As previously mentioned, the intervention in this cycle was predominantly disorganised; hence the evaluation of the intervention was not simple and straightforward. In order to overcome this difficulty, the researcher adheres to the evaluation of the Actions planned, however, still a evaluation of all the activities involved in the cycle needed to be reviewed, thus in this section is presented the assessment of all the actions occurred during the intervention phase of CAR followed by a chronological evaluation of events that the researcher considers important for the development of the start-up framework.

    1. *The selection of a robust Business Model ad hoc to the e-trade project.*

At the beginning of the cycle it become clear the need for a BM that adheres to the characteristics of the e-trade project, and the BM proposed in the 2nd cycle was not covering the main needs of the e-trade initiative. As a result, the team have contacted *Academic2* and propose the V^4 BM to be use within the project.

Also the incorporation of *PM2* to the project was favourable in many aspects, first, *PM2* demonstrated to have high level of knowledge in different areas, although IT was not his main activity, he was fairly familiar with the all the terms used in the project, from the BM to IT terms like "use case" and others. As a consequence, the problems of communication existing in the past were solved; finally both teams were talking the same language.

The new PM in turn (*PM2*) have showed real interest in the BM, and established the BM as starting point for the development of the initiative. This was very important, because it was necessary to add control to the project and direct the team efforts in the same direction. During December and January the team achieved very good progress in the filling of the BM, however after *PM2*'s exit the prototyping of the BM slows one more time, mainly because the validation of important inputs in the BM was not done. By January 18th 2010 the researcher makes a note of the information the Brunel team has, and sends an email to *The owner* to align the information between the two teams: the researcher writes: *"We Identified that there are many elements of the Business Model that cannot directly be derived from the information we have at the moment. We Estimate that at the moment we have only 25% (maximum) of the information needed to fill the V^A model."* Some of the information missing (about 40% of the 75% remaining) it was fundamental information related to the Strategy of the project, and this information has to be provided by *The owner* only, for the reason that it was in essence strategic information, and the Brunel team, can not and should not infer this information without a proper backup and approval of *The owner* and the PM in turn.

During the implementation of this action, some terminology confusion occurred, the teams were talking about BM, BP and BC arbitrarily, which in turns confused the stakeholders and the participants involved. Despite this confusion was clarified during the workshops in England, this problem recurrent in the project and happened again after the exit of *PM2* and with the incorporation of *PM3* as PM of the project. Thus the need for a more comprehensive approach emerged. This approach, needed to include all documents related to business start-ups.

Under the direction of the third PM (*PM3*), the model development was slowly decreasing priority in the project. First, both teams agree to continue working in the BM but also *The owner* asks *PMConsultant1* to elaborate a Business Case beside the BM. Soon after, *PM3* decides that prototyping the BM was not a priority anymore thus the efforts of the team were redirected to the development of a BP again. The researcher opposed to this approach and let *The owner* know about it, however apparently the priority of the project have change, and now the software development was urgent, thus *The owner* diminish the implementation of the BM.

As a consequence in April 2010 , *PM3* and *PMConsultant1* presented a BP to the team, Although, still some elements of the BM were retaken in the new BP, there were still many gaps in the BP which refers to strategic decisions which were not taken yet, thus, this new approach has delay again activities planned. Once again, the researcher sees this action as step back in the project, but aligns with the decision and tries to push the continuation of this activity, populating the BM with e-trade data.

The table below presents the elements of the BP presented by *PM3* in April 2010. The elements of the BP presented have certain similitude with elements of the BM. Unfortunately the BP was not developed in full, this BP contain elements that can be used in the BM, actually the BP have components that the Brunel team was asking for, such as market segment and marketing analysis, also the components of this BP were a mixture of elements seen in the BM, BC and BP.

Element:	Content:
Business description	*Description, Objectives, Mission, Vision*
Product and Services	*Overview and Benefits for the customer*
Market Analysis	*Background and characteristic of the market, Industry Future Trends, tendency in prices, Customer Considerations, Competition*
Marketing Plan, Sales and Services	*Market Segment, Distribution Channels, Pricing Policy, Market Share, Sales Plan, Marketing-Advertising Plan, Service Strategy*
Organisation	*"Board" - Board of Directors, Organisational Structure, Roles and Responsibilities, Strategic Alliances*
Operations	*Internal Operating Strategy, Location, Equipment, Contracts*
Financial Plan	*Investment Proposal, Risk Assessment, Exit, Strategy (Dissolution), Breakeven Analysis, Financial projections for 3 years, Profit and Loss, Cash Flow balance*

Table 5. 3: Elements of the BP used in April in the e-trade project

2. *Workshops in England*

Undoubtedly, the workshops in England were the most productive activity performed in the cycle, and the selection of the BM to be use in the project, the main outcome. Furthermore, working on these workshops, particularly the revision made on the Business Data available was very useful to the team, and several inconsistencies between Strategy and the BM emerged form this activity.

These workshops, particularly the second (2nd December 2009), help the researcher to understand one of the main problems of the project: The lack of strategic decisions presented at this stage. Despite, *The owner* have inform the participants about the aims of the e-trade project (big number of transactions and the number of users registered), it was clear the absence of a Strategy in place, and also it was clear that *The owner* did not understand the importance of such decisions and the relationship with other elements. Furthermore, while populating the BM, the researcher found many inconsistencies between different parts of the BM, for example, the demographics, the target market and the regions in which the portal will operate were not aligned. Hence the team conclude that a new analysis and market research need to be done.

The workshops were also beneficial for the project for two additional reasons: meet all the participants and define roles. At this stage two more people were integrated into the project which the researcher considers they have contributed to the project: From one side, *Academic2* joined the Brunel team and in the other side, *PM2* was appointed as PM of the project. The Brunel team feels very comfortable with the incorporation of *PM2* as PM of the project. With him (*PM2*), the problems of communication were solved and also *PM2* put order to all the mess the project had in terms of documentation, information, and communication.

The definition of roles of the participants and the PM parade

After the workshops, the participants in both teams were defined. At this stage there were still only five participants, thus the definition of roles was pretty much straight forward. The Brunel team (*Academic1*, *Academic2* and the researcher) will be responsible for prototype the BM and for the software development; while the SME-MX team (*PM2* and *The owner*) will coordinate the project and deal with strategic and financial decisions.

Although the Brunel team increase the number of participants later on in the cycle, still their roles and functions were very specific and delineated. Conversely, after the departure of *PM2*, *The owner* incorporates two more PMs to the project, and also two vendors. However their role were not well defined and even more worrying was the fact that at times, the Brunel team was not aware of new incorporation or the exits of actual participants of the project.

Although, in this cycle two more PMs were appointed after the departure of *PM2*, still the same problems arisen from lack of coordination, and can be observe during some parts of the cycle. The Brunel team asked several times for clarification of roles, mainly during the jointed participation of *PMConsultant1* and *PM3*. Apparently one will be the Project manager and the other the project leader. However, even with the addition of these two players, the project lacks of coordination in large periods of time during this cycle.

Changing so often the PM was a major problem in the project, each new PM wanted to set their own style of work, and create his/her own business documents. This in-and-out of participants, or as the researcher called "the parade of the PMs", delays many of the activities planned for two main reasons; first each new PM wanted to work with their own documents, and secondly each new PM have different priorities in the project, from construct the BM (*PM2*) to create a BC (*PMConsultant1*) or to start with software development (*PM3*). This was pointed out to *The owner*, emphasising that any new players who joined the project, such as the PMs, must adapt to the project needs and not the opposite (the project adapt to the PM ways of work), as it was happening.

3. Review of the current business documents and their practical use

This particular action was very important to understand the way SME-MX is operating and what kind of information normally use to develop action plans. As detected at the end of the second cycle, it was needed a thoroughly review of the business documents existing in the industry, and more important, the documents used in daily basis by SME-MX.

With this aim in mind, during the second workshop in England, a detailed description of the Business case, Business Plan and Business Model was provided with the aim to finalise the confusion between this documents and to finally consent a definition of each document. As a result the BP and BC were defined and the relation between the Model and the Plans was portrait. Still after this review of the current business documents, the confusion of documents was present during the entire cycle mainly attributable to the PM parade.

Despite the researchers efforts to have a common understanding of the different documents used in the project, the confusion among the documents prevailed during the rest of the project, apparently *PM3* was not used to work with BM and for him the BP was the only document needed, and the other documents used before, can fit in some parts of the new BP, however at this stage the Brunel team was confused and did not know what were the priorities of the project.

4. Populating the BM with e-trade business data

The implementation of the BM was complex in many aspects, this complexity have created confusion between the different stakeholders, mainly within the SME-MX team. One disadvantage found on this BM is that the users need to have certain level of IT literacy and be familiar with the concepts of the BM itself. The BM, as such, it is rather complex as it contain 14 components and 64 subcomponents, across 4 dimensions. Each of these dimensions needs to be fully understood in order to comprehend the components and proceed with filling them with data; this problem was present in the project. However the incorporation of *Academic2* was very helpful to overcome this problem.

Several conclusions can be derived from this activity. However the main conclusion was the lack of Strategy found. It become easy to identify the lack of Strategy or a fussy Strategy while analysing the BM. Contrary to the first impressions of the project, it was found at this stage a huge amount of information missing, mainly information related to the Strategy of the project which was necessary to take decisions and further directions to operate.

Facebook game as part of web 2.0

As part of the analysis on web 2.0 and how these technologies fits in the BM and therefore can be used in the project, the researcher and *Academic1* analysed the feasibility to create an online game. This game was programmed to use the Facebook platform in order to achieve a high number of users and have three main aims; 1. Market research, 2. Train and familiarises users with the e-trade functionality and 3. Direct traffic to the real portal (attract customers). *The owner* was enthusiastic with the idea at the beginning, and some advances were done in this matter, thus a separate BM especially for the Facebook game was developed involving two vendors Zonnect as the software developer and Minimoko as the designer of the image and branding of the game, including the e-trade initiative. Also another participant joined the Brunel team focused only in the development of the game and elaboration of use cases. *Academic3* joined the team in May 2010 with the purpose to assist *Academic1* with the elaboration of use cases specific for the game and to perform research in the area of online gaming.

Despites the Facebook game was planned to re-use the same "software coding" that the real portal will use, and therefore save time and money in terms of the software development, the Facebook game was cancelled at the end of June 2010 under the direction of *PM3*. It was understandable that the priority of the project was not a Facebook game at this stage, and probably it was not the right timing, because the software development of the real portal was just started and *The owner* and *PM3* prefer to focus only in the development of the BP and software development.

During this cycle and with the change of the BM, the researcher studied the fit of web 2.0 with the new BM and presented the information to SME-MX. However another unfinished milestone at this stage was the decision of which web 2.0 technologies will be used in the Portal and how they will be used. The owner has planned to use these technologies since the conception of the project idea. However the uses of such technologies was not clear, apparently the owner have only considered the common uses, e.g. having a Twitter and Facebook account and try to get followers.

5. Capturing business requirements and software development

The activity of capturing system requirements has been ongoing since the beginning of the project and some advances have been made in this matter. Although the main functionality of the e-trade project was captured, still these use case diagrams needed to be validated by the strategic team (*The owner*, *PM2* and later *PM3*) in order to pass it to software developers. During the short stay of *PM2* as PM much progress was achieved in terms of software requirements, *PM2* understood that making use of the technique (use case) will facilitate the transfer of requirements to developers. Conversely, *PM3* was not confident with use of these diagrams and did not see the link of this process with the

software development, thus the development of the BM and software development was divided one more time. The problems of understanding the Use case diagrams have pondered the use of this technique. Apparently the use of this technique to gather requirements was not the best option to communicate the system functionality, thus another technique designed for this purposes need to be analysed and considered.

Another important event occurred during the cycle and further analysed, was the rush of the owner to develop the software and start operations as soon as possible. In March 2010 the project owner (*The owner*) took the initiative to contact software vendors without consulting *ITConsultant* (*Academic1*), who was at the time, the person in charge of the IT deployment. A situation that was odd. Nevertheless, *The owner* has previously contacted Sienna (Software developers) and consequently quotations were made. Although, *Academic1* was the main point of contact between e-trade and Sienna, *The owner* was focused on developing the software ASAP and he maintain direct communication with Sienna hindering some of this information to the Brunel Team, probably because the team (*Academic1* and the researcher) were strongly disapproving this action.

The process of starting with the software development was pushed from *The owner* and *PM3*, both seemed comfortable with start the development of the portal, despite to not have resolved certain issues related to the Strategy yet. Hence during this period it become more evident the need to work in the definition of the Strategy.

A first assessment of the Brunel team about Sienna indicated that the vendor (Sienna) had the intention to do everything, from the BM or BP to software development, and probably as a result increased their fees. In March 2010 *Developer1* presents a proposal for the Portal. However *Developer1* have not considered the use cases previously created for these purposes. The researcher concludes from these actions that the vendor is trying to make SME-MX to work according to Sienna's style and not vice versa, this was later corroborated in subsequent communication between Sienna and the e-trade participants'.

At the beginning *Developer1* has accepted working with use cases as a form of pull together requirements, but at the end of the exercise *Developer1* was working without having fully comprehended the real requirements of the e-trade project, also Sienna decided to not use the Use case diagrams anymore and Sienna change the way of gather requirements and use a very basic form which was in form of meeting minutes. This discrepancies between Sienna (*Developer1*) and *Academic1 were recorded in* an email dated on 22nd June.

During this period Academic1 was excluded from vital communication between the provider (SIENNA) and the client (SME-MX), which clearly shows the disagreement of Sienna to work with use cases. Also

in an email dated on Tuesday 22 June 2010, *The owner* asks *Academic1* to adjust Brunel team way of working according to *Developer1*'s ways and requirements. A situation that the researcher considers odd, however *Academic1* explain one more time that the employment of use case is a way to pass requirements only, and have ask *Developer1* to come with any other idea to perform this task, but they could not come with any other idea and the capture of requirements was done through meeting minutes only. A situation that create more problems later, as the capture of requirements depends of the point of view of *Developer1*'s notes, which not necessary were the way e-trade was describing them.

As a result of the above actions all the work done in terms of the BM was relegated and not considered at this stage, also *Developer1* was not worry about the lack of Strategy in many parts of the project, apparently Sienna just wanted to accomplish *The owner*'s desires of building the portal ASAP. Therefore, as expected the first prototype delivered from Sienna was not 100 percent adhered to the requirements that the Brunel team have done, hence *Academic1* let *The owner* know about his concerns in an email dated on 8th July 2010.

Despite the involvement of software developers (Sienna) in this task and the urge of *The owner* to start operations, the software development had few advances during this cycle, and the outcomes from sienna were not as expected and a little disappointed.

Other Activities:

Furthermore the following actions were analysed in order to determine the value of those interventions and the impact in the project, as well as, the impact within the Framework proposed.

- o **PM2 Evaluation:** The second PM (*PM2*) seemed to be more structured and experienced; hence many advances were made during his short stay in terms of communication, and progress in the development of the BM. However *PM2* exits the project because he did not saw any benefit to continue working in the project.

- o **PMConsultant1 Evaluation:** After the series of workshop held in London and *PM2*'s departure, *The owner* proposed the PM role to *PMConsultant1*. However, *PMConsultant1* was not prepared to accept a job in such conditions (no payment guaranteed, no promise of success, and no time for such a commitment), also *PMConsultant1*, use to work with big organisations, found SME-MX not so challenging according to his expectations. Thus his participation as a PM in the project was brief, akin to a 'shooting star'. *PMConsultant1*'s was never entirely committed to the project and his participation was short, therefore no real evaluation can be derived from his participation of the project, however his valuable contribution to the project was the clarification of the uses of a Business Case and the Work

Breakdown Structure (WBS) as he proposed for the project. A WBS is basically a list of actions or steps to be performed within a time-frame. *PMConsultant1* proposed 3 WBSs, one for the definition of potential business opportunities, a WBS for the development of the e-currency and a WBS for the key business start-up activities. Even though the proposition of *PMConsultant1* was aimed to bring the control that the project needed, The WBS proposed were only templates which still needed to be developed, unfortunately, due to the short duration of *PMConsultant1* in the project, these templates were not used.

o **Confusion between roles:** During a short period, at the end of *PMConsultant1*'s participation, *PM3* was introduced to the team to collaborate with *PMConsultant1* in the creation of a BP. *PM3* and *PMConsultant1* were in communication and both of them seem to be having the role of PM but their roles where never clear, mainly because of *The owner* didn't communicate to the team what was going on. During this time the need of clarification in the roles of the players become clearer once again.

o **PM3 and Use Cases Evaluation:** At the end of May 2010 *PM3* starts formally as a PM of the project. *PM3* was the PM who last more in this cycle. Although his participation alleviates some problems of communication, he was focused on the software development, a situation that appears to be wrong at this stage, mainly because the main strategic decision of the project were not validated yet, furthermore the project did not has a complete document created yet; nor BM neither BP or BC. Additionally, at this moment in time, an important event occurred; the capture of software requirements in form of Use Case diagrams, as part of software development, was suspended in July 2010. *PM3* seems to be unfamiliar with this technique and agree with the software developers to not employ "use cases" anymore, as the mechanism for passing requirements between the Brunel team and the software developer (Sienna). *PM3* was a good coordinator but his knowledge in IT seems to be limited.

o **Confusion in Business documents:** In addition to the PM parade occurred during this cycle, *The owner* went to another player to "contribute" with the BM. *PMConsultant2*, present a "BM", which in reality was not a BM, as a matter of fact this document was another BP, just more unstructured. This action results in problems of communication with *The owner* again, due to the confusion that he (*The owner*) brought again to the team, adding another "unnecessary" document. Although, *The owner* has experience starting-up companies, it appears that *The owner* got confused about some definitions and concepts. Particularly he (*The owner*) though that the Business Model was the same as the Business Plan or the Business Case. *The owner* believed that it was only one document needed for this venture, and the BM term or BP, and BC were just another way to name the same document.

o **The PM parade implications:** *PM3* leaves the project in August 3 2010 (at the end of this cycle), after him *Developer1* temporally takes his role.

  o It was noticeable the need of a PM in the project, it was definitely necessary the participation of a person who control the project and pull together all the participant's efforts. However, the PM parade was harmful to the pace of the project, the involvement of many players at this stage and their respective change in the goals hindered the project evolution. At this stage five PMs have been involved in the project (*PM1*, *PM2*, *PMConsultant1*, *PM3* and *Developer1*), which leaves the rest of the participants in confusion of the task to be done and the priority of such tasks. However a PM dedicated to the project is highly advisable for projects of this nature

  o The owner has hindering the project progress in some stages, particularly with the software development, hence the PM position has soften the owner's lack of IT knowledge, and the choice to leave *The owner* aside of technical decisions has helped the project to move forward.

o **Software developer evaluation:** On 22 July 2010 Sienna decides that prototyping was not the best option and they deliver the first quotation for the development of the software (webpage or portal) however the quotation was a bit loose as it not shows how much iteration were planned before deliver the last version. The Brunel team let *The owner* know about some confusion in the quotation, however *The owner*'s urge to develop the software, makes him to ignore these warnings.

o **The need of a defined Strategy:** the first evidence that the Strategy was not well defined emerged with the first attempt to populate the BM with e-trade business data in previous cycle. Consequently as the project moves forward and the development of the BM advanced, the Strategy has converted in the mayor concern in the project. The lack of Strategy has jeopardised the development of the e-trade initiate. As Osterwalder (2002) explain in his BLS framework, the Strategy is the starting point were the main objectives of an organisation are created together with the vision and mission, therefore the Strategy can be seen as liaison with the BM. Hence if the Strategy is not clearly defined, would be very difficult to develop a coherent BM or BP accordingly to the organisation's expectations. Consequently, the Strategy plays a significant function in the start-up framework and is the initial point of access to develop the organisation's BM.

o A final observation was made out of the evaluation of this cycle: The SME-MX team should be aware of the importance of defining a Strategy and the possible sources of income, as these will shape the Business Model. It was noticeable at this stage the lack of Strategy, and the importance of this is highlighted in the literature. Strategy was noticeable missing in the

project, thus the researcher draws the attention to this information and advices the SME-MX team to think in possible avenues for income and present it to the rest of the team in the next meeting. Regardless some ideas were presented in subsequent meetings, still the Strategy development was an unfinished task which will have a main impact in the execution of next cycle.

In next sections the main reflexion of the activities performed during the third cycle is presented together with the learning derived form the intervention of the researcher in the e-trade project. First the practical learning is presented, followed by the implications learned in terms of theory. Both wings attempts to contribute in terms of the theoretical aims designed in the planning phase of this cycle. Furthermore, a thoughtful reflection of the intervention is portrait in this section and supplementary recommendations to SME-MX are presented.

5.2.5. Learning and reflection for Practice 3

Challenges in the development of the Business Model:

i. In order to use a BM which covers all the possible aspects involved in the development and operation of an enterprise the V^4 BM was presented, however the numerous components and subcomponents of the model have confused the company under study. As a result The V^4 BM appears to be complex and not easy to understand. However the PM in turn considered the BM a necessary starting point for the project and recognises the advantages of having a robust BM, which at the end, is a way to assessment the business idea together with the Strategy.

ii. Despite, the V^4 BM is a comprehensive recompilation of all the elements needed for the development of a BM, thus could be applied to any organisation, regardless the type or sector, still a difficulty was observable at the time of capture business data. Despites the authors of The V^4 BM argued that this BM can be use for any type or organisation, still the V^4 BM was originally created for large organisations already established, thus it infers many aspects of the Strategy Planning, and also contradicting Al-Debei et all (2007), some subcomponents may not be used by SME-MX at this early stage of the project.

iii. Inexperienced SMEs participating in a *dot-com* initiative have many problems to understand the strong relation between the business (*dot-com*) and the software. In the case of SME-MX, *The owner* and *PM3* were insisting in commencing with the software development despite not having structured yet the business Strategy, separating one activity from the other. This problem was more evident as the project grows and the complexity grows. It was clear the lack of Strategy decisions in many aspects of the project that need to be addressed before start planning the software development, even more in the case of the e-trade project where

the development of the software will be the business itself, thus need to be treated as a whole. Therefore SMEs need to comprehend the importance of the development of the BM at the moment to develop new project or initiatives.

The missing link: Strategy

i.   As the project progress more Information appeared to be missing from the BM, mainly the information needed was related to strategic decisions which have not been clarified yet and to the Strategy itself.

ii. Contrary to the first impressions of the project, it was found huge amount of information that was missing and was necessary for the development of the BM. This information was mainly related to Strategy aspects that the team initially though it was present.

iii. The main conclusion of the cycle was the lack of Strategy in the project. The development of the BM was useful to identify the aspects of the project still missing and the lack of Strategy or a fussy Strategy. As a result, the SME-MX team should be aware of the importance of defining a Strategy and the possible sources of income, as these will shape the Business Model and speed up the start-up process.

The BM, BP and BC confusion:

i.   The use of different business documents is common among enterprises; these documents are used with different aims and objectives, from founding and approving projects (BC) to planning specific activities according to specific goals and targets, and also aligned to the companies' mission (BP). The most common business documents used are; Business Plan and Business case. However, some other documents can be created to assist and sustain the success of a firm, such as the BM and Strategic Planning. However it seems to be confusion among practitioners defining and using such documents. Furthermore, the indiscriminate use of such documents among the stakeholders has made evident the subjective use of those documents in the e-trade project; the teams were talking about BM, BP and BC arbitrarily, which in turns confused the stakeholders and all participants.

ii. Despite a clarification of those terms and a unification of the uses of those documents was performed, the confusion and misused of the terms prevailed during the rest of the cycle, moreover with the incorporation of new players the confusion of the documents was accentuated.

iii. A review of the business documents used in the project was performed in December 2009 and the teams concur in single definition. However the confusion of the documents was again

observed attributable to the incorporation of new players in the project and the accumulation of additional documents brought by new the new entrants.

The PM parade:

i. Every new entrant in the project, particularly the PMs wanted to start all over again, and work in his/her way, disregarding previous work done (e.g. development of the BM and capture of system requirements). Thus another obstacle for the project was the poor alignment of new entrants with the rest of the team. Many setbacks of the project were attributable to the 'PM parade', even though a PM was necessary, the constant change of leadership was one of the main constrain in the pace of the project.

ii. It was noticeable the need of a PM in the project, it was definitely necessary the participation of a person who control the project and pull together all the participant's efforts. Changing so often the PM was a major problem in the project, each new PM wanted to set their own style of work, and create his/her own business documents

iii. The PM parade delays many of the activities planned in project and hold-up strategic decisions needed for the BM and for software development. Two main reasons can be concluded from this; first, each new PM wanted to work with their own documents, and secondly, each new PM have different priorities in the project, from construct the BM (*PM2*) to create a BC (*PMConsultant1*) or to start with software development (*PM3*).

iv. The parade of PM has been prejudicial to the project because every new player hired in this position normally have disregarded previous work done, therefore the teams have to start all over again, normally from the beginning, which delays all other activities already programmed, such as capture system requirements and BM development.

v. The final reflexions about the 'PM parade' have concluded, but not generalised, that the reason for the PM parade and the problems to retain Human resources, were the rewards mechanism offered by SME-MX which were week. Furthermore, the business idea was still not fully-developed in order to attract investors.

Use of web 2.0:

i. Regardless of the urge of *The owner* to develop the software, he (*The owner*) still was not looking at the web 2.0 technologies and how the e-trade project will make use of it. It seems that the web 2.0 is still considered by entrepreneurs and practitioners as an extra tool for the portal or as a content aggregator, and not as integral part of the business. It can be concluded that the use of web 2.0 Technologies could be better applied.

ii. Although the literature up to date is paying attention to this observable fact (web 2.0), still the literature has not fully explored and explained how web 2.0 can bring value to organisations. The researcher believes that web 2.0 can be used in different areas of the business such as, market research, customer relationship and marketing among others, and also can be deployed in different ways accordingly to the organisation's objectives e.g. social networking, online games, blogs and messengers among many others. However this domain has to be fully explored in order to identify the real value that web 2.0 brings to organisations.

iii. The creation of a social network game was proposed and initially agreed with the intention to use web 2.0 with different purposes. This game was programmed to use the Facebook platform and it was initially planned to accomplish three specific objectives; 1. Market research, 2. Train and familiarises users with the e-trade functionality and 3. Direct traffic to the real portal (attract customers). Regrettably, the Facebook game project was cancelled due to strategic decisions, however it has been useful to identify the areas and opportunities to be studied within the web 2.0 context and under the business perspective and not the traditional 'social' perspective.

iv. The learning out of this activity have gave the researcher an idea about the different uses of web 2.0 technologies under the business perspective, also it seems that this technologies could benefit companies with low marketing budget, as the case of the majority of SMEs. Hence these technologies seems to be essential for *dot-com* SMEs initiatives as the case of e-trade, therefore web 2.0 is an area which needs to be acutely analysed through further research.

General challenges of the cycle:

i. The Definition of Roles plays an important part for any project. Regardless of having few participants in the e-trade project still it was difficult to differentiate between roles and responsibilities, this activity become even more problematic with the constant incorporation of new players and even more worrying was the fact that at times, the Brunel team was not aware of new incorporation or the exits of actual participants of the project, which leaves the project uncontrolled at many times.

ii. *The owner* has a particular leadership style, he tends to not trust in people unless they prove to be extremely good, this type of leadership could be cause of conflicts between participants.

iii. The project owner and director of SME-MX (*The owner*) was consulting external people without telling not even to the project manager in turn. As a result he confuses the e-trade team in many times, adding unnecessary documents or information, moreover, the level of

trust between *The owner* and the other team members decreased as a consequence of these actions.

iv. Another characteristic observable between *The owner* and comparable with the literature in the entrepreneurship arena was the common attitude towards rushing the actions performed and the desire to start operations as soon as possible, which normally will lead the project to fail. By rushing is likely to miss valuable information and to not consider all the business aspects needed to start operations. In the case of the e-trade project, *The owner* shows the desire to develop the software as soon as possible from the beginning of the project and he is the reason to accelerate the e-trade process. Although SME-MX knew that the Strategy was still ill defined, they wanted to develop the portal in spite of the success of the model was still uncertain.

v. In term of capture system requirement and the employment of Use case diagrams can be conclude that despite to be a common technique among software developers, still a simpler way to communicate these requirements need to be explored. It is know the lack of expertise and knowledge among SMEs in terms of IT and IS, thus the IT consultant (*Academic1*) seems to be the right choice to alleviate those problems, however it is important to align software developers with the IT Strategy used or some problems of communication can arise in this activity, as it was the case of the e-trade project. Sienna was working without having fully comprehended the real requirements of the e-trade project, thus the first deliverable was not 100% adhered to the software functionality originally planned, also Sienna decides to not use the Use case diagrams anymore and Sienna change the way of gather requirements and use a very basic form which was in form of meeting minutes which once again is not the best way to capture requirements as this still involves the perceptions of the note taker. Finally the decision of the solution architect to not use the Use Case diagrams but instead use 'screenshots' of the proposed functionality was not really clear, thus the functionality of the Portal was not as expected.

vi. Finally, *The owner*'s interventions in an area in which he is not an expert hindered many decisions and obstructed the software development. The election of the PM to leave *The owner* sometimes aside of technical decisions had helped the project to move forward. However *The owner*'s desire to be involve in everything even not knowing technical aspects is a lesson learned in terms of division of task and responsibilities that need to be in place at all times.

5.2.6. Learning and reflection to theory 3

The Business Model:

i. The start-up process is much more complex than the BM suggest. Thus a more comprehensive approach is needed.

ii. Despite the V^4 BM was comprehensive, at the moment of the implementation, the researcher found still many issues with it, for instance this BM is still oriented for large organisation, more specifically the model was built within the mobile sector, this is a small limiting into the model, also the model is made for already established organisation, thus do not consider the first steps that a firm need to execute in the start-up process.

iii. It was noticeable that one of the main problems was that the Strategy was not well defined thus some aspects of the BM could not be completed. This was pointed out to *The owner*, but decided to focus on those aspects of the system that could be defined and leave the Strategy aside. This action was a mayor mistake in the project because it just delayed decisions that need to be taken urgently.

The Fit of web 2.0 in the V4 BM:

i. Because the BM has changed, a new revision of the Model was needed in order to find the fit of the web 2.0 technologies within the four dimensions of the model. After a discussion with *Academic2* (designer of the V^4 BM) it was conclude that the web 2.0 technologies were implicit in some aspects of the BM, however a physical incorporation of the web 2.0 was needed and further analysis was done. As a result of the analysis the BM position the web 2.0 technologies within the elements of the Value proposition dimension. Considering the web 2.0 as a service offered by the organisation, which is intended to add different types of values (hedonic emotional, epistemic, network effect and brand) and will be directed to specific target segments. Furthermore there is a strong relation between the web 2.0 and the value architecture dimension, particularly with the Technological architecture component, which need to be considered at the time of software development, technology design and configuration. Figure below shows the inclusion of web 2.0 into the BM. However still these technologies need to be proved within this research context.
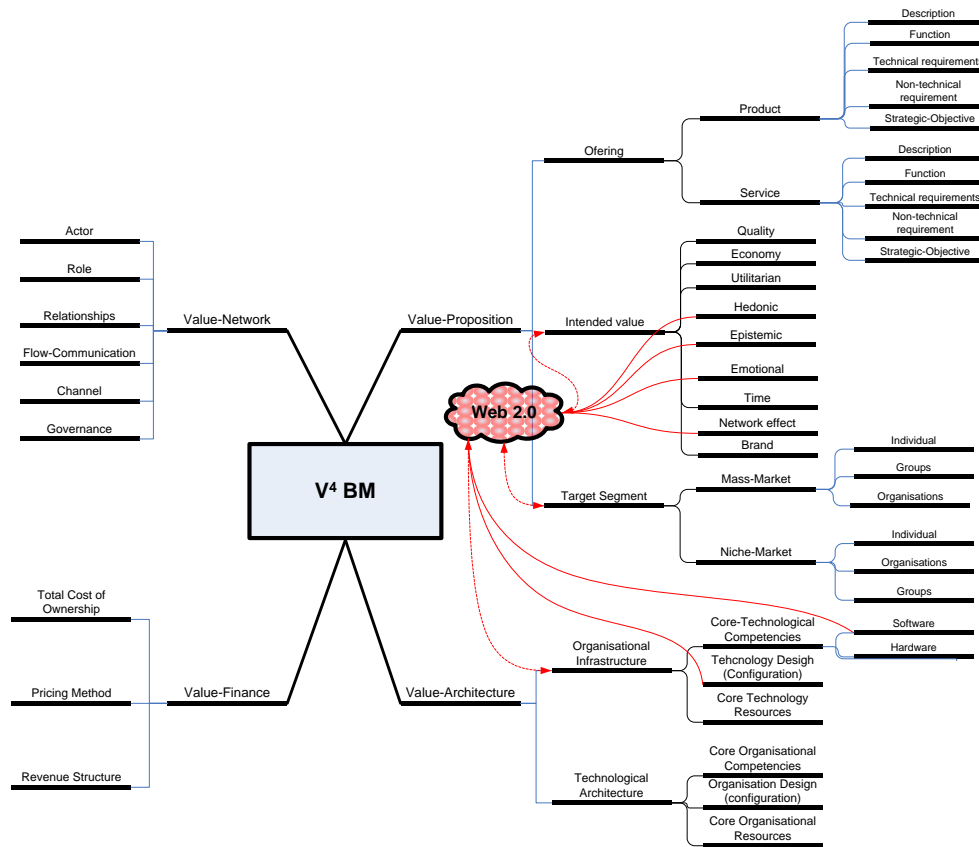
Figure 5. 4: Inclusion of web 2.0 into the V⁴ BM, adapted from Al-Debei et al (2010)

Revision of the framework (changes in the framework)

A review of the framework has been performed after the researcher's intervention in this cycle considering the learning and reflexion arising from the challenges encountered during the execution of this cycle. As a result the framework has had some changes, as described in figure 5.5.
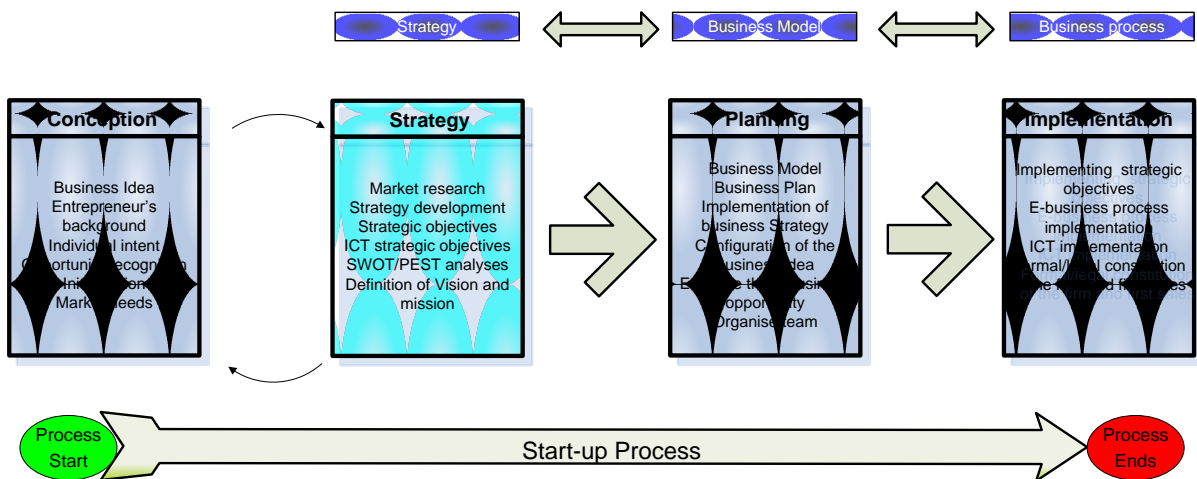
Figure 5. 5: The revised Start-up Framework

Previous framework, which has been presented in chapter 4, section 4.4.3 Figure 4.9, have proposed a linear process to develop the Strategy in the conception stage (including the Business idea) then

create the BM in the planning phase and finishes with the actual execution (implementation) of the business process. However after the series of activities performed in the project it was found that a higher importance has to be given to the development of the Strategy, thus a research needs to be done in these area and a review of the documents used for this aim needed to be reviewed also, as a consequence, the framework was enhanced mixing the BLS with the start-up process, however a extra level has been added to the framework and also the main business documents have been included, this is illustrated in figure 5.5.

5.3.   Cycle 4 – making sense – In the quest for Strategy

Dates:	15th August 2010 to 12th May 2011 (9 months)
Participants:	*The owner, Academic1, Researcher, Sienna (Developer1 & Developer2), PM2 (Return in September 2010)*
Data collection:	40 observations, emails and notes; 16 interviews, workshops and meetings (19 hrs); 55 documents and archival records

<div align="center">Table 5. 4: Cycle 4 facts</div>

The final cycle of the AR process related to the e-trade project has a particular distinction from the rest of the cycles. In order to accomplish the main aims of the cycle which are the elaboration of the Strategy and the development of the BM, it was agreed between the two teams to execute as much iterations as needed between planning and intervention, until the solution of the problem is found. Whit this objective in mind, this section described the actions planned and implemented, together with the evaluation and reflexion of the fourth cycle. The cycle started from August 2010 and formally ended in May 2011 with a total duration of 9 months as shown in the figure 5.6.
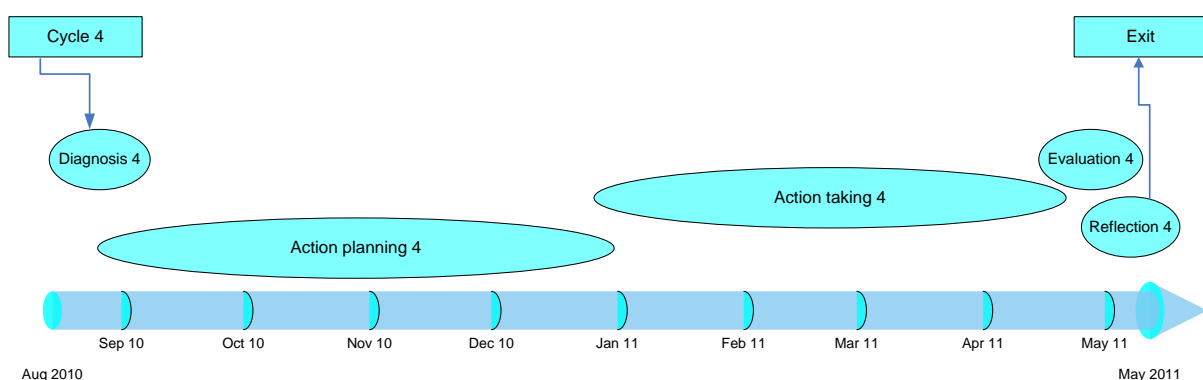
<div align="center">Figure 5. 6: Cycle Four Length</div>

The final cycle of the AR related to the e-trade project starts with the identification of the problems as a result of the reflexions and recommendations from last cycle.

5.3.1. Diagnosis 4

The diagnosis of the forth cycle was simple in practice; the evaluation together with the learning and reflexion phases from previous cycle have already given directions to follow in the project and the researcher have already advised the continuation of the project into another cycle, thus the problems still present in the e-trade project have been detected and are further described below.

The identification of the problem areas:

At the end of the third cycle, the e-trade project team identified three main objectives that need to be covered during the intervention of the fourth cycle.

 a) The definition of the Strategy

 b) The development of the BM and subsequent documents (BP, BC)

 c) Tangible results in software development

The diagnosis phase for this cycle converged with the end of the third cycle, hence the actual phase formally started in mid August 2010 with a meeting between *The owner*, the IT consultant (*Academic1*) and the Business Model developer (the researcher). During this meeting the main broad problem areas were discussed and brake down into six problems to be further analysed.

From the first broad objective, two problems were detected as follows

Problem 1: Strategy not defined (needed urgently)

During the e-trade project it was observed that the lack of strategic planning had significant impact on the progress of this project. This problem was observed since the start of the development of the V^4 BM, and at the end of the intervention phase of the third cycle the researcher have expose this problem to the SME-MX team, however, SME-MX was focused on the software development and did not consider this observation as a problem. Hence during the corresponding analysis of this phase, the team realise that the decision to postpone strategic decisions was a major mistake that delay the BM development together with software development. Hence, the SME-MX team realised that some decision needed to be made in this direction, however, they (and mostly *The owner*) still saw this, as a step backwards instead of moving forwards. However it was decided to look in detail to the Strategy development process. Hence at this point more importance was given to clear and develop the Strategy that the project will follow.

Problem 2: The clarification and definition of the Strategy components

Once both teams have agreed to engage in the developing of the Strategy and after realising that the Strategy needed to be carefully analysed, the next step needed was to agree a common definition of

the Strategy and a description of the elements involved in the Strategy Planning. Thus, a definition of Strategy was indispensable and a definition of the components or elements needed to be clarified.

At this stage the e-trade team have experimented some problems related to the definition and uses of Business Documents, moreover the addition of other document (Strategy Planning) to the variety of documents already in use, predicts more confusion among the participants, thus a way to structure those documents is needed. Furthermore, the relationship between Strategy Planning and all the other documents already used in the e-trade project is necessary in order to understand the links and relationships between common elements.

Also reviewing the second broad objective (The development of the BM and subsequent documents), two more problem areas were detected;

Problem 3: Development of the BM

During the reflexion phase a meticulous analysis was performed in order to identify the main reason, or to explain why the project has not progressing as expected, this analysis include the process to developing the BM, which was discussed during the diagnosis' meeting. The analysis concludes that the development of the BM has involved many components and subcomponents which have confused the practitioners. Hence the need to find a way to give clarity to all players was spotted at this instance. However the main reason to not progress as expected in the development of the BM was the limited information available to this aim, which was related to the business Strategy and only *The owner* and the PM on duty can validate this information.

The development of the BM has helped the project to expose the most important problem at this stage. All the questions that were unanswered and the doubts about the project were related to strategic decisions which were not taken yet, thus the main problem at this stage was the proper development of the Strategy. It was clear that the development of the BM cannot continue after some issues related to the Strategy of the business have been clarified.

Moreover, during the elaboration of the BM some confusion was presented related to what kinds of documents are needed to develop the project. Previously the participants were talking about three mayor documents Business Model, Business Plan and, in lesser grade, Business Case, however, now that the lack of Strategy has been exposed, it is necessary to look into the literature about strategic development and agree with a definition of the term and the elements that compose the Strategy.

Problem 4: The need for structured way to manage the business information generated and the relationship with the 'Business Information Database' (BID)

The owner has let the team know in many occasions the need of certain documents, since the beginning of the project *The owner* has always mentioned that he wants a Business Plan and a Business Case, unfinished milestones mainly for the reason of the aforementioned lack of Strategy. However the need to produce such documents was still present in the project at this stage, and moreover the need to clarify the relationship of such documents with the BM was required. The BM seems to be the central starting place to gather business information and the source to develop the other documents. Hence there is a challenging opportunity to plan the method to gather together the information needed for the development of all the documents.

Finally reviewing the last broad objective of the project discussed at this stage (Tangible results in software development) one more problem area resulted;

Problem 5: Urge to have tangible outcomes (e.g. software/prototype/web portal)

The owner has been pushing the software development since the beginning of the project, even if the Strategy was not yet defined. Despite have realised of the importance of the Strategy, still *The owner* wanted to continue with the development of the software and the interaction with Sienna continue during this cycle.

Other problems identified

Additionally there were other problems settled during the meeting which are;

Problem 6: The PM role.

After the departure of the fourth PM (*PM3*) at the end of the third cycle (August 2010), the project has been running without a PM for a period of 3 months (August '10 to December '10). However, *The owner* and *Academic1* were more participative involved in the project and both acting as PM in certain activities, however, still the need for a PM dedicated for the project was a priority and the appointment of a PM was urgently needed.

5.3.2. Planning 4

The planning of the main activities to be performed during the intervention phase was short but demanding, first the team discuss the main problems still occurring in the project and then the researchers presented a list of activities to be executed, and to be approved by the directors' board.

From the problems found in the diagnosis phase, the following sets of activities were planned:

From Problem 1 & 2: definition of Strategy and clarification of components

As detected, Strategy Planning was urgently needed, thus a revision of the definitions in both, the academic and the industry areas, is essential to understand the missing links in the BM, furthermore a thorough analysis of the main components of the Strategy development is needed, with the intention to complete the business Strategy. The action proposed is the Definition of Strategy and components of the Strategy Planning

From Problem 3: Development of the BM

Identifying gaps in the BM and their origins: The main problem reported in previous cycles was the lack of Strategy and the need of answers to many questions related to the development of the BM. However, this was not the only problem related to the development of the BM. It was observed too, the confusion of the elements and sub elements that compose the BM, thus to proceed with the elaboration of the BM, it is necessary to look into the Strategy and to identify all the elements necessary for the development of BM as well as the relationship between the business documents used (Strategy, BM, BC, BP). Therefore, a description of the elements of each of the documents is needed and a review of the uses of such documents will be re-evaluated. However the development of the Strategy and the BM will continue.

From Problem 4: the need for structured way to manage the business information generated

It is clear that a mechanism to understand the business documents and their elements, as well as the similitude and difference between them, is needed. For this reason an instrument to gather and distribute accordingly the information among business documents will be created with the intention to contain the information necessary for the creation of the different business documents used in the project, such as; Business Model, Strategy Planning, Business Plan and Business Case. Hence the revision of the components of each document and their relationship is proposed together with the creation of a database containing all this documents.

From Problem 5: urge to have tangible outcomes

Software development: *Academic1* and *The owner* agreed to continue working in the software development side of it, even during the process of Strategy development. Hence the software development process will continue until finished.

Other action plans

From Problem 6: PM role

At this stage it is well know in the team, that a PM or project coordinator is essential to control the growing e-trade project, hence *The owner* will contact and hire a new PM for the project as soon as possible.

A final revision of those activities was completed, and as a result, both teams (Brunel and SME-MX) agreed the following activity plan based on the six problems previously found, and presented in the table below.

No. Activity	Description	Participant(s)	Deliverable	Date: Prog/exec
1	Definition of Strategy and components of the Strategy Planning	Researcher	Report	September 2010
2	Development of Strategy & BM	*The owner, Academic1* & PM (TBH)	Document/report	Sep-Nov 2010
3	Revision of the components of each document and their relationships	Researcher	Report	Nov '10-Jan '11
4	Creation of Database for Business Information	Researcher, PA	Database	January 2011
5	Appointment of PM	Owner (*The owner*)	N/A	ASAP
6	Software development	*Academic1*, Sienna (*Developer1, Developer2*)	4th deliverable of Use cases	January 2010

Table 5. 5: Team activity plan for the 4th cycle

Also the usual deliverables were set up and presented to the owner.

5.3.3. Intervention 4

The intervention phase was planned to cover all the project problems found in the diagnosis phase, thus this sections explain the actions deployed to achieve the solution of those problems through the actions planned. This cycle has extent over 9 months and the intervention of activities planned was rather untidy. Therefore, In order to help the reader to understand the project evolution, a summary of the main events in the project in chronological order is presented in the appendix E, and next is presented a fully description of the activities planned and performed during this intervention.

Intervention of the actions planned

This section aims to describe the specific activities performed during this phase. The six explicit actions planned in this cycle together with the corresponding deliverables are presented in table 5.5.

Theoretical objectives: Similarly to previous cycles, theoretical objectives were planned in order to gather information to be analysed at the end of the cycle:

   o Links and relationships between SP, BM and BP.

   o Review of the theoretical framework (the relationships of the business document within the start-up framework)

The intervention of the researcher in the project during this cycle involves the actions previously planned. Although there were six specific actions to be performed, these actions were conducted in parallel alongside the duration of the cycle, thus the intervention of the researcher overlaps in time over the implementation of the activities planned.

The definition of the Strategy was the main action executed during this cycle, the importance of the Strategy phase is portrayed as the fist tier that organisations need to accomplish in the BLS framework as described in Osterwalder (2002). However during this project, the main participants of the project were reluctant to develop the Strategy until the project was in an advanced stage. This decision delays the progress of the development of the BM, and as previously stated, the researcher expose this problem at earlier stage of the project however for the reasons already explained, it was until this cycle when the team actively engage in this task (Strategy development).

  1. Definition of Strategy and definition of the elements of Strategy Planning.

Studies in Strategy has been ongoing since the last fifty years and the understanding of it has been evolving considerably, however, there is not a consensus yet on the definition neither a distinctive step-by-step manual to construct Strategy, furthermore the elements that the Strategy needs or form part of it, are neither established in the literature (Seddon et al. 2003). Moreover the first analysis of the literature presents some overlaps between the Strategy and the Business Model concepts.

As a consequence of the first findings, the researcher has performed a similar exercise used in the research of (Seddon et al. 2003) to find a common definition of the Strategy among practitioners. The researcher execute a web search using Google in May 2011, where 537 million of web pages using the term "Business Model" appear, and 381 million using the term "Strategy" although some web pages offer definitions of these terms, there are often poorly defined, furthermore those definitions reveals many overlaps between these terms. The experts on Business Models and the experts on Strategy every so often describe each term as substantially the same, with some degree of differentiation (Seddon et al. 2003).

Therefore, seems to be still not a consensus definition of what Strategy is? Furthermore the literature corroborates some confusion and misinterpretations of the Strategy term, particularly this term have been used indiscriminately with the Business Model term. Porter (2001) also argues that the term Business Model has been introduced for business on the Internet that have been using this term

instead of the terms Strategy and competitive advantage. The researcher agrees with Porter and others authors that the term Business Model is still dim and confused; moreover Porter (2001, P.73) described the Business Model as a "*loose conception of how a company does business and generate revenue.*" However Porter (2001) establishes a main difference between Strategy and BM, which seems to be essential for the understanding of both concepts (Strategy and BM). The author states that having a Business Model by itself it is not enough to develop a company, and the main reason of this assertion is that, the aim of the Business Model is to generate revenue, and "*generate revenue is far cry from creating value*" (P.73)*,* and crating value is the aim of the Strategy.

The research done in the Strategy domain and further presentation to the SME-MX has added confusion to the already misused terms in the project (e.g. BP, BC). Moreover the overlaps presented between Strategy and BM have rather confused the team instead of ease the project flow, consequently, a thorough reflection directs the research to study the relationships among the components and elements of each of the documents used among the e-trade project. Hence the first step was the identification and definition of the elements of the Strategy Planning document.

The literature in Strategy appoint to the use of a business document called "Strategic Planning" (SP) in order to develop the firm's Strategy, thus it was necessary to look into the definition of these concept and the elements or components that form this "Business Document"

Strategic Planning definition and elements:

Strategic planning is an organisation's process of defining its Strategy, or in other words the direction of the firm. During this process the board of directors need to take decisions regarding how they will allocate its resources in order to pursue the company's Strategy, which for SME's the most important resources included Financial and Human resources. Hence, Strategic planning is the formal consideration of an organisation's future course (Bradford et al. 2000).

After reviewing the definitions available in the literature, the team decides on the use of the following definition, which will be use in this research for now onwards. "Planning or Strategic Planning is the process in which the organisation states the vision and mission of the company, it analyse the internal and external situation of the company, sets the overall objectives, and formulates strategies and strategic plans needed to achieve those objectives ". Also a revision of the main elements of the Strategy Planning document was investigated, and further analysed together with *Academic1* and *PM2*, as a result, the Strategy Planning document was created. Table 5.6 presents the definitions of 14 components of the SP document resulted from the analysis performed at this stage, and therefore used in this study.

Element/Component	Definition
Business Definition	This section provides a brief description of what the business will do and the main activities to perform.
Supporting technology	This section is only filled if the business definition differs from the supporting technologies. For supporting technologies we refer as the description, definition and functionality of the web site and the supporting technologies, such as; web 2.0 technologies.
Vision	The vision defines the desired future state of the company in terms of the fundamental objectives and / or strategic direction (long-term 5-10 years).
Mission	Defines the fundamental purpose of the organization, it answers the question, what the company is? And what needs to be done to achieve the vision.
Aim/Goals	A Goal is an observable and measurable end result; it has one or more objectives to be achieved within a more or less fixed timeframe.
Objectives	An objective is an end that can be reasonably achieved within an expected timeframe and with available resources.
Contribution to the main Objectives	This section is used when the Strategy Planning takes place at a project level, in which the project leader needs to describe how the project will contribute to the main objectives of the organisation.
Core Values	Core values are shared values within the organisation; beliefs that are shared among the stakeholders of the organization and a principle that guides an organisation's internal conduct as well as its relationship with the external world.
Corporate Strategy	Will tell how the organisation will Differentiate from the competitors. E.g. Low-Cost, and Focus.
Policies	Policies are principles, rules, and guidelines formulated or adopted by an organisation to reach its long-term goals.
Existing agreements	The existing arrangements are any contract, deal, pact or covenant previously agreed with suppliers, customers and/or shareholders who will or could change the shape, design, and development of the Business Model and/or Strategy.
Dependencies	This section describes the internal and external factors upon which the success of the project depends.
SWOT & PEST Analysis	SWOT and PEST analysis are tools generated to aid managers to see the big picture of the internal and external factors that may influence the success or failure of an organisation.
Action Plans	The action plans are the specific actions to be execute in order to achieve each objective.

Table 5. 6: Elements of the Strategy Planning used in this study

2. *Development of Strategy & BM*

The first attempt to populate the Strategy with business data from the e-trade project was made during the period of September to October 2010. During this period *PM2* (who returns to the project in August 2011) and the researcher were working in the development of the Strategy, thus a first attempt to develop the Strategy of the e-trade project was made, however the results were not enthusiastic mainly because some problems were detected during the development of this document. The first obstacle was the confusion between the elements needed and the understanding of some concepts which appears to have the same meaning, such as; core values and polices, or a distinction

between the Mission, the aims and the Objectives. Consequently the next action in order to develop the Strategy of e-trade was the need to clarify the type of information needed and the clarification of each element.

In order to deal with this constant confusion among the participants in the project, a revision of the elements that outline the Strategy Planning and their relationship between those elements was performed. The Strategic Planning document for this project was build upon the outcomes of the literature revised, and also as a result of the analysis performed by the participants of the project (*PM2, Academic1* and the researcher), see table 5.6. During this analysis two elements were added into the document; Business definition and definition of the supporting technology, these elements were not originally part of the SP but were introduced to the document for two main reasons. The first one with the intentions to facilitate the understanding of the project to external stakeholders and the second was added with the intention to describe the links between the SP and BM with the software development.

3.   Revision of the components of each document and their relationships

At the end of December 2010, the third problem was reviewed and further planned actions were implemented. The addition to other document to the already extended list of documents used in the project was confusing SME-MX; once again the confusion on terminologies among business documents was hindering the progress of the project, moreover the boundaries of each document were not clear; the team did not know where one document starts and one ends. Therefore it was clear that a better understanding of the documents used was needed to clarify functions of the documents and to draw the boundaries and restrictions of each document.

Moreover it become notable the need to organise the large amount of components and elements corresponding to the different documents used, hence a thorough research on all documents was performed as this stage and the information obtained was incorporated to the previous research done during the the third cycle, resulting in the classification, identification and definition of the elements of SP, BM, BP and BC.

Additionally, to facilitate the understanding of the relationship among the business documents and the start-up framework, the researcher have positioned the 'business documents' in the start-up framework, highlighting the direct relationship between the Strategic Planning document and the first level of the BLS as shown in figure below.
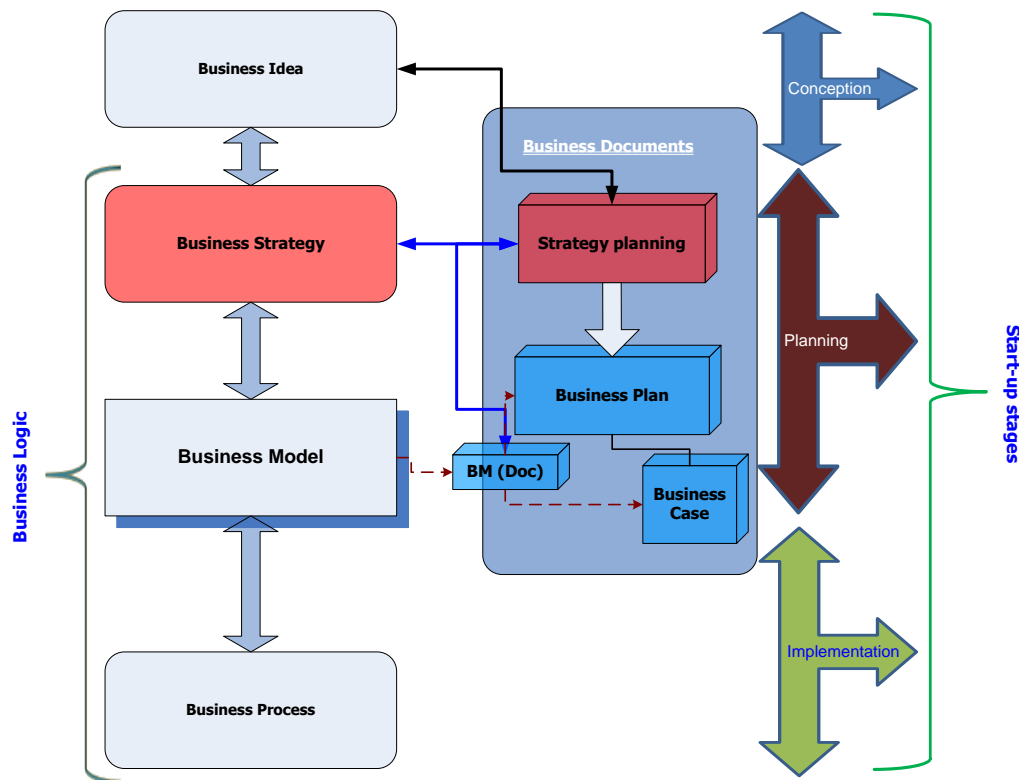
Figure 5. 7: The Business documents used in the project and the relationship with the BLS

4. *Creation of a Database of Business Documents with all the elements*

After detecting the need to organise and classify the large amount of components necessary for the development of the e-trade project, the next step in this research was the development of a database attempting to bring together all the information needed for this purpose.

The aim of this database was explained in a video-conference between the researcher, *The owner* and *PM2* and also recorded in the field notes of the day and in an email sent to *PM2* and *The owner* on the 4 Oct 2010 and is quoted as follows "*the aim of this activity is to provided a robust structure to construct a database with the definition of the documents that can be derived from this database, such as: BM, BP, Marketing Plan (MP), Operational plan (OP) and BC. Once this is done, the next step is to fill the database with the information obtained from the documents that have been generated and circulated alongside the project; moreover new information will be generated during the developing of this database… I would like to emphasise that the filling (development) of the database must not stop the progress of the portal, however feedback is essential to the project's Strategy, for the reason of, this will give the basis to answer all the questions that the board of directors generate on daily basis*". *PM2* replied: "*We must make sure that the extended plan "V⁴" (referring to the V^4 BM) and the database contains sections that allow us to focus very precisely in each of the primary roles of the users. Answering questions for the "seller's role", such as: What are the needs of the sellers? How e-*

trade will generate a superior experience on the client? And, how this will be reflected in the Mission statement?" (Field notes: 04/10/2010).

Consequently a meeting was scheduled between the researcher and *Academic1* with the aim to design this database. The database was called "Business Information Database" (BID) as this database intends to support organisations embarking in the start-up process of a project or a new initiative by the means of gathering all the information in terms of business documents that a company needs. The BID proposed has the initial aim to identify common elements of the different documents and possible links between them as well as the identification of components used along different documents.

The first attempt to construct the BID has put on evidence the constant use of certain components alongside different documents; such as the **value proposition element** which is used in the BM and BP and also is implicitly stated in the Strategy Planning. Furthermore some links were observed during this activity; the SWOT analysis for instance, will provide information to many components of the business documents (e.g. BM, BC), furthermore this element is repetitive in the Strategy Planning and the Business Plan. The table below presents some of the elements which are used in more than one document thus have stronger relevance, however the table presents only some examples but the full database and the relationship of the elements can be seen in the appendix section, Appendix E.

Component/Element	EP	BM	BP	BC
Mission	√		√	√
Goals	√		√	√
Objectives	√		√	√
Value proposition		√	√	
Strategic roles		√		√
Product and services	√	√	√	
Customers	√	√	√	√
Existing agreements		√		√

Table 5. 7: Common elements among Business Documents

During December-January 2011 two new players joined the a-trade team with the primary intention to assist in the elaboration of this database; *Academic4* joined the Brunel team and a new player was hired for SME-MX as research assistant. *PA* was appointed as PA for SME-MX (*PM2* and *The owner)* but also was hired with the intention to manage organisation aspects of the e-trade project. One of the tasks of *PA* was to assist with the BID; hence *PA*'s main contribution to the project was a preliminary attempt to link these components.

After a revision of the work of *PA* and further research, the researcher presented the first attempt to organise all this information and the fist version of the BID was developed and delivered to the e-trade team on Jan 2011. This version depicts all the elements and subcomponents needed for the elaboration of the Business Model (V^4), the Business Plan, the Strategy Planning and the Business Case, also it classify each documents and prioritise the information needed. The framework used as platform for the development of the database is presented in the figure below.
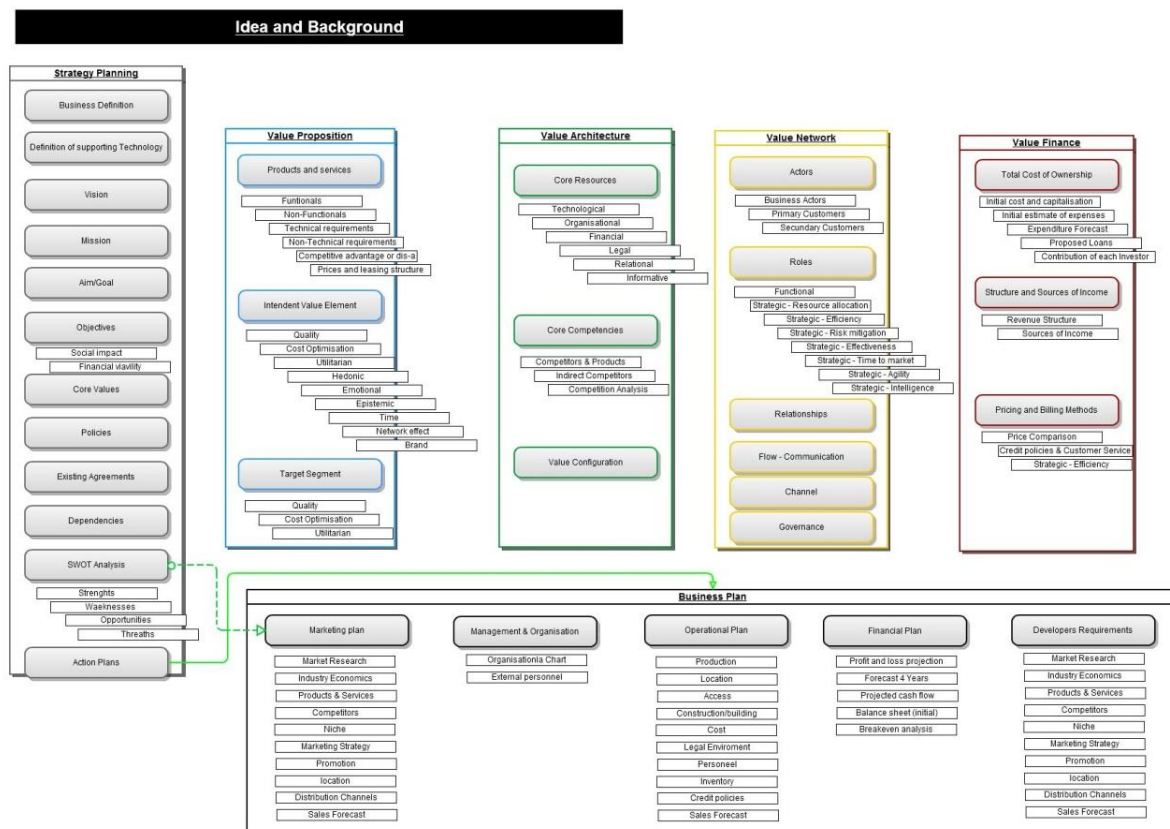
Figure 5. 8: Framework used to produce the Business Intelligence Database (BID)

Academic4 joined the Brunel Team in January 2011 with the task to develop a prototype program in Microsoft Access, which will be used as a first electronic version of the database derived from the information of the BID Framework.

By reason of time limitation; it was decided to design a basic program to prototype and test the database. The process followed for the elaboration of this prototype was part of a project submitted for the degree of BSc Computer Science, however a brief description of the actions performed for this activity is presented below.

The BID software prototype

The overall aim of the software application program is to design and develop a database, to assist SMEs to have the right documentation in order to create a *dot-com* company. The documentation will

221

revolve around 4 main documents: Business Case, Business Plan, Business Model and Strategic Planning.

Database prototype aim and objectives:

The database will be developed initially as a prototype. This prototype took several interactions to test the software and to add any elements missing in order to create a further improved version. This process was repeated until a fully functionally has been developed. Furthermore, although security is an important issue, the data connection string will not be encrypted due to the time and expertise restrictions of this project

The process of data modelling was used to conceptually design the tables that construct the relational database. An entity-relation diagram (E-RD) methodology was used to define the relationships between entities, and was used as the foundation for constructing the database.

The prototype of the database was completed in early February 2011 and the first version of business data capture into the database was presented to *PM2* for further analysis. This exercise has exposed the inconsistencies among versions of the different concepts and the business information related to those concepts, showing a clear lack of direction of the project which can be seen as entrepreneur's lack of managerial skills. As an example of these findings, the different versions used to define the mission differ among time, changing drastically from the first version to the last version used as today. Theoretically it is normal to have differences among versions as the project progress; however it is not intended to have significant variations in the main goal of the project, which was the case of the e-trade project.

Table below is an extract of the electronic version of the BID which exemplifies the significant changes made on the main goal of the project. In this case the different versions of the Mission are portrayed; demonstrating how the main direction of the project has been constantly changing, therefore making evident the lack of vision and direction of the entrepreneur.

Date	Versions
14/07/2009	We Generate multilateral trading of goods, optimising the resources of the users in order to meet the human need to buy but without money
16/07/2009	be a portal which facilitates the exchange of goods (things) to optimise the resources of the users, through an Internet portal focused in the satisfaction of the buyers
27/08/2009	Create an electronic currency to facilitate the purchase and exchange of goods and services through the use of a technology platform with no restrictions of time or space frontier.
29/10/2009	We facilitate the purchase and exchange of goods and services with the creation of an electronic currency, through a technology platform without time restriction, boundary or space, optimising the resources of the participants to meet the human need of buying
20/07/2010	Be a Mexican company that provides consumers with an a free technology tool that allows to satisfy their basic needs of the users in a simple and safe way but without the need to disburse cash.

Table 5. 8: Different versions of the Mission used in the e-trade project

The results of the revision of the information captured in the BID were informed to the SME-MX team and further reviewed during a meeting in March 2011. During this meeting the team discussed the evaluation of the BID and how the database relates with software development. PM2 sent an email on the 17 march 2011 which summarises the meeting in five actions

1. We review the BID and we are aware of the need to complete the different levels of the strategic plan structure, model and Business Plan.

2. We reviewed the changes that the project has experienced from the original conception of the portal until now. By doing so, we have realised how the core of e-trade has transformed form the begging when the project was a bartering and trading portal, until now, where the project is not anymore a exchange portal, but a community site.

3. We also review the first deliverable (Banners / history boards) from Sienna, and we concluded that the software development activity will continue as planned. However we must align efforts in this direction. We (SME-MX) have understood relevance of the business documents such as BM and SP with the software development, thus it is important to notify about advances made on the Strategy development to upload the information into the BID and adjust the e-trade model accordingly, and also it is important to pass any update in the information to the software developers (Sienna).

4. Consequently we will review the advances made by Sienna in terms of software development by verifying if the prototype presented adheres to the business objectives.

5. If the point 4 is approved, Sienna will be doing the first test of usability, functionality and feasibility of the software.

After the meeting reviewing the progress of the BID, *The owner*'s made some comments which once again have confused the rest of the team; apparently *The owner*'s believes that the team (*PM2,*

Academic1 and the researcher) was wasting the time in some activities that were not productive in terms of tangible outcomes. *The owner* comments in an email after have reviewed the latest BID; *"I (The owner) have reviewed the document and I think you have captured very well the need to see the progress of each of the versions used in the project. However, I think all this information is globally listed in the attached document, we will comment it…"* Basically the document that *The owner* has referenced in this email is the *"Plan_Portal v.2 with comments"*, and this document was one of the documents taken into consideration (among six other documents) for the development of the first prototype of the BID. In other words, the owner was referring to an old document that in fact, it was part of the data used in this version of the BID therefore could not contain all the information generated.

A subsequent Skype conversation between the researcher and *PM2*, confirmed the researcher's observation about the owner's comments. *PM2* mention that the document *The owner* was referring was an old document and obsolete in terms of the business information, and it will not contribute to the project since the information is out of date and at present the objectives have changed. However *PM2* thinks that at least some information can be useful, therefore a second revision of this document was carried out.

After the first attempt to populate the BID, the results show the need to control (versioning) and define the latest version of the documents to be used as the foundation for the development of the BID and further Strategy Planning. For this intention the following agreements were created, and recorded in the meeting minutes of the day (30/03/2011).

1. It was agreed that the last document that *The owner* had sent yesterday (March 29th) named "Portalv2 coments.doc Plan" will be considered as the only historical source to populate the BID. Another document that may be used is the Business Model that was developed in February 2010, the "V^4 V1.2 BM-tradeEnglish.doc ASR."
   Note for *The owner*: if you think there is another document that is required and need to be included in this review, let us know.

2. *PM2* agreed to validate the main components of the Strategic Planning (Mission, Vision, Values etc,), once the revision finished, PM2 will pass the information validated to the researcher for quality assurance, finally with the SME-MX consent, the latest versions of the information will be uploaded into the BID

It seems that SME-MX was still struggling to validate some strategic information, thus it was not prepare to fill all the information required in the BID. Furthermore is noticeable that some of the elements or components of the BID will not be used for SME-MX, in any case not until the project

starts and the company growth. *PM2* mention the following "*As reinforcement of the exercise we are trying to carry out, it is necessary to update and compile all the 'base' documents to be used and analyse all the documents. However the project has undergone changes that are not reflected in these documents thus we will not be able to fill all the information required in the BID, hence I suggest the use of a "light" version of the BID which will contain only the core components needed for the development for the e-trade project*".

As a result the *PM2* request, the identification of the main elements needed for a "basic KDB" was performed together with the identification of the essential information needed to develop the light version of the BID. In order to define Where to start and which elements are more important the researcher presented a document to *PM2*, and a discussion about the elements to be included was completed.

With the intention to give structure, and to ease the start-up process, *PM2* and the researcher agreed to use a light version of the BID which is adapted according to the structure of the e-trade project, based on the document "Estructura del documento maestro version light de eBee V1.0.doc" (Structure of the master document light version eBee V1.0.doc).

Finally the BID light was developed and was the main document used in the e-trade project until the end of the cycle. However, the team coincided to continue working with both versions of the BID; the full version of the BID which included all the elements of the four documents, and the basic one, the BID light.

5. *Appointment of the PM*

After the departure of *PM3* as Project manager of the e-trade project in October 2010, the project continued for about two months without PM. Although this was problematic again, the communication between the IT consultant and *The owner* was fairly at ease. *Academic1* has more flexibility in his area of responsibility (Software and Strategy) and *The owner* was working directly with the researcher in the Strategy development. However the need of a PM for the project was still there, thus in November 2010, *The owner* sent and email to the rest of the team announcing the reincorporation of *PM2* as PM of the e-trade project. Nonetheless this time *PM2* was not hundred percent dedicate to the e-trade project, *PM2* was appointed as the Business Innovation VP of SME-MX, thus apparently the monetary conditions were better than before and this was not a PM concern anymore.

PM2's commitment and professionalism remained intact for the most cycle; it was until May 2011 when *PM2* decides to leave the project for the second time, and this time probably for good. Despite

PM2 have announced to *The owner* his departure, *PM2* still agreed to finish the task entrusted, as he declared in an email sent on may 2011 to the researcher and *Academic1*.

6. Software development

The software development has continued from the beginning of the cycle and during the rest of the e-trade project execution. Based on the advances on the BM and despite there were significant gaps, *Academic1* delivered the final cut system of use cases based on his understanding of the business, and these use case diagrams were passed to Sienna for prototyping.

In November 2011 *Academic1* decided to quite over the role of IT consultant for e-trade project, this action response to disagreements with *The owner* in terms of rewards mechanism but mainly because his role was not fully defined or respected, as *Academic1* has been relegated from some decision related to the software development, moreover there were some discrepancies in some Strategic decisions made. However, *PM2* insisted to *Academic1* to stay in the project until accomplish the objectives. After some time deliberating the decision, *Academic1* continued participating in the project but only as IT advisor for *PM2* and only focused in the software development and the analysis of the deliverables from the software developers (Sienna).

There were some events that hindered the progress of the software development, apart of the ones mentioned in previous cycles, for instance the researcher was not aware of some changes happening in Sienna. For reason still unknown, *Developer1* was no longer the person in charge of the e-trade project, and he (*Developer1*) passed the project to an account manager in Sienna. *Developer2* was now in charge of the software development and the development of the software functionality. Once again the continuing changes of personnel have hindering the process of software development. Moreover some problems with the capture of system requirements were detected, apparently the form of capture requirements (using the use case technique) have caused some problems of understanding in the Sienna team.

After the IT consultant (*Academic1*) resigned to SME-MX, Sienna, especially *Developer1* changed the form of gathering requirements from the use cases to history boards. Even though this form of gathering requirements seems not adequate, the Owner seemed glad with this way of working.

At the end of the intervention phase Sienna delivered the firs version of the e-trade prototype but in form of what they called "histories or history-board". These histories were PDF files with screenshots which basically were based on the use cases delivered to sienna at earlier stage of the project. Despites the setbacks originated from the "confusion" of gather requirements and some problems of communications with Sienna. SME-MX decides to continue working with Sienna, at least until the end

of the contract, which ends with the delivery of the first prototype of the e-trade project (history boards) but do not cover the actual development of the software.

PM2 comments "*I think in the process, we feel comfortable with Sienna, because in effect we have seen the enthusiasm and progress, but not in the efficiency of implementation and review methodology*". Thus the team decides to continue working with Sienna for the software development part of the project.

Sienna proposed to work according to the following Gant chart with the intentions of deliver the software prototyping and the final prototype as shown in the table below.

Deliverable	Feedback / Final deliver
Basic elements of the design	12-May 15-May 19-May
History board 1	19-May 23-May 25-May
History board 2	19-May 23-May 25-May
History board 3	24-May 27-May 31-May
History board 4	24-May 27-May 31-May
History board 6	30-May 1-Jun 5-Jun
Additional History board	30-May 1-Jun 5-Jun
Additional elements	3-Jun 6-Jun 9-Jun
Prototype final review	15-Jun 20-Jun TBD

Table 5. 9: Sienna Timetable proposed

5.3.4. Evaluation 4

The evaluation phase of the fourth cycle was performed in May 2011, once the intervention and the actions planned have finished. This phase gained importance as it presents the final conclusion of the project and the evaluation of actions performed by the researcher during this study.

The evaluation of the intervention phase in this cycle was complex mainly for the iterations between planning-intervention presented. Hence in this section, all the actions performed during the intervention of the researcher are assessed and the conclusion of the events performed in the development of the e-trade initiative is presented as follows:

1. *Definition of Strategy and elements of the Strategy Planning*

This particular task was not as straightforward as it was believed at the beginning, because when it comes to a definition and therefore the components of Strategy it was necessary to look at the different concepts that scholars have given to it. The results found some overlaps in the concepts, different authors refers indistinctively to Strategy and Business Model making even harder the

definition of the components that the Strategy should include, hence the definition of the elements in the literature remains confuse and blur for practitioners.

The definition of the 'Strategy' concept is a bit diffuse and there is not a common definition of the concept among practitioners and academics, furthermore the concepts found in the Business literature are very similar to the concept of Business Models used in IS literature.

These overlaps between the two concepts (Strategy and BM) have confused the SME-MX team, as they did not know where one documents ends and the other starts, thus a clear definition of these documents was needed.

An investigation looking at the definition of these terms was conducted in order to dissipate the doubts about the elements of each document and as a Result a common definition and elements were agreed between both teams (Brunel and SME-MX). After reviewing the definitions available, the team decided on the use of the following definition. "Planning or Strategic Planning is the process in which the organisation states the vision and mission of the company, it analyse the internal and external situation of the company, sets the overall objectives, and formulates strategies and strategic plans needed to achieve those objectives

As a result of this intervention it can be concluded that entrepreneurs need to focus on this important aspect of the development of the business (Strategy) in the early stages of the project. The e-trade initiative have delayed the elaboration of the Strategy too long and this decision have hindered the progress of the project, moreover the fact to not have a Strategy delineated have confused the main actors of the project (*The owner*, *PM2* and the researcher) and all the stakeholders involve in this initiative, including Sienna who have not finished the software prototype because of the aforementioned reasons.

2. *Development of the Strategy Planning*

Once the definition and the elements belonging to the Strategy Planning have been agreed, the next natural step in the project was the development of the Strategy. The BLS reference to three levels or tiers to be accomplished in order to develop a strong business initiative, in the case of the e-trade project, the team was working in the second tier, while the first level was not finished yet, which in practice seems to not be a major problem, however the team realise that there were some gaps in the BM that need to be answered through the Strategy development, thus during this cycle the Strategy takes a major role in the project and the team advocates to the definition of the first tier of the BLS in order to move to the BM development and further implementation of the action plans.

However the addition to other document, to the already extended list of documents used in the project, brought even more confusion to the participants, instead of ease the progress of the project. A basic confusion was detected in terms of witch elements belong to which documents and more important, were one document starts and one ends, furthermore it seems that the SME-MX team was still struggling to validate some strategic information, hence the development of the Strategy was not finished during this intervention, moreover the need to put some order to all the documents used in the project emerged at this stage and the Strategy development was reschedule until the database was build.

At the end of the intervention phase the development of the Strategy Planning document have 75% of progress, but still some components needed to validated for *The owner*, consequently *PM2* agrees to validate the main components of the Strategic Planning (Mission, Vision, Values etc,) at the end of May 2011 to continue with the development of the database of business information (BID)

3. *Revision of the components of each document and their relationships*

A recurrent challenge along the project was the constant confusion among the definition of the business documents used in the e-trade project, moreover the growing amount of components and subcomponents belonging to each document, have confused SME-MX and other stakeholders involve in this initiative, therefore this activity became main concern within the team. Progressing with this premises, the researcher performed a classification of the elements, components and subcomponents of each document (SP, BM, BP and BC). The results of this analysis lead to an initial database with a total of 202 entries divided among documents, components, elements and sub components and the definitions of each entry (see appendix F).

This exercise was useful to identify the uses and boundaries of the main documents used to start-up firm. Moreover, the revision of these documents was useful to observe the links amongst the business documents and the hierarchy between the components and subcomponents, which has assisted in the elaboration of the Business Information Database (BID). Also at the end of this activity, the research re-evaluated the position of the documents within the start-up stages and the Business logic framework as shown in figure 5.7.

4. *Creation of the Business Information database (BID)*

The confusion among the different documents used in the industry, therefore used in the e-trade project, together with the large amount of components and subcomponents belonging to the different documents, have been the main factor for the disorder and the unstructured gather of Business Information in the e-trade project.

During the first part of this intervention considerable advances were made on the area of the BM and Strategic Planning; however a disorder in the information still prevails despite the researcher's efforts to maintain a structure for the Business data and for the project in general. After this the team become aware of the necessity of a structured approach to manage the entire information needed for this project and a better way to develop each of the documents sought.   Thus a Better ways to develop these docs was needed, a sort of file system or general database.

Whit this aim in mind, the database called "Business Information database" (BID) was born. The initial aim of this database was to classify the information needed for each document but also was thought to identify the common elements of the different documents and possible links between them as well as the identification of components used along different documents.

The researcher presents a first attempt to the organise all this information and the fist version of the BID was developed and delivered to the e-trade team on March 2001. The initial development of the BID have been use to versioning the documents provided by SME-MX. It was important to note all the changes that the project has undergone in time to see the implicit changes in the Strategy and thus, in the project development. Also this database was helpful to note the different understanding of the different players about the same concept, for example what *The owner* considers to be the Vision of the project, for *PM2* was the Mission and for *PM3* was the objectives, thus the development of the database was not only made to bring control to the project, it was also used to validate information and unify criteria.

The BID was taken pleasantly by the SME-MX team; particularly *PM2* was deeply interested in the database and keen to develop the BID immediately. Nonetheless the SME-MX team was still struggling to validate some strategic information, thus it was not prepare to fill all the information required in the BID due to deadlines constrains, besides it was detected that many of the components and subcomponents of the BID will not be use for the e-trade project, at least not in the early stage of operations, therefore *PM2* explicitly asks in an email dated on 17 March 2011 for a basic database containing the main elements and most important elements needed for the realisation of the project: "*I suggest the use of "light" version of the BID which will contain only the core components needed for the development for the e-trade project*".

The project continues with the elaboration of a basic version of the Business Information Database, a "light BID" was created with the main function of provide to SME-MX with the essential number of components needed for the "basic understanding and development of a *dot-com* initiative, in this case the e-trade project.

The BID light has four main components; Executive Summary, Strategy, BM and BP, each of these components is further divided in the subcomponents belonging to each Business Document. The components of the light version of the BID are presented in table 5.10 and also were presented in the document "Structure of the master document version light eBee V1.0"; also the document "Basic BID V3.1 10-05-11 ASR" presented the final populated version of the BID light.

DOCUMENT	COMPONENT	SUBCOMPONENT
1. EXECUTIVE SUMMARY	IT IS DEVELOPED AT THE END	
2. STRATEGY (DEFINE THE STRATEGY TO FOLLOW)	DEFINITION OF BUSINESS (SUMMARY)	
	OPERATION OF THE SITE (A DETAIL)	
	VISION	
	MISSION	
	GOALS	
	OBJECTIVES	CONTRIBUTION TO THE MAIN OBJECTIVES
	Core Values	
	POLICIES	
	EXISTING AGREEMENTS	
	UNITS	
	SWOT (Strengths, Weaknesses, Opportunities, Threats)	LIMITATIONS (Weak) Strategic Benefits (OPPORTUNITY) Strategic Risk (Threats) Critical Success Factors (strengths, opportunities)
	INTERESTED PARTIES	
	ACTION PLANS	
3. BUSINESS MODEL (DEFINE COMO VA A SER UN NEGOCIO SUSTENTABLE)	VALUE PROPOSITION	SERVICES AND PRODUCTS ADDED VALUE TO YOU SEGMENT TARGET (market, sector and segment)
	VALUE NETWORK	actors, roles and relationships
	VALUE ARQUITECTURE	RESOURCES COMPETITION
	VALUE FINANCE	TOTAL VALUE OF INVESTMENT STRUCTURE AND SOURCES OF INCOME PRICES AND BILLING METHODS CLIENTS (END USERS ARE NOT)
4. BUSINESS PLAN (DEFINE THE COURSE OF OPERATIONS FOR THE BUSINESS)	Technical requirements	Services and products
	Competition analysis	Advantages and disadvantages
	MARKETING PLAN	DETAILED MARKET ANALYSIS AND HOW TO GET TO SEGMENT TARGET
	PLAN OF OPERATION	
	ADMINISTRATION AND ORGANIZATION	
	FINANCIAL PLAN	

Table 5. 10: Components of the 'BID light'

5. *The PM Role*

After the departure of *PM3* as Project manager of the e-trade project in October 2010, the project ran for some months (two months) without PM. Although this was problematic again, the communication between the IT consultant and the owner was fairly at ease, however still a coordinator for the project was urgently needed.

In November 2010, *The owner* sent and email to the rest of the team announcing the reincorporation of *PM2* as PM of the e-trade project. *PM2* rejoins the project at the moment that the team was performing the analysis of the Strategy, the right moment to involve *PM2* on this development due to

the clarity needed in this action, *PM2* brought back the order that the project needed and also the coordination and clarification of the actions related to the Business Model and Strategy development.

PM2 remains in the project until the end of the cycle; however in May 2011 *PM2* decides to leave the project for the second time apparently for the same reasons as before. Despite this time *PM2* was appointed as Business Innovation VP of SME-MX and not only as PM of the e-trade project, thus apparently have better remuneration scheme than before, still some differences with *The owner* related to the economic remuneration and *The owner*'s type of management makes *PM2* leave the project. *PM2* commented about his exit of the project the following; *"It is very difficult to work with a person with the leadership like The owner, we have had many conflicts related to strategic decisions in SME-MX business operation, and I don't want to bring those conflicts into the e-trade project, thus is better for me and for the project to move outside of the project"*. Apparently still the rewarding mechanism used by *The owner* was not ready and not enough to maintain a valuable person in the project.

After the departure of *PM2* at the end of the fourth cycle of the e-trade project AR, *The owner* did not look to fill the position anymore, as he thought that the work of the PM is done, and the remaining part of the project (Software development) does not need this post.

6. *Software development*

This activity, as expected, has been carried out throughout all the cycles of this CAR. Apart form some quotations asked to different software developers in the second cycle of this research, Sienna has always been involved in the development of the software prototype, however the results of Sienna's work has not been as intended. After several months of passing requirements in form of Use case diagrams, the Brunel team was expecting to have better outcomes at this stage. Conversely, Sienna was not really pleased with the employment of Use Cases and at the end of this cycle Sienna changed the way of gather requirements and presents the use of "histories" to validate the prototype done.

Additionally, at the beginning of the cycle Sienna decides to assign another person to the project instead of *Developer1*. Hence *Developer2* have now taken the role left by *Developer1* and converts in the first contact for the software development of the e-trade project. This action initially confuses the SME-MX and Brunel teams. Moreover, the change of the executive attending the project takes the Brunel team by surprise, they were not expecting this change and they were not aware of this change until *Developer2* was already working in the Project a situation that the Brunel team felt it was not right.

As anticipated, the changed of the persons involved in the project have brought confusion and disorder again, and this time was not the exception. Some Problems aroused when trying to develop the prototype of the e-trade project. The Vendor (Sienna) was not used to work with Use cases despite they said the otherwise. Also the Vendor was confused as who was the "champion" or the person to deal with, in terms of the software development, and during this time there were some meetings and decisions made that have excluded *Academic1*, and of course as the IT consultant, *Academic1* was not content with it. Based on the advances on the BM and despite there were significant gaps, *Academic1* developed 1st cut system use cases based on his understanding of the business and delivered again to Sienna, this time to *Developer2*. At this point PM returned (*PM2*) and took over the project again, a situation that helped to put some order for a second time and work in a structured way again.

Even though the project was following a methodology for data collection (Use cases), the methodology chosen seems to be controversial, and have caused some "problems" to Sienna in the understanding and interpretation of the Use cases. Hence after questioning Sienna about other methods to this aim the team agreed to pass requirements in a very basic way.

For the reasons previously mentioned, *Academic1* decided to quite over the role of IT consultant for e-trade project in April 2011, and although *PM2* convinced *Academic1* to remain in the project as his IT Advisor, *Academic1* ended his relation with Sienna and passed this role to *PM2*. At the end of the intervention phase Sienna delivered, what they called "histories", these histories were a simple representation of some of the use cases delivered by *Academic1* but it was presented in PDF format containing screen shots of the different functions such as; buying products, my account, new user, and so on.

As a conclusion of the intervention of Sienna in the e-trade project, the researcher makes a series of observations (discussed in the meting dated on 8th May 2) about Sienna's performance and how should be the future work with them. In summary *PM2* and the researcher conclude with one phrase: "Sienna as our supplier must adhere to our communication methods or propose a method robust enough for our requirements…"

The final deliverable from sienna was on the April 2011, this deliverable contains seven "histories" according to the actions planned. After this deliver SME-MX decides to hold back the software development until some strategic issues and doubts are dissipated. Which the researcher believes it was the right choice.

5.3.5. Learning and reflection for practice 4

This section presents the main conclusions of the fourth and final cycle of the AR performed in the organisation under study (e-trade). The section is dived in the reflexion out of the activities planned during the diagnosis and planning phases of the CAR process.

Definition of Strategy and elements of the Strategy Planning

- o The first challenge presented during this cycle was the definition of the Strategy and the components that form it. The literature presents still not a consensus on the definition neither on the elements needed to construct Strategy. Moreover the analysis of the literature presents some overlaps between the Strategy and the Business Model concepts which have generated even more confusion among the stakeholders of the project. Thus in order to ease this confusion, the researcher and the client look for a common agreement on the definition of Strategy and their corresponding elements.

- o The Strategy Planning components and subcomponents presents a series of concepts that possibly will confuse novice entrepreneurs, the similarity and closed relationship among some components makes difficult the differentiation and boundaries of each documents, this confusion can be particularly explained with the components; Mission and vision, which still scholars and practitioners are using these terms interchangeably while in reality those concepts are related but mean different steps of the organisation.

Strategy and BM development

- o The experience of previous cycles has given clarity among the Strategy and BM concepts; two different processes which were treated as the same during the early stages of this project. Also during this project the entrepreneur was dividing this two phases (Strategy and BM), whilst the literature appoints to the integration of these phases and evidences that having a Business Model by itself it is not enough to develop a firm or company, mainly because the aim of the Business Model is to generate revenue, while the aim of the Strategy is to create value (Porter, 2002), which in essence are two different concepts, although have a strong relationship.

- o Also Magretta (2002) emphasises the importance of a good Business Model as an essential part for building Strategy in any organisation, whether it is a new venture or established firm, thus the importance of the Strategy and the BM are equal and the relation between them is direct but not restricted.

- o Also it was important the need to map this "new" document into the framework, reflecting the direct relationship between the Strategic Planning document and the first level of the BLS,

furthermore the start-up framework was once again analysed against the findings of this cycle, and is further reviewed in the theoretical reflexion part of this section.

As a result of this intervention it can be concluded that entrepreneurs need to focus on this important aspect of the development of the business (Strategy) in the early stages of the project.

Creation of Database for Business Information

o The addition to other document (Strategy Planning), to the list of documents used in the project, brought more misunderstanding to practitioners, thus a way to organise and classify the large amount of components needed for the development of the e-trade project was proposed for the e-trade project at this stage. The database was called "Business Information Database" (BID), referring to the different business documents and the components of such documents. The first version of the BID portray all the elements and subcomponents needed for the elaboration of the Business Model (V^4), the Business Plan, the Strategy Planning and the Business Case, it also classify each documents and prioritise the information needed. The Brunel Team to develop a prototype in Microsoft access with this aim, this first electronic version of the database was based still a prototype, and contain very basic programming, however the feedback of the BID was satisfactory.

o The first prototype of the BID was very helpful to determine different versions in the information used in the project and to analyse the changes on such information, furthermore the database was useful to review the components of each document and analyse the relationships between the elements of the EP with the BM and the BM with the BP (processes).

o Despite the BID was very well accepted, and SME-MX was pleased with the functionality of this, it seems that SME-MX was still have struggling to validate some strategic information, thus it was not prepare to fill all the information required in the BID. As a result a "basic KDB" was needed together with the Identification of the main elements of each document. With this aim, the Identification of the essential information needed to develop the light version of the BID was presented to the directors' board.

o A "light BID" was created with the main function of provide to SME-MX with the essential number of components needed for the basic understanding and development of the e-trade project. The project continues with the elaboration of a basic version of the Business Information Database however at the end of this exercise it was found that still the links between all the components is needed and a understanding of the relationship the database and the framework

Software development

- o Once again the continuing changes of personnel have hindering the process of software development. Moreover some problems with the capture of system requirements were detected, apparently the form of capture requirements (using the use case technique) have caused some problems of understanding in the developer's team. Apparently the methodology for data collection (Use cases) seems to be controversial, and have caused a little inconvenience to Sienna in the understanding and interpretation of the Use cases, thus it was decided to look for another way of communicate and validate requirements, and in the meantime stop using this methodology. However the "methodology" chosen by Sienna was too simple and leaves space for different interpretation of the functionality of the system, thus several iterations were needed but not accomplished.

- o Sienna delivered the firs version of the e-trade prototype but in form of what they called "histories", this histories have some of the requirements passed in form of use cases, however they were not hundred percent adhere to the original requirements, thus after the last deliverable, SME-MX decides to hold back the software development until some strategic issues and doubts are dissipated. Which the researcher believes it was the right choice.

5.3.1. Learning and reflection for theory 4

Links and relationships between SP to BM and BP

- o Developing a new dotcom Business Model can be seen in three main stages: Strategy (definition) Business Model (conceptualization) and Implementation plans (Business Plan, financial plan, etc.). Although the inputs and outputs of these three stages are closely related, current literature has treated those separately and there is little information that outlines the sequence, dependencies and priority of the activities required to produce a robust Business Model and corresponding action plans. Whereas large organizations count with the expertise to identify these relationships, it is know that SME do not.

- o It seems to be a strong relationship among the business documents used in the project, especially between Strategy Planning and BM development, although some of the relationships and links are implicitly deduced, still there is a strong need to make clearer to stakeholders how the components of each document interlink amongst each other.

Review of the theoretical framework (The fit of the Strategy within the framework)) and the start-up process

- o At the end of this cycle and after the revision of the Strategy Planning document, a revision of the start-up framework was completed in order to position this document (SP) into the

framework. It seems clear the direct relationship between the Strategic Planning document and the first level of the BLS (Strategy), and also a strong relationship of the SP with the rest of the documents. Figure 5.3 presents the initial mapping of the Business documents and also the final framework is further explained in next chapter.

- o Also towards the end of this cycle, it become evident the need to further analyse the relationships among the different business documents, especially the relationship of the 3 tiers of the business logic, Hence as a final activity to finalise the start-up framework proposed in this study, the researcher attempts to answer the following questions; How the Strategy affects the development of the Business Model and how the components of both, relates and links between each other, also how the BM is linked with the action plans, and finally identify if these links and relationships are linear or there are inter-related.

5.4.   Summary

This chapter have presented the final two cycles performed in the organisation under study (SME-MX). Cycle 3 have focused in the study of three main objectives related to the second level of the business logic; The BM. Thus the objectives of the cycle were; analyse the literature in the BM domain, select a BM ad-hoc to the e-trade project, and populate the BM with e-trade data. Also during this cycle a review of the current documents used was completed resulting in the unification of the definitions and components of each business document. Conversely, cycle 4 has focused in the development of the first level of the business logic; the Strategy. Cycle four focused in the deep understanding of the Strategy and the document used to portray the Strategy (Strategic planning). The aim of the last cycle was to identify the components of the Strategy Planning and to investigate the relationships among the elements of this document with the BM, with this aim a database was created (BID) to assist in the identification of the relationships among elements.

This chapter finishes with the withdrawal of the researcher of the project in May 2011 and the delivering of the final report to the client, which presents the framework for start-up a *dot-com* initiative, resulted of the AR study and further recommendations for SME-MX. However, the researcher has programmed the execution of a final cycle (without the participation of the client) in order to add missing information to the framework and to evaluate the framework through the use of two case studies. The final cycle (evaluation cycle) is presented in next chapter.

Chapter 6:

Validation cycle (Testing the framework and the links between the building blocks)

Azael Serrano
Brunel University

CONTENTS

Chapter 6: Validation cycle (Testing the framework and the links between the building blocks)

6.1. Introduction

Chapter 6 presents the last cycle of this research, which has been designed to validate the final framework produced as a result of 4 cycles of CAR. This cycle differs from the previous four in the sense that there was not actual participation of the company under study, namely SME-MX. However, this chapter is structured following the CAR phases (Diagnosis, Planning, Intervention, validation and Reflexion).

This cycle can also be seen as an overall analysis of the previous cycles. The **diagnosis** of the validation cycle presents a summary of the four cycles of CAR performed in the organisation under study, and finishes with the final start-up framework created from the findings of the literature and the results of the QDA of the study. The intervention phase concentrates on the development of the final framework, and this is done without the intervention of SME-MX, as the actual CAR ended in previous cycle. The intervention phase also presents the final analysis and examination of the relationships of the different business documents used throughout the phases of the start-up process. Finally section 6.6 explains how the framework was **validated** through the use of two short case studies. The learning and reflexions from this cycle and thus the entire study are presented in chapter 7 of this dissertation.

6.2. Diagnosis (Summary of the e-trade project)

This section describes the research performed during the participation of the researcher in the e-trade project, therefore this sections starts with a summary of the project objectives followed by the project background which links the research objectives with the execution of four cycles of CAR which are presented in section 6.3

The aim of this research is to develop a start-up framework with a list of sequential steps to be used for start-up a *dot-com* initiative within the SME context. With this objective in mind, the researcher used a CAR approach within a Mexican SME to develop the start-up process of a *dot-com* company in real world settings.

Project background

The e-trade project which started as simply software development activity shortly evolves into a more complex project which involves the understanding of the whole process to develop a new venture within the SMEs and *dot-com* sectors. Consequently the client approaches Brunel University and the researcher in order to obtain assistance in the development of a *dot.com* company. The 'problem' that SME-MX was facing at this time, seems to be an easy and straightforward assignment, however the

literature exhibits that developing a *dot-com* initiative is not a simple and undemanding task, what is more, the execution of this research confirms the findings of the literature as the project presented several challenges to overcome. A brief explanation of the company under study and a summary of the problems analysed in the CAR applied in this study is presented below.

Project background: summary

SME-MX is a successful Mexican SME with more than 10 years in the market, participating mainly in the B2B mass retail market with a leading Strategy in the wholesale and retail sector. Previous experiences of the owner of SME-MX and the critical economic situation in developing countries, such as 'Mexico', encouraged the owner of SME-MX to incursion in the *dot-com* sector, through an innovative idea of trading (products and services) in a C2C basis, without the need of cash. This idea rapidly evolves into the e-trade project, which was born under the *dot-com* umbrella to cover the particular needs of this market niche.

This study is concentrated in the analysis of the actions taken by SME-MX (the organisation under study) thus the main participants of this study are those individuals working in SME-MX, however some other actors (such as software developers and consultancy companies) participated in some stages of the project and were considered too. The full description of all the participants in the project is presented in chapter 4 section 4.2.3.

The aims of the research and thus the aims used to explore the e-trade project were established as follows:

- o   Develop a start-up framework in the *dot.com* context
- o   Detect the main challenges of the start-up process
- o   Organise the amount of business information emerging from the project throughout the analysis and classification of the current business documents used in the industry.
- o   Develop a database containing all the components and elements needed for the planning.
- o   Link the building blocks

Once the researcher-client agreement was signed, the project was ready to commence and legitimately started in 18th May 2009 with the diagnosis of the first cycle. The following section presents the project evolution through four cycles of CAR, together with the description of the evolution of the development of the framework proposed in this research.

6.3.   Summary of each cycle (Project/framework evolution)

The following sections presents the main findings and challenges in each cycle, followed by a description on how the start-up framework was developed, and finishes with the analysis of further actions to be undertaken in order to finalise this research and provide valuable insight to the IS domain. Each cycle is presented as follows: first a table summarises the diagnosis and planning stages followed by a summary of the evaluation and reflexions phases of each of the four cycles.

6.3.1. Exploratory cycle - Cycle one results

The e-trade project started as software development activity but after the first approach of the client with the Brunel team and after a first diagnosis of *IT consultant*, the real problematic emerges: SME-MX needed assistance in the development of a *dot-com* initiative, in which the owner did not have prior experience, making even more difficult to be performed on their own. *The owner* was not familiar with these types of businesses and the requirements of these kinds of ventures (*Dot-com* initiatives), hence the owner's process to start-up this new venture was not clear and a thorough analysis of the problem situation was needed as this stage of the project.

Diagnosis and Planning

During the diagnosis and planning phase of the first cycle, a number of areas for improvement were found, hence activities were planned in order to overcome such problems and advance in the understanding of the e-trade project. Table 6.1 presents a summary of the problems encountered in the project and the solutions offered during the intervention of the first cycle.

Diagnosis	Problem delimitation / Aim	Activity Planning / Intervention
Identify the process needed to develop a *dot-com* company	Review and present the latest start-up process	1. Review the latest finding in *dot-com* developments and propose a start-up framework
Identify how and which web 2.0 technologies can help the development of this project	Review and present how, and which web 2.0 technologies can help in the development of the e-trade project	2. Drawing the commercial uses of web 2.0 technologies
Capture software requirements / Software development	Capture of System requirements	3. Capture system requirements in the form of Use Case diagrams
Theoretical Objectives	Identify the main challenges arisen from this cycle and external factors affecting this development	4. Qualitative Data Analysis and Thematic Analysis. (theory-driven)

Table 6. 1: Diagnosis, and Planning phases in the first cycle of the e-trade project

Intervention and Evaluation

As a result of the diagnosis and further planning of actions, the researcher implements the activities planned through the intervention phase, therefore the outcomes of the researcher's intervention among the activities executed are presented as follows.

1. Review and present the latest start-up processes and proposed a start-up framework for e-trade: The researcher and the organisation under study conclude that the first activity to be performed would be to investigate the start-up process to be the foundation and direction to start the development of the e-trade initiative. Hence, the researcher exposes during this period the importance of following a process, or steps, to guide the entrepreneurs' actions in the process of starting-up a firm, hence the aim of the researcher was to develop a practical approach to indicate the steps needed for the development of a *dot-com* company.

As a result of the literature review, the researcher proposed an initial framework to start-up a *dot-com* company. This framework is based on the different frameworks and models found in the literature. The initial framework proposed was developed based on the revision of the literature in two main areas: the business and the IS domain. The researcher combined the two streams of the literature and proposed an initial conceptual framework based on the 3 stages found in the Business literature and the three levels of the Business logic from Osterwalder (2002, 2007) representing the IS domain.

The initial framework is based in the three stages needed to start-up a firm; conception, Planning and implementation. However the addition of the three levels of the Business logic, have made and adjustment to the framework, adding a temporal phase between the Planning and Implementation stages: The architectural level, in which the BM is portrayed. Also Osterwalder and Pigneur (2002) argued that the Strategy should be positioned at the planning level, thus the Business logic starts at the planning level and finishes with the implementation of the business process as shown in the figure below (see also Chapter 4, Figure 4.5).
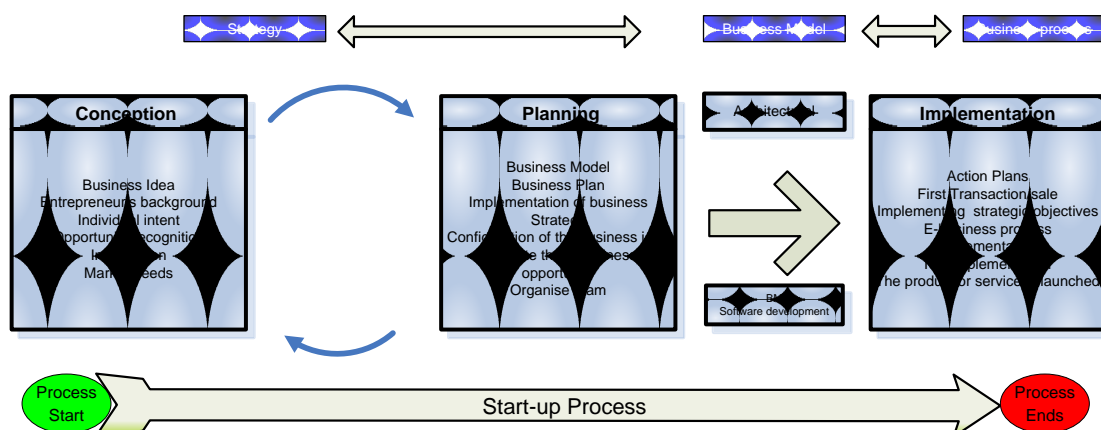
Figure 4. 5: Initial Conceptual framework

The outcomes from this action plan have cleared the panorama of the e-trade project and have been useful to position the project within the conceptual framework. Moreover, this analysis has assisted to identify the need of using a Business Model as a subsequent step in the e-trade project.

2. Review, classify and identify the web 2.0 technologies/drawing the commercial uses: The researcher presented a report at the end of the first cycle with a detailed description of state-of-the-art web 2.0 technologies. The report is presented in the appendix section (Appendix A). Additionally abstracts of this report are presented in chapter 4, section 4.4.4.

Although the web 2.0 technologies were not considered during the project, still these technologies seems to be very important for *dot-com* organisations, therefore some information related to this topic is presented alongside this research.

3. Capture of system requirements: The capture of the initial system/software requirements started from the beginning of this cycle, at the end of May 2009. *IT Consultant* suggested the use of a software modelling technique called "Use Case" for the purposes of gathering systems requirement and pass them to software developers, which at the time seems to be the right choice for this activity. This task, capturing requirements, has been useful for the finding of some of the inconsistencies or gaps between the functionality of the project and the system requirements, such as the need to define the sources of income and other strategic decisions. However, although it was some important and relevant information still missing, the client requested to continue with this task for the rest of the project.

4. Main challenges and observations: The following observations and notes are considered the most important problems faced during the intervention of the first cycle.

- o *Limited IT Knowledge and lack of Human and financial resources*.
- o *The marketing research done at this time was shallow and based on "educated" guess*.
- o *The need to see tangible results from SME-MX*.
- o *The need of a PM.*
- o *The business information available was unstructured and messy.*

The team become aware of the absence of a start-up process (during this time, the project seems to be in the very beginning of the conception phase, hence it was still not settled a starting point and the information generated was basically random and unstructured (akin to a brainstorming session). At the end of this cycle, the researcher proposed a more structured approached to manage the e-trade project. Hence a First BP was proposed with this aim, and as a result the client agreed to continue the project development through a second cycle.

Further research agreed to be covered during the execution of a second cycle

The evaluation of this cycle has found the following areas to be further analysed during the second cycle.

- o A revision of the start-up framework positions the e-trade project at the end of the "conception" stage of the start-up process; therefore the team is required to concentrate the efforts in the planning stage.

- o One of the main elements of the Planning phase is the use of a Business Model (BM) or a Business Plan (BP), as a consequence, the researcher proposed a BP at the end of this cycle, however this BP did not have all the components needed considering the characteristics of the e-trade project. For instance, the first BP proposed did not consider the e-Commerce factor and value creation element necessary fro this project. Consequently, The BM seems to be the connexion between the Conception and the Implementation phases. Consequently a Research needed to be done in order to select a Business Model according to the e-trade characteristics.

- o Also some confusion between the names of the documents emerged at this point. Hence the researcher investigates the difference and relations between a BP and BM in order to clarify the apparent confusion on those terms.

- o As consequence of the new term (and document) emerged (the BM), the need for research in this domain was required and also the selection of Business Model suitable for SME-MX requirements was essential for the project. Consequently, all the information of the project was fed into the selected BM.

- o Finally, the incremental amount of information in the project illustrates the need to organise and manage all these information. Furthermore it was evident the need for a Project Manager or project leader dedicated to the project in order to ease this situation.

6.3.2. Assembling the team and project kick-off - Cycle two results

The second cycle of the e-trade project had a length of 4 months, from August to November 2009. After accomplished the aim of the first cycle (identify the main problem of the e-trade project) the second cycle was used to formally start with the development of the e-trade initiative. Therefore this cycle has a strong connection between the evaluation phase of previous cycle and the diagnosis phase of this cycle. As a result of those phases, the actions performed during the second cycle and the main problems detected, thus investigated during the second cycle are presented in the table below.

Diagnosis	Problem delimitation / Aim	Activity planning / Intervention
The appointment of a coordinator or PM was necessary and urgent	Need for a PM dedicated to the project	1. Appointment of a Project Leader, coordinator or PM
The need for research in the BM domain and the call for a Business Model suitable for SME-MX requirements.	The need for research in the BM domain and the call for a Business Model suitable for SME-MX requirements.	2. Review and propose a Business Models accordingly to the characteristics of the e-trade project.
Selection and development of the Business Model	Selection of **one** BM for the e-trade initiative.	3. Select and Populate the BM with e-trade business data.
Continue with software development and capturing system requirements	Capture system requirements	4. Capturing business requirements in form of Use Cases
Theoretical objectives	Challenges in the implementation of actions planned and further challenges of the cycle.	5. Analysis of data QDA and Thematic Analysis

Table 6. 2: Diagnosis and Planning phases of the 2nd cycle

Evaluation & Reflection

1. Appointment of the project leader (PM): It was evident the need of a project coordinator in order to handle the incremental number of tasks resulting from the project, and to solved the problems of communication. The incorporation of a PM partially solved some of the communication issues between the Brunel team and the client, also the incursion of *PM1* as PM into the project alleviates one of the main challenges facing in first cycle of the project: the organisation, alignment and structure of the information. However two main hold backs resulted from this activity; first the new PM, wanted to have a fresh start in the project, therefore the PM in turn disregards previous work in the development of the BM and change the method to document the project, a BP was use again. Secondly the PM exits the project just after 3 months in the position, hence the communication problems emerged again.

2. Review and propose a Business Model for e-trade and the need for documented business information: The team agreed to use a BM as a base for all the information produced and to be produce along the e-trade project. This cycle lead to the selection of a Business Model that matches the requirements of the e-trade project. As a conclusion of this study, it was found that it was little or nor information specifically for these types of organisations (*dot-com*). Furthermore there is still not a clear understanding of how many of these models exist today and how they are clustered. However the poor results of the analysis performed, motivated the researcher to look closer on the characteristics of this types of companies, in order to adapt existing BM to the e-trade initiative.

The first BM presented to the client was a hybrid of different BM from different authors who attempt to identify and explain general elements (**components**) in the BM such as Rayport (2002) and Radovilski (2005) (see figure 4.9 in chapter 4).

3. Populate the BM with e-trade business data: Once the selection of the first BM was done, the team worked in a first round to capture business data, and as a result the first deliverable was ready and presented in an initial BM in August 2009. Although This BM was an incomplete document due to the fact that most of the information to populate the BM was related to the Strategy of the project and needed to be build up by SME-MX. The BM proposed did not cover all the aspects needed for the development of the e-Business initiative that SME-MX needed. For instance, this BM has not differentiated between brick and mortar and *dot-com* initiatives as well as being designed for large organisations. Hence the need for a BM more oriented to "*dot.com*/e-Business" characteristics emerged.

4. Capturing business requirements in form of Use cases: Although a second cut of use cases was delivered at the end of this cycle, still the use cases were not developed in full mainly due to some strategic decisions that needed to be taken by SME-MX. At this point it was evident the tendency of the client to develop the software at this stage. In this cycle SME-MX contacted software developers regardless of the advice from the Brunel team not to do so, as the use cases were not fully developed nor validated.

5. Main challenges and observations in this cycle:

- ○ ***Selection of the BM.*** The first challenge faced at this stage was the selection of the e-Business Model that better suited SME-MX needs.
- ○ ***Communication challenges.*** Communication is one of the most reported issues in any IS/IT projects and in the e-trade project has been a main issue of concern too. It seems to be a technology-language barrier between the two teams (Brunel and SME-MX) which have made more difficult to complete certain tasks or defining some elements of the Business Model.
- ○ ***New PM appointed.*** The PM recently incorporated to the project decided to not use the BM and brings back the concept of BP; this was considered as a step backwards. However some 'new' concepts were introduced, such as Strategy, Vision, Mission and Marketing. Moreover, additional information was needed and not considered before, such as marketing research including the SWOT and PEST analyses which later the researcher realise that belongs to the Strategy.
- ○ ***Lack of IT knowledge***. During this cycle it become evident the IT Knowledge limitation, lack of Human Capital and financial resources of SME-MX as the main constrains of the project.

Further research agreed to be covered during the execution of a third cycle

o   After a careful analysis of the Business Model used during this cycle, it was detected that some decisions needed to be made at the strategic level to give clarity and direction to the project, thus a clearer understanding of the relationship between Strategy and Business Model was needed.

o   The BM used during this cycle was still not covering the main characteristics of the e-trade project, therefore a robust Business Model that embrace all the characteristic of the e-trade project was still necessary.

o   The Confusion in the documents used in the project to document the business data prevail alongside the cycle, hence it become evident the need to clarify and delimit the business documents used.

6.3.3. Business Model development and the PM Parade - Cycle three results

The third cycle had a length of 9 months; from early December 2009 to 10th August 2010 (see Figure 5.1 in chapter 5). This cycle had made clear the relevance of the Business Model within the start-up framework, therefore focuses on the concept of BM, the selection of a BM ad-hoc to the e-trade project and the data population of the Business Model with e-trade business data.

Cycle 3 started with the evaluation of the outcomes of Cycle 2 in the diagnosis phase, which suggested the need to change the current Business Model in use, for a robust BM in order to sustain the e-trade project idea and conceptualisation.

At this moment in time (the start of cycle 3) the researcher has attempted to position the e-trade project in the start-up framework and positioned it in the planning phase, as it was believed that the elements of the Strategy level have been accomplished. Hence the next logical step in the start-up framework seems to be the architectural level (BM) to connect the Strategy and the actions plans. However there were some indicators during the cycle that pointed to a lack of Strategy in the project, and it was further analysed during the cycle.

The main events covered and investigated during the first cycle are summarised in table 6.3 below.

Diagnosis	Problem delimitation / Aim	Activity Planning / Intervention
The need for a robust BM	The selection of a robust Business Model	1. The selection of the V^4 BM and the inclusion of web 2.0
Understanding of the data needed to the development of the BM and the Relationship with software development	Analysis of the data necessary to populate the BM and links with software development Capture software requirements	2. Populating the BM with business data 3. Capturing system requirements; third cut
Confusion and misuse of the definition of the business documents	Review of the current business documents used in SME-MX and their practical use for the e-trade project	4. Unification of criteria along the uses and definitions of the current Business documents
Theoretical objectives	Revision to the start-up framework to identify changes in the framework)	5. QDA with Thematic Analysis
	Challenges in the implementation of actions planned and further challenges of the cycle.	6. QDA with Thematic Analysis

Table 6. 3: Diagnosis and Planning in the 3ʳᵈ cycle of the e-trade project

Evaluation & Reflection

1. The selection of a robust Business Model ad hoc to the e-trade project: The variety of the Business Models existing in the literature and the indiscriminate use of such models, made this task more difficult. Hence the Brunel Team decided to search for assistance with a specialist in e-Business Models. As a result the researcher proposed the use of the "V^4 Digital Business Model" as a second version of the Business Model. The reason behind the selection of this model is explained in the intervention phase of cycle 3 in chapters 5, section 5.2.3. However the researcher have made minor modifications to the V^4 model adding web 2.0 technologies to the model, and the adaptation of the BM to develop it in the context of the e-trade project, as explained below.

Modification to the V4 BM to include web 2.0

With the change of the original BM to the robust version of the V^4 BM, a new revision of the Model was needed in order to find the fit of the web 2.0 technologies within the four dimensions of the model. As a result of the analysis, the researcher and *Academic2* placed the web 2.0 technologies within the elements of the value proposition dimension. Figure 5.4 in chapter 5 illustrates the incorporation of web 2.0 into the BM.

Evaluation of web 2.0

It seems that the web 2.0 is still considered by entrepreneurs and practitioners just as an extra tool for the portal or as a content aggregator, and it is not seen as an integral part of the business. However the researcher believes that the different uses of web 2.0 technologies, if well planned, could benefit companies with low marketing budget, as normally happens with SMEs. However and despite the

efforts of the researcher to include this topic into the software development of the e-trade project, still these technologies were not fully studied during this research, making difficult for the researcher to draw final conclusions in this domain.

Evaluation of the V^4 BM

One disadvantage found on this BM in relation to the e-trade project is that in order to understand the BM, the user (in this case SME-MX) required certain level of IT literacy and be familiar with the concepts of the BM itself. The BM, as such, it is rather complex as it contain 14 components and 64 subcomponents, across 4 dimensions. Each of these dimensions needs to be fully understood in order to comprehend the components and proceed with the population of the BM with e-trade data.

The V^4 BM presented another challenge to the e-trade project. The V^4 BM was originally created for large organisations already established, and therefore it assumes that the organisation has already started operations thus start-up process is already done. Consequently the BM assumes that the Strategy is already in placed, and also contradicting Al-Debei et al (2007), some subcomponents may not be used by SME-MX at this early stage of the project.

However the understanding of the BM dimensions and components was useful to determine the aspects still missing from the e-trade project and the sources of that information missed, also this activity has evidenced the lack important Strategy decisions needed to progress in the development of the BM and the project in general.

2. Populating the BM with business data: The complexity of this model made difficult to understand all the dimensions and components. Although the researcher and *Academic2* emphasised several times the definitions and relationships among components, still the client was not fully aware of those relationships. Moreover it was detected at this point that more actions were needed in order to build, understand and made clear the relationships between the BM and the other phases of the framework (e.g. Strategy and Business processes).

It was found at this stage a huge amount of information missing, this problem was detected as a result of populating the BM. During this analysis the researcher found many inconsistencies between different parts of the BM. However the main conclusion after the evaluation of the e-trade BM was the lack of Strategy Planning; hence a profound analysis of the Strategy development process becomes a priority in the e-trade project.

3. Capturing system requirements (third cut): The elaboration of Use Cases, as part of the software development, continues during the entire cycle. The actions of the PM in turn (*PM3*) were oriented to the software development, thus this cycle has a strong tendency to this task. During this cycle two

software developers were contacted with this aim, and some advances were made in terms of capturing system requirements. Although some use cases were passed to the software developers during this cycle, this activity was still not completed, mainly because the use cases delivered were not validated by the client and secondly because the task of create use cases was not finished, both attributed to strategic decisions still to be made.

4. Confusion between documents: This particular action was very important to understand the way SME-MX is operating and what kind of information normally use to develop action plans. The teams were talking about different business documents (BM, BP and BC) arbitrarily, which in turns confused the stakeholders and all participants involved. The different stakeholders' views as to what make a Business Model and a Business Case (BC) and Business Plan (BP) seems to differ among them. This was a major problem during the entire project and exacerbated every time that the PM changed.

A review of the business documents used in SME-MX and in the literature was completed during this cycle; as a result the researcher presented a report to SME-MX team about the different business documents used for organisations and the similarities/differences between them. Furthermore, the report presented contained the different definitions of the business documents, and the aim of this report was to agree in a single definition for each document among the participants of the project. As a result the BM, BP and BC were defined and also the relation between the Model and the Plans were presented. However, after the review of the current business documents used, still the confusion of documents was present during the entire cycle, mostly attributed to the PM parade.

5. Revision of the conceptual framework - Mapping Strategy and BM in the framework: A review of the framework has been executed after the researcher's intervention in this cycle and considering the outcomes from the learning and reflexion phase. As a result the framework has had the following changes:

Previous framework proposed a linear process which starts with the identification of the business idea and continues with the Strategy, which is part of the planning stage, then create the BM in the architectural level and finishes with the actual execution (implementation) of the business process. However after the series of activities performed in the project it was found that a higher importance has to be given to the development of the Strategy. As consequence, the initial framework was enhanced integrating the BLS (Strategy-BM-Process) with the start-up process (Conception-Planning-Implementation). Due to the importance of the Strategy development in the framework, an extra phase has been added as a consequence of the high relevance of the Strategy element in relation to the start-up framework, as shown in figure 6.1 below. This figure presented the revised framework linking the

start-up stages with the business logic, and emphasises the Strategy and the BM as the fundamental connection between the BL framework and the start-up process.
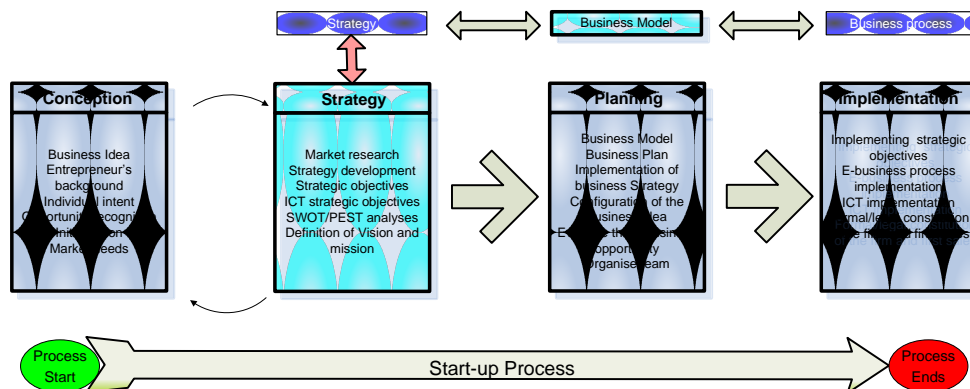
Figure 6. 1: The revised and changed framework

However, it was detected that still some research needed to be done in the Strategy domain and a review of the documents used to develop Strategy was needed also. Nonetheless this revision made clear the lack of Strategy decisions in many aspects of the project that needed to be addressed before start planning the software development and before the elaboration of the BM. The development of the BM was useful to identify the aspects and information missing in the project and the lack of Strategy or a fuzzy Strategy. Thus the main conclusion of the cycle was the lack of Strategy prevailed in the project.

6. Main challenges and observations:

o **The PM parade**. The incorporation of the PM was useful to alleviate the problems of communication from previous cycles. However, the 'PM parade' affected the evolution of the project. At this stage of the project (the end of cycle 3) four PMs have participated in the project and quit after only few months in the position, a situation that clearly hindered the progress and peace of the project.

o **Software development**. The capture of software requirements in form of Use Case diagrams, as part of software development, was suspended in July 2010. The PM in turn (*PM3)* seems to be unfamiliar with this technique and agreed with the software developer to not employ "Use Cases" anymore as the mechanism for gathering requirements. Therefore the software developer company disregarded most of the Use Cases created, and as expected, delivered a completely different functionality in the first prototype of the e-trade website, which leads to some problems in the way to communicate software requirements. From this problem, it can be concluded that perhaps this technique may not be the best way to capture system requirements among SMEs due to the level of IT literacy needed to understand these diagrams. Alternatively, training in this area may be necessary to enhance this process. Another problem related to software development was the expectations from the SME-MX owner. The owner

was expecting tangible outcomes and not only documents. Thus the client was pushing this activity during this cycle (prototype software, and web Portal development), and consequently the project moves from development of BM and BP (under the guidance of *PM2*) to software development under the guidance *PM3* who has been instructed by *The owner* to develop the software. Consequently the development of the BM and software development was divided one more time. From this action it can be concluded that inexperienced SMEs participating in *dot-com* initiatives may have problems to understand the strong relation between the business conceptualisation (*dot-com*) and the software development (web portal) in this types of initiatives.

o **Definition of Roles**. The incorporation of new players (participants) confused the stakeholders, as the team did not know who the new players are, and what the main roles of each of them are. The definition of roles played an important part in this project, hence can be concluded that a clear definition of roles and responsibilities of each participant needs to be clear to the rest of the stakeholders and participants.

o **Strategy definition**. The Strategy seems to be at this stage the mayor concern in the project. Hence the SME-MX team should be aware of the importance of defining a Strategy and the possible sources of income, as these will shape the Business Model and the further implementation of the actions plans (BP). During the e-trade project it was observed that the lack of strategic planning had significant impact on the progress of this project.

Further research agreed to be covered during the execution of a final cycle

The main conclusion from this cycle was the lack of Strategy of the e-trade project. It was found at this stage a vast amount of information missing, mainly information related to the Strategy of the project which was necessary to take decisions and further directions to operate. Hence the main areas to be studied during the last cycle were summarised as follows.

o Unified criteria among the definition of the Strategy.

o Clarification of the elements of the Strategy (Strategy Planning components and subcomponents).

o Development of the Strategy (populating the Strategy planning components with e-trade business data).

The conclusions of the cycle shows that the start-up process is much more complex than the BM suggest. Thus a more comprehensive approach is needed and the team needs to think in a better way to structure and organise the business information emerging from the project. Therefore the creation of a

database aimed to ease the complexity of the start-up process needs to be analysed; therefore an objective has been settled for that aim.

    o   The identification of all the elements of the business documents and the creation of a Business Information Database (BID)

6.3.4. Making sense - Cycle four: results

The fourth and last cycle within the e-trade project started with four specific objectives: 1. To define the Strategy document 2.To investigate the main components and elements of the Strategy Planning and the relationship with the start-up framework, 3. To populate the Strategy planning and Business Model with business data from the e-trade project, and 4. To define the final framework from the literature and the outcomes of the AR project.

This cycle had a length of 9 months and covered a period from August 2010 to May 2011 and marks the end of the client-researcher agreement. The main areas investigated during this cycle and the activities planned are presented in table 6.4, below.

Diagnosis 4	Problem delimitation / Aim	Activity Planning / Intervention
Clarification and definition of the Strategy components	Strategy not defined or poorly defined	1. Revision and Definition of Strategy, identification of the elements of the Strategy Planning and development of Strategy within the e-trade context.
The need for a structured way to manage the business information. (populate the Strategy planning and BM documents	Revise and separate all documents for the start-up process Identify the technology needed for the elaboration of the Business documents (BID)	2. Revision of the components of each document and their relationships 3. Creation of Database for Business Information. "BID"
Theoretical Objectives	Review of the start-up framework	4. Revision of the framework: Mapping Strategy planning in the framework
	Challenges in the implementation of actions planned and further challenges of the cycle.	5. Analysis of data QDA and Thematic Analysis

Table 6. 4: Diagnosis and Planning phases in the 4th cycle

Evaluation & Reflexion

1. Revision and Definition of Strategy, identification of the elements of the Strategy Planning and development of Strategy within the e-trade context: The results of the literature review in the area showed some overlaps in the Strategy and BM concepts and did not present a common definition of the concepts. The definitions found in the business literature are very similar to the Business Model concept used in the IS literature, and shows how the authors refers indistinctively to Strategy and Business

Model, making even harder the definition of this concept. In order to ease this confusion, the researcher and the client agreed on the definition of Strategy and their corresponding elements. After agreed a common definition for the Strategy, the next difficulty to overcome was the confusion between the components of the Strategy Planning document. Some of these components seemed to have the same meaning such as; core values and polices. Moreover, some other components have been used to explain the same concept or idea such as the Mission, the Aims and the Objectives, thus seems to be repetitive. Hence a thorough revision of each component was completed with the client's intervention in order to be in agreement with the components of the Strategy Planning document.

The components of the Strategy Planning are presented in table 5.6 in chapter 5. As a result of this intervention it can be concluded that entrepreneurs need to focus on this important aspect of the development of the business (Strategy) in the early stages of the project.

2. Revision of the components of each document and their relationships: The amount of business data needed for the project has considerably increased with the inclusion of the components of the strategic planning (SP), which makes evident the need to clarify what and which information is needed to be included in the start-up framework and to analyse how this information is organised in the different documents. The addition to other document, to the already extended list of documents used in the project, brought more complexity. The number of documents used in the project has confused the use of terminologies, and more importantly the purpose and use of each of these documents within the context of a start-up. In order to ease this problem, the researcher presented a report in December 2010 with the definition and components of each document and describing the relationship between documents and the start-up framework, the figure below presents the relationship of the business documents with the Business logic system and highlights the importance of developing such documents during the Planning stage of the start-up framework (see also chapter 5 section 5.3.3).
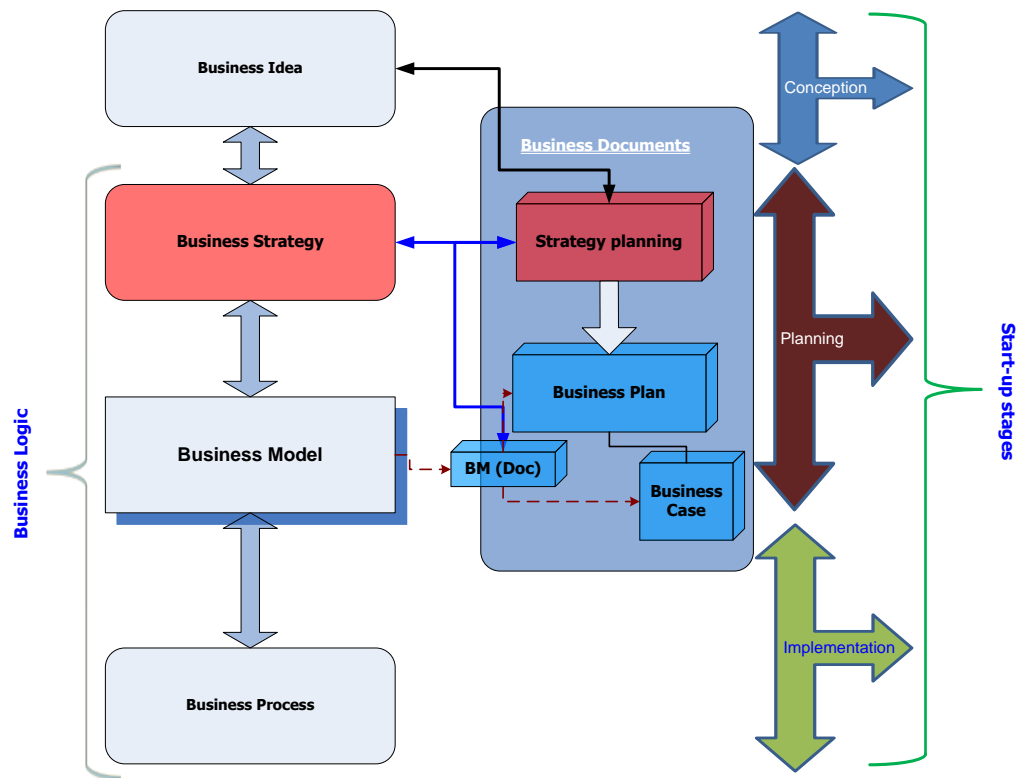
Figure 5. 4: The Business Documents in the start-up process and the BLS

Also this activity was useful to identify the uses and boundaries of the main documents used to start-up a firm; the definitions and uses of each document is presented in chapter 2, section 2.6. However, despite all the efforts to unify criteria in this subject, the confusion of documents prevailed during parts of the rest of the project, one reason could be the constant changing of participants leading this development, which in turn, created some problems of communication between SME-MX and Brunel team.

4. Creation of Database for Business Information: After the revision of the documents used in the project, the researcher proposed the elaboration of a comprehensive database containing all the information (elements) used in each of the documents. At this point it was evident that all documents identified before, namely Strategic Planning, Business Model, Business Case and Business Plan, had many elements in common, but they had different purposes to accomplish. In addition to this, it was also evident that each component will have a number of versions as the project evolves; hence version control for each component (and document) was also necessary. Considering these facts it was clear the need to have a technological mechanism that could help to control the development of these documents, which pointed out to the development of the **Business Information Database (BID)**. The aim of this activity was to construct a database that contains the structural components of each of the documents identified so far, such as: BM, BP, Marketing Plan, Operational Plan and BC. This database would be the general repository of data to produce any of the documents mentioned before and also to

create customised reports. A secondary objective when developing this database was to identify common elements within the different documents and the possible links and dependencies between them. The identification of the dependencies and links would help to identify those components that are key for the development of each document. They could also help to prioritise the development of each component.

The results of this analysis lead to an initial database with a total of 202 entries divided among documents, dimensions, components, elements and sub components. Thus the first problem was the variety of names given to the components of each documents. Some authors called components, others, elements and even other authors has given the name of dimensions or values. To avoid confusion in terminologies these concepts are referred from now onwards as "building blocks". This is based on the analogy with Lego toys, in which a building block is a component that fits with others to form a whole. The database created and proposed in this research is named 'Business Information Database' (BID) as it captures all the building blocks needed to elaborate each of the aforementioned documents (Business Model (V^4), the Business Plan, the Strategy Planning and the Business Case) and to develop customised reports based on these building blocks.

A first revision of the BID confirms that the database needed a large amount of information (building blocks), and SME-MX was still not ready to find all the answers related to all the building blocks. Therefore the PM in turn (*PM2*) explicitly asks for a "basic" database containing only the main and most important building blocks necessary for the development of the project. Hence a basic BID or 'BID light' was created as a subset of the larger BID. An initial set of common elements among the business documents detected in this cycle is presented in table 5.7 in chapter 5.

A **prototype database** in Microsoft Access was developed to assist SMEs in the process of filling the building blocks with business dada and to facilitate the development of a *dot-com* company. This first electronic version of the database had very basic programming functions, however, it was very helpful to identify different versions of the building blocks used in the project, and to analyse the changes on such information. The prototype was also useful to review the building blocks of each document and analyse the relationships between the building blocks of the EP with the BM and consequently the BM with the BP.

Evaluation of the database (BID)

The exercise of populating the database exposed the inconsistencies among versions of the different building blocks and the business information related to those building blocks, showing a clear lack of direction of the project, which can be interpreted as an entrepreneur's lack of managerial skills. Also this activity identified the radical changes of the vision, direction and Strategy that the project has

experienced during this process. This exercise also helped to identify user requirements for the development of a robust BID. For instance, the database needs to be very flexible in order to allow users to add and delete building blocks, and to allow the elaboration of customised reports or Business documents. Also the different electronic format of the information used to populate the database (e.g. PDF, diagrams, text, etc.) had to be considered and the results added more complexity to the BID. Finally, version controlling and historical records were another functionality that needed to be added.

4. Revision of the framework: At the end of the development of the first version of the Strategy Planning, a revision of the start-up framework was completed in order to map the recent document (SP) into the framework (see Figure 5.4)*.* Consequently the relationship of the BM and the BP (and BC) was described. With this purpose a QDA was completed in order to find relationships amongst the information related to the elaboration of the framework.

5. Main challenges and observations:

- o **The start-up process**. The experience of previous cycles strongly suggests that a Business Model on its own cannot help to develop a *dot-com* company, and a more comprehensive framework may be preferable in these cases.
- o **Project Management**. The return of *PM2* brought back the order that the project needed and also the coordination and clarification of the actions related to the Business Model and Strategy development.
- o **Strategy Development**. At the end of this cycle, the development of the Strategy Planning document has 85% of progress, although still some building blocks needed to be validated from SME-MX side.
- o **Business Information Database**. During this activity SME-MX decides that the database is too comprehensive and according to them, it was not necessary to fill all the building blocks. Hence a BID light was created with the collaboration of the client.
- o **Software development**. Even though the project was following a methodology for data collection (Use cases), the methodology chosen was controversial between SME-MX and software vendors and caused some "problems" within the developers in the understanding and interpretation of the Use Cases.

Further actions

At the end of the AR study, the researcher analysed the information from the literature and the results of the QDA in order to develop a start-up framework focused in the SME needs within the *dot-com* context. Although the framework is comprehensive and describes the general steps needed to facilitate this process, it still missed some vital information. The results from the e-trade project showed the need

257

to better understand the dependencies and relationships between all building blocks. This problem was evident in the e-trade project and was one of the main reasons of many delays in the project. For instance, the owner did not know the implications of delaying decisions of information related to the Strategy that were linked with many other building blocks needed for the development of this initiative. For example, SWOT analysis was needed to develop many other building blocks of the database. Hence the last two activities programmed for the development of the framework were: finding the relationships between building blocks and testing the framework with different organisations.

6.3.5. Development of the e-trade Start-up framework

This section explains the process followed for the elaboration of the start-up framework presented as the conclusion of the AR conducted in SME-MX. However a detailed analysis of the development of the framework by the use of thematic analysis is presented in the appendix section (**see appendix C**). The framework was developed considering three sources of information, which in turn have added rigor and relevance to this research by means of triangulation: 1) the literature review in the IS and Business domain related to the start-up of business ventures, 2) considering the observations of stakeholders in the e-trade project (Owner, CEO, PM, software developers, IT consultants and academics) and finally 3) taking into consideration the results of the QDA and the Thematic Analysis. Hence the following section presents a brief description of the main inputs taken from these sources.

At last, the table below summarises the Action Research-Data analysis phases followed in this study.

Guidelines for analysing data	Process for analysing data
Design a systematic approach. Keep a data log	Go through all data collected making notes as proceed and store the data in a Data management system.
Allow the data to influence the learning	Look for themes and patterns.
Search for themes and patterns	Narrow the themes up to 4-7 ideas (Data condensation)
Organise the data according to the outcomes of the data	Go back through the data and add codes accordingly with the themes.
Include all the data, even that does not reflect progress	Create sub groups under the themes if necessary.
Read, reread and read again the data	Keep notes continuously, search for new findings and relationships
Create visual image of the learning, write or record the information into a matrix	Review information searching for dominant or frequent ideas. Develop Matrixes.
Write notes all the times	Identify main points through the main categories
Share and pear review the findings. discuss to elicit new questions	Draw the information together including evidence to support the research writing, include the client and other participants in the analysis
Let the data influence the research.	Write the final report

Table 6. 5: Action Research-Data analysis summary

Information from the literature

The literature related to the start-up process has been presented in chapter 2, section 2.5 and also is condensed and summarised in chapter 4. Consequently only the main inputs considered for the development of this framework are presented below.

The literature in business domain have contributed to this research mainly, but not only, in the works of Gartner (1985), Shook et al (2003) and Serarols-Tarres (2006, 2009) who have contributed in the definition of three phases or stages in the framework (Conception, Planning and Implementation). The IS literature has also influenced this research, mainly with the works of Osterwalder and Pigneur (2002) and Osterwalder (2007) adding three tiers or levels: Strategy, Business Model and Business process, and also adding the sub-level (architectural level) to the framework, which form the link between the Strategy and Business Process or the implementation of the actions plans.

Information from stakeholders

The different participants in the project have contributed in the elaboration of this framework in different ways, but mainly the outcomes from the 4 cycles of AR were loaded with useful information related with this framework. These outcomes are distributed along the AR cycles however the main contributions of each participant are summarised in table below.

Cycle	Participant	Contribution	Input to the framework
1	Researcher	Proposed the conceptual framework	Initial framework from theory
1	*The owner, Beri & PM1*	Adding the components Mission, vision and goals	Identification of building blocks
1	*Academic1*	Linking software development with BM	The relationship between these concepts through Use Case diagrams
2	Researcher	Proposing a BM and adding web 2.0 to the BM	Identification of building blocks
2	*PM1*	Proposing a BP	Identification of building blocks
3	*Academic2*	Adding a robust Business Model	The incorporation of a comprehensive BM
3	Researcher	Clarification of the business documents used in the project.	Identification of building blocks
3	Researcher	Mapping the Business documents in to the BL and the framework.	Links formed between the Business documents and the framework
4	Researcher & *PM*	Adding the Strategy phase	Adding additional stage (Strategy), breaking down the planning stage
4	*PM2, The owner*	Adding two elements to the Strategy Planning	Identification of building blocks
4	Researcher, Academic1 & Academic4	Creating the database (BID), BID light and prototype program	Building relationships between building blocks
4	*Developer2*	Proposing another alternative to gather requirements (Story boards)	Identification of building blocks

Table 6. 6: Information from stakeholders

Information from theme development (Thematic Analysis)

At the end of the fourth cycle, the researcher performed a post-data collection analysis following a data-driven-approach within Thematic Analysis with the intention of analyse the information and build categories that were used for the elaboration of the final framework. The Thematic Analysis process has been explained in chapter 3, section 3.8.4 and the analysis of data and the process of building categories or themes is also explained in the appendix B.

In addition each cycle have focused in specific areas of research, therefore influence the data collection for each cycle. Table below presents the research focus of each cycle

Cycle	Research Focus	Organisation
1st cycle	start-up process and web 2.0	SME-MX
2nd cycle	Business Model	SME-MX
3rd cycle	Business Model and software development	SME-MX
4th cycle	Relationships of EP BM BP	SME-MX
5th cycle	Develop the final start-up framework	SME-MX, Matchboxmovies.com, and Minimoko

Table 6. 7: Areas of research in each cycle of this study

Theme development and data condensation

During this process the researcher encountered that many of the categories (themes) were linked between them and thus be grouped in the same code (category), consequently the 136 initial categories detected were condensed and resulted into 21 broad categories. A table presenting these 21 categories can be seen in the appendix C.

The link between the 7 final matrices and the framework

As a result of the above analysis, 7 broad categories were formed and each theme produce a matrix showing the relationships among the themes, categories and nodes as presented in figure iii (see appendix C).

The final examination of the QDA consisted in the identification of related raw data for each matrix and the relationship of the matrices with the final start-up framework. This process is presented in the appendix section. Finally and as a result of the analysis of the above information, the framework resulted from this study is presented in the figure below.

CONCEPTION

- Business idea
- Identification of the Business opportunity
- Concept and Testing the idea
- Assessment of ethical or government restrictions
- Entrepreneur characteristics

PLANNING

- Create a team
- Prototype
- Technical set-up and IT development
- Market Research
- Panning
- Documentation of the business (BM, BP, BC)
- Testing
- E-business and Web 2.0 planning
- Business Management

STRATEGY

- Strategy Panning
- SWOT/PEST analyses
- Vision and mission of the organisation
- Branding
- E-business and Web 2.0 strategy

IMPLEMETATION

- Venture creation
- Operations
- Finding resources
- Implement and legal constitution
- 'Beta' version
- Launch of the portal
- First transaction

Figure 6. 2: framework re sulted form the AR cycles

In this figure the red arrow represents the initial approach that e-trade followed to start-up the project and the green arrows present the findings of this Action Research approach, in which indicate a linear process that arguably any SME must follow to start-up a *dot-com* initiative. Additionally, the sections

related to CAR cycles within this project (see chapter 4 and 5), presents also the evolution of the framework through each of the cycles

Validation of the framework and further research

The framework presented was derived from one case study, namely SME-MX, thus it is required to be validated in other contexts. In order to validate the framework, the researcher considered the information from the final interviews with key participants in the e-trade project and two more SMEs (Case studies) were consulted for this purpose. This information is presented in section 6.6 (Validation).

6.3.6. E-trade Project situation at the end of the cycles

This section presents the status of the project at the end of the intervention of the researcher, followed by the description of the main challenges encountered in the e-trade project and further conclusions of the AR performed.

At the end of the fourth AR cycle, the client and the researcher agreed to end the researcher's participation in the project, thus the study formally ends in May 2011. The intervention of the researcher finalised with the delivery of a report containing the BID light and a short explanation of the framework and an assessment of the e-trade project. The report presented was used to validate the framework with the main actors of SME-MX. Also during the last meeting between the researcher and *The owner,* the client described the final actions in the project and offered an updated status of e-trade*.*

The status of the project at the end of the intervention: The researcher ended his participation in the project in the last part of the planning phase. At the moment to leave the project the complete set of actions planned was not developed in full. Some strategic decisions were not validated and the owner was still trying to get funding for the rest of the project. The software development activity was suspended due to the lack of a clear strategic view and conflicts with the software vendor. With most of the participants retiring from the project, the owner enters in a reflecting period. The owner, however, has made clear his intentions to finish the population of the building blocks of the BID *light* and to hire another PM to manage all the aspects of the project.

The main problems and challenges that have hindered the development of the e-trade project are presented in chapter 7. However the client has identified the following aspects that have obstructed SME-MX to not complete the project.

- o   Communication
- o   IT/IS literacy (understanding concepts)
- o   Relationship between software development and the BM
- o   Lack of control and PM alternation

6.4.   Planning of further actions (Planning)

After the final talks with the client, two broad areas were detected for further improvement and to be analysed through QDA: the need of mapping the main business documents by means of constructing the building blocks, and establish the relationships and dependencies between the building blocks and documents. To this end the following objectives were set:

- o   Identify the main business documents used by practitioners or recommended by academics.
- o   Identify the components (building blocks) of the main information needed (Business documents)
- o   Test the usability of the BID and how it will assist in the control of changes on the documents and versioning among building blocks, also the relevance of the BID light.
- o   Identify the Relationship between documents (BLS and framework mapping)
- o   Identify the relationship of the different components of the BID (linking Strategy to BM)
- o   Adjust the framework according to the validation phase, and finalise the start-up process framework.

6.4.1. Further analysis (Activity plan)

The intervention of this final cycle had three particular goals:

- o   Identify the main documents used to start-up a *dot-com* initiative together with the definition of each building block.
- o   Map the building blocks into a database (search for links and dependencies)
- o   Finding the priorities and relationships among building blocks

Hence, the following activities were planned as part of the post data collection analysis; these activities are presented in the table below.

Activity	Description	Participants
1. A revision of main documents used to start-up a *dot-com* initiative (e-trade –literature)	Identify and define the main documents and their components	Researcher
2. Revision of the Database	Map the building blocks into a database	Researcher and Academic1
3. Identify the relationship between the building blocks	Find relationships and hierarchies amongst the building blocks	Researcher and academic 1
4. Evaluation of the start-up framework	Final interviews with e-trade and the use of two case studies (mailboxmovies.com and Minimoko)	The researcher, SME1, SME2 and SME3
5. Develop the final framework	Final framework proposed	Researcher

Table 6. 8: Activity plan in the evaluation cycle

The first two activities are analysed in the following sections, for the reason that these activities involved only the analysis of the data in relation to this areas. However the third activity is treated in a separate section (6.5) as it contains the actual intervention of the researcher during this final cycle. Also two short case studies are presented in the validation section (6.6).

6.4.2. Activity 1- A revision of the main documents used to start up a *dot-com* initiative (unifying definitions)

The literature shows the irrespective use of the business document and their definitions (see Seddon & Lewis, (2003) among others). As expected, in the e-trade project this confusion was present along the four cycles of AR. Therefore the unification of the definitions of the documents and identification of the building blocks was necessary in order to support the development of the start-up framework and the structure of the building blocks.

The main documents indentified in the literature and also acknowledged in the information from this study are SP, BM, BP, and also the BC was another document often mentioned in the e-trade project and in the literature. The Business Case was initially not considered as a main document because the BC can be created using the information from the Business Plan or the Business Model, and it is only used for the approval of new projects within an established company or to search for funding. However this document was considered for the elaboration of the BID and included in the software prototype of the BID.

Despite the attempts to unified criteria among the uses and definitions of these documents, some confusion prevailed during the e-trade project. Based on the findings in both, the literature and the e-trade project outcomes, the final revision of these documents was completed, resulting in the unification of the definitions as follows:

Strategy Planning definition: Planning or Strategic Planning is the process in which the organisation states the vision and mission of the company, it analyse the internal and external situation of the company, sets the overall objectives, and formulates strategies and strategic plans needed to achieve those objectives. Business definition and definition of the supporting technology originally were not part of the Strategy Planning, however as a result of this research, these two elements were incorporated to the list, despite of both components are implicit stated in the definition of the Strategy.

Business Model definition: A BM or eBM describes the roles and relationships among a company's consumers, customers, partners, and suppliers, and also identifies the flows of the products/services, information, and money (Magretta, 2002).

Business Plan definition: A Business Plan contains the action plans that an organisation needs to perform in order to pursue their goals and objectives. The BP consists of a formal statement of a set of business goals, the reasons behind these goals, and the plan to achieve those goals; it may also contain background information about the organisation. The BP can be divided in, as many chapters as needed. The main chapters used are according with the way an organisation is structured, and how the objectives will be accomplished. Hence the most common division of a Business Plan include at least, and not necessary in this order; Analysis of the Current Situation and Marketing Plan, Strategy and Objectives, Marketing Plan, Operational Plan, Financial Plan, and Management and organisation Plan. Moreover other plan can be added, particularly to the *dot-com* domain and e-Business initiatives; *'Developers Requirements'* also known as *'Web Plan'*.

Business Case definition: The BC is used to obtain management commitment and approval for investment in business change including projects and programmes. A Business Case is also used for obtain founds from external organisations such as Banks or to attract business partners. Therefore a BC is the document in which the financial information is used to demonstrate the project viability to possible investors or loaners.

Once the definition of each business document has been clarified, the next step in this research is the identification of the building blocks that construct each document.

6.4.3. Activity 2 - The need for a Business Information Database

This section presents the main building blocks needed for the elaboration of each document (Strategic Planning (SP), Business Model (BM), Business Plan (BP), and Business Case (BC)). The building blocks of the database are divided in three levels (1, 2, and 3) each level represent the direct relationship of the blocks in a hierarchical manner. Level 1 represents the highest hierarchy and level 3 the lowest. Due to limited space in this section, the building blocks of each document are presented only at the level 2. However the full descriptions of all the building blocks that constitute the BID are presented in the appendix section (Appendix F).

Strategy planning building blocks

Level 1	Level 2
Business Definition	
Supporting technology	
Vision	
Mission	
Aim/Goals	
Objectives	
	Contribution to the main Objectives
Core Values	
Corporate Strategy	
Policies	
Existing agreements	
Dependencies	
Situational analysis	
	SWOT Analysis
	PEST Analysis
Action Plans	
Strategic fit (BC)	
	Overview of the organisation
	Contribution to the main objectives
	existing agreements
	scope
	limitations
	dependencies
	strategic Benefits
	strategic risks
	Critical Success Factors

Table 5. 1: Elements of the Strategy Planning used in this study

BM building blocks

Level 1	Level 2
Value Proposition	
	Products - Services
	Intended Added-values
	Target Segment
Value Network	
	Actors
	Roles
	Relationships
	Flows- communication
	Channels
	Governance
Value Architecture	
	Core-Resources
	Configuration of Resources
	Core Competencies
Value Finance	
	Total Cost of Ownership
	Pricing and Billing Methods
	Revenue Sources and Structure

Table 6. 9: The Building blocks of the BM used in this research

BP building blocks

	Level 1	Level 2
Building Block name	General description	
		Mission
		Vision
		Objectives
	Services/Products	
	Target segment	
	Competencies	
	Pricing and billing methods	
		Price Comparison
		Customer service and credit policies
		Personal financial statements
	Initial expenses and capitalisation	
	Financial Plan	
		Profit and Loss Projection
	Profit projection (4 years)	
		Projected cash flow
		Balance sheet at opening day
		Breakeven Analysis
	Executive Summary	
		Product/services
		Customers
		Owners
		(For investors) Resources
		Company Overview
		Company Philosophy
		Company's strengths and capacities
		Legal form of ownership

Table 6. 10: The building blocks of the BP used in this research

Also the figure below shows all the building blocks of the BP and their clustering

Operational Plan

Production
- Methods (quality control, inventory control, production techniques, etc)

Location
- Physical requirements
  - Amount of space
  - Type of building
  - Zoning
  - Power and other utilities
- Access (parking, transportation, shipping centres, etc)
- Construction
- Cost
  - Rent
  - Maintenance
  - Utilities
  - Insurance

Legal environment
- Licensing and bounding requirements
- Permits
- Health, workplace or environment regulations
- Special regulations for the industry
- Zoning or building code requirements
- Trademarks, copyrights or patents

Personnel
- Number of employees
- Type of labour
- How to find the right employees
- Pay structure
- Training methods and requirements
- Jobs assignments
- Job descriptions for employees
- Quality of existing staff

Inventory
- What kind of inventory (raw materials, supplies, FG)
- Seasonal build-ups
- Lead-time for ordering
- Inventory investment (value in stock)

Credit Policies
- Managing your accounts payable
- Managing your accounts receivable

Management & Organisation Plan

Organisational chart

Corporate policies

Professional and Advisory support
- Board of directors
- Management advisory board
- Attorney
- Accountant
- Insurance agent
- Banker
- Consultant or consultants
- Mentors and Key advisors

General Info
- Executive summary
- Date of starting operations
- Head count
- Primary location of business
- Primary sector of business
- Main products/services
- Form of business
- Identity of Business
- Status of business

Marketing Plan

Market Research
- Why?
- How?

Economics (facts about the industry)
- Size of the market
- Percent share of the market intended
- Current demand in target market
- Trends in target market
- Growth potential of the business
- Barriers to entry

Product and services (from customers point of view)
- Important features and benefits
- After sale services

Customers
- Age
- Gender
- Location
- Income level
- Social class and occupation
- Education

Competition
- List of the major competitors and products
- Indirect competitors
- Competitive analysis

Niche

Marketing Strategy
- Promotion strategy

Promotion
- Advertising
- Low-cost methods
- Image

Promotional budget

Pricing
- Method of setting prices
- Price comparison with competitors
- Customer services and credit policies

Proposed Location
- It is important for customers?
- Consistent with image
- Convenient for customers (parking, space, etc)

Distribution channels
- Retail, Direct, Wholesale, Agents, etc

Sales Forecast
- Best guess
- Worse case

Business Plan
Vision Statement
Mission Statement

Financial Plan

Assumptions for 1st Year

Financing
- Projected cash flow
- Net change in long-term loans/debt/notes during first year
- Opening long-term loans/debt/notes
- Opening cash balance (deficit)
- Opening Day Balance Sheet
- Interest rate for all loans/debt/notes
- Interest rate for cash balances

Working Capital
- Opening trade & other payables (creditors)
- Opening trade & other receivables (debtors)
- Average credit taken for all supplies
- Average credit given on sales

Miscellaneous
- Dividends planned for year
- Proceeds of share/stock issues during year
- Number of shares issued during year

Fixed Assets & Investment
- Opening total cost of fixed assets
- Accumulated opening depreciation
- Average depreciation rate
- Planned capital expenditure (investment)

Sales, Costs & Inventory/Stocks
- Sales projection
- Finished inventory (stocks)
- Cost of materials/goods
- Materials/goods inventory (stocks)
- Average monthly direct costs
- Average monthly overhead expenses
- Profit projection

Assumptions for Years (2 to 5)
- Proceeds of share issues(optional)
- Number of shares issued(optional)
- Dividends(optional)
- Net change in long-term loans/debt/notes(optional)
- Planned capital expenditure (investment)(optional)
- Break-Even analysis
- % annual change - overhead expenses
- % annual change in sales
- Cost of materials/goods as % sales
- % annual change - direct costs

Web/developers Plan

Website Strategy
- Business Model
- Site Positioning
- Development/Requirements
  - Future Development
  - Milestones
  - Resources Needed
  - Back End
  - Front End
- Web 2.0 Plan
- Traffic Forecast

Strategy & Implementation
- Website Marketing Strategy
  - Online Sales Forecast
  - Online Sales Strategy
- Strategic Internet Alliances
- Competitive Edge

Expense budget
- Software development cost

Figure 6. 3: The building blocks of BP

BC building blocks

Level 1	Level 2
Overview	
	vision
	goals
	objectives
Strategic fit (BC)	
	Overview of the organisation
	Contribution to the main objectives
	existing agreements
	scope
	limitations
	dependencies
	strategic Benefits
	strategic risks
	Critical Success Factors
	Strategic (resource allocation)
Generals	
	organisation chart
	Project Title
	Program Council
	Project Management Manager
To obtain capital from Banks	
	Amount of loan request
	As funds will be used
	As will be achieved
	Terms of payment required
	guarantees offered
To obtain capital from Investors	
	short-term funds
	Funds needed in two to five years
	As funds will be used
	Expected return on investment
	Exit Strategies for investors
	Percentage of shares offered
	Conditions that the owner would accept
	Financial information to be provided
	Participation of shareholders on the board or management

(Left vertical label: Building Block name)

Table 6. 11: Building blocks of the BC used in this research

This database was initially planned to support SME-MX in the control and management of the project information and to facilitate the activity of populating the BM and other documents with e-trade data. The BID was also useful to manage changes of the information and versioning the data among building blocks. During the population of the e database, relationships among different building blocks emerged. The initial analysis comparing the building blocks of each document showed some repetition of the

blocks among different documents (see table 5.7: common elements among business documents, in chapter 5, section 5.3.3). Also as expected strong relationships were found among the building blocks of the same document (e.g. Vision, Mission and Goals in the SP). Some other dependencies were found between building blocks of different documents, such as the relation of the SWOT analysis in the SP with the Value Proposition block of the BM (particularly with the target segment), as well the relation of the SWOT with the Marketing Plan section of the BP. The analysis of these dependencies and relationships is explained next.

6.5. Activity 3 - Identifying the relationships and dependencies between the building blocks (Intervention)

This activity was performed in three stages, first the relationships between the elements and components of the strategic planning is presented, followed by the relationship among the values and components of the Business Model BP and (BC), and finishes with the analysis of the relationships and links formed amongst the three main Business documents used for the start-up process.

6.5.1. Relationship of the elements of the Strategy planning

The building blocks that form the Strategy Planning document differ vastly from author to author in the academic literature and industry. As a result of this, different building blocks have been used to construct this document. The following analysis has been prepared considering only the building blocks used in the e-trade project.

Vision

Vision plays a principal and important role because the vision statement of an organisation defines the desired long term future of the business; the definition of the vision states the path and purpose of an organisation and the relationships with different stakeholders among the lifecycle of an enterprise. The main dependency of this element is the background of the Idea and the business idea by itself, but also it depends of the SWOT and/or PEST analysis, which they will help in shaping the future status of an organisation.

The Vision directly affects the Mission, The core values, Policies and the Action Plans in all their forms. Also it plays a central role in the Business definition and the definition of the supporting technology.

Mission

The Mission, as a short term future desired of an organisation, depends entirely of the Vision and therefore of the Business idea. The mission triggers automatically the Aim/goal element and indirectly to the Objectives and policies, furthermore, mission is an essential building block of the implementation plans.

Aim/Goals

The aim or goals are measurable end results that will help to achieve the mission, therefore the relationship between both elements is linear and straightforward. The SWOT analysis generates direct information to the goals, mainly in the opportunities arisen from this building block.

The aim has one or more objectives attached to it which are achieved within a fixed timeframe. These objectives can be used within the different business implementation documents, such as Business Plan, marketing plan, financial plan and so on.

Objectives

The objectives depends mainly of the Mission and the Goals of an organisation, however, swot and pest analysis plays a fundamental role to provide information to executives in order to plan their objectives and the future action plans.

Managers and entrepreneurs can benefit from SWOT analysis in an indispensable but simple form. Strengths and weaknesses are used directly to develop the objectives and also the opportunities and the Threats helps to shape the objectives depending on the mission statement of the organisation.

PEST analysis is used to analyse the macro-environmental factors which can affect the Strategy Planning. The political economic, social and technological factors need to be considered at the time of the development of the objectives, as organisations must to bare in mind all external and internal factors to propose S.M.A.R.T. objectives. Particularly from this analysis the Economic factors will derive valuable information to the financial objectives, and similarly the social factors which will provide with information to the social impact objectives.

The objectives depend directly of the goals, as they frame a group of activities to be carried out in order to achieve a goal. Moreover this building block (objectives), clearly derive the implementation of tasks to be performed in relation to the achievement of the goal pursued. The objectives could be divided into different action plans which as well can be further classified into individual units or separated and differentiated accordingly with the different areas that the organisations touch upon.

Corporate Strategy

This specific term is used in two ways: first is used to portray all Strategy decisions in all types of organisations and secondly the term refers to the most general level of Strategy and it contains other levels of Strategy which are corporate level-Strategy , Business unit Strategy , and Operational strategies (Weill & Vitale, 2001).

In this study this building block refers to the most general level of Strategy, hence this block will describe how the organisation will be different from the competitors. Progressing with these premises as a foundation and depending on the general Strategy of the organisation, the corporate Strategy block will depend of the SWOT analysis and the *dependencies* building block. Furthermore this building block will be used to derive the Action Plans, hence is directly linked with the BP document. Also talking at the corporate level Strategy, this building block will be linked with the policies.

Policies

Organisations will have policies (whether formal or informal) relating with a range of a variety of areas such as Procurement, CRM, Sales, Organisation. However the conventional policies in an organisation are working-times policies and Human Resources polices in general; the most common policies are: Recruitment policy, Trainee and Apprentice Induction policy, Equal Employment Opportunity, Time-Office Policy and Working Norms, Disciplinary Procedures, and employee policies among many others. The policies must be relevant and aligned with the mission and therefore with the aim of the organisation, furthermore the policies will influence how the business processes are designed, managed and implemented.

Existing agreements

The "existing agreements" building block do not depend on any other element, as these agreements could exist or not within the development of an organisation, without affecting the Strategy Planning or the development of the Business Model, however the existence of a previous agreement with any of the actors can facilitate the deployment of some parts of the Business Model.

If the organisations have active agreements at the time of start-up, those could affect the Aim/goal and objectives elements as well as the action plans.

Dependencies

Dependencies can be based on the existing agreements already in place in the organisation and the SWOT & PEST analysis. These two elements will shape the dependencies needed for the successful operation of the business. In that perspective any critical dependency will shape or alter the actions plans, therefore the operations of the organisation.

SWOT & PEST Analysis

The SWOT and PEST analysis used independently or in combination play a central role in strategic planning. They support the decision-making process to develop firms' Strategy, therefore SWOT, PEST, and any other situational analysis are necessary to support entrepreneurs, owners and managers in the

development of the documents needed to start-up a new venture; Strategy Planning, Business Model and Business Plan.

The SWOT & PEST analysis have a cyclical and bidirectional interaction with some building blocks of the Strategy Planning, such as the Core Values, Aim & Goals, Objectives, Mission and some how, with the Vision. This bidirectional interaction complicates the understanding of what needs to be done first, and triggers the question if the strategic planning has sequential steps for its development.

The SWOT/PEST analyses depends of the core values, aim/goals, and the objectives, but at the same time the SWOT analysis will generate valuable information to develop, modifies or change any of those elements; as a result the bidirectional interaction mentioned above is completed. For example, existing agreements and dependencies can result in strengths or weakness for an organisation, thus the SWOT analysis will require the information extracted from these two elements. Similarly, the mission and in some cases the vision can be constructed from the SWOT/PEST analyses, or these analyses can be used to modify some parts of the mission and vision to clarify this statements.

The logical connection between the SWOT/PEST analyses with the action plans is performed at the operational level. From the results obtained from such analyses the different action plans for each business' units are developed and implemented.

Action Plans

The action plans are the empirical connection between the Strategy and the Business Plan, and also are the theoretical connection within the planning and the Implementation stages of the start-up framework. The action plans are the specific series of actions to be performed during the implementation stage, which will end with the physical and legal start of operations of the organisation which delineates the end of the start-up process. Hence the actions plans have a direct connection with the BP and can be divided according to the different sections of the BP, e.g. Operational Plan, Marketing Plan and so on.

In terms of the SP documents, the action plans are the final output of the Strategy, therefore it will depend of all the building blocks of the SP, with emphasis on the mission, aims and goals, polices, existing agreements and SWOT/PEST analyses.

6.5.2. Relationship of the elements of the V⁴ Business Model

Similarly to the SP, the BM literature is vast in definitions hence in the number of building blocks used to develop the BM. The number of building block amongst different BMs varies from 6 to 16 and up to 200 building blocks in different levels. This study will be based in the building blocks depicted in the work of

Al-Debei et al (2008), namely V^4 BM, and used during the study of the e-trade project. The reason of choosing this model has been explained in chapter 5.

The chosen model has four primary dimensions (building blocks level 1) and within this dimension, fifteen key design concepts (building blocks level 2) are indentified along with their interrelationships and rules in the Business Model domain, see (Johnson, Scholes & Whittington, 2008). This task is performed in two stages; first is the identification and definition of all the building blocks belonging to this document (see section 6.4.3). Then the second step is the analysis of the links between these building blocks. The Dimensions and building blocks of the BM are very much interdependent, as it can be seen in figure 6.4. Hence, addressing them separately without taking into consideration their interrelationships is neither sufficient nor effective. One action or alteration in one block would normally trigger changes in other blocks so as to keep the service feasible and successful it is important to look at these building blocks as a whole.
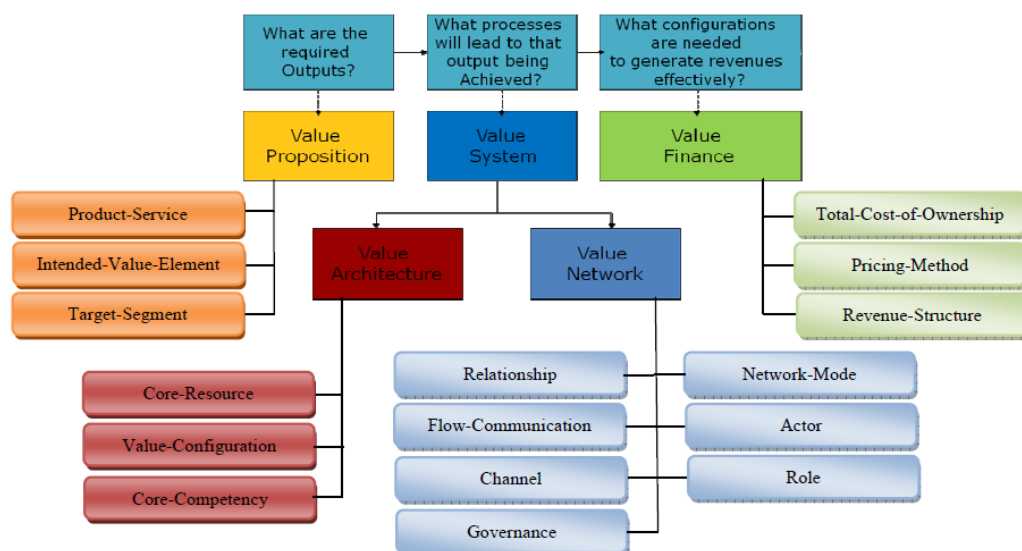
Figure 6. 4: Dimensions and Concepts (Al-Debei, 2010)

Designing new e-Business ventures requires first the examination of their value proposition issues and looking closely at the service/product definitions, as well as matching the target segments with the product/services value elements. However organisation must consider that these concepts interact with one another, thus the designing of these concepts must ensure that they enforce each other. The development of these concepts (building blocks) do not necessarily follow a linear sequence, but instead it is comprised of a set of tasks for collecting, processing, and analysing relevant data and information that guide the processes and decisions related (Al-Debei & Fitzgerald, 2010a). A summary of the complete model and the relationship among the different levels of the building blocks is presented in Al-Debei et al (2010). However, in order to understand the relationship of the Strategy with the BM a brief description of these relationships is presented below.

The **value proposition** dimension requires information directly from the value network, and also the value architecture enables information to this dimension. Additionally the **value finance** dimension will be designed in order to align this dimension and the **value proposition** dimension, with the purpose to accomplish the organisation's goals.

The value network dimension and corresponding building blocks will mainly provide information to the **value architecture** dimension. Also this dimension affects the **value finance** and by doing that, it also facilitates the development of the **value proposition**.

The sources of income and any other alternative to generate revenue are depicted in **the value finance dimension,** hence this dimension depends and relies on the remaining three dimensions, however is affected largely from the building blocks of the value network and **value architecture** dimensions, and hence need to be designed according to the value proposition.

Finally **the value architecture** dimension is very important when it comes to e-Business initiatives. This dimension takes information from the value network principally in form of actors, roles and relationships, and also directly affects the **value finance** and the **value proposition** dimensions.

In terms of software development, it is also vital to have a strong technological architecture capable of providing high standards, as well as a suitable organisational infrastructure, including appropriate managerial resources. In addition, and in view of the fact that different aspects of software development and the organisation are interrelated mainly in the *dot-com* sector, this research reveals that it is also important to look at these aspects whilst developing the Strategy, and to consider their interdependencies.

6.5.3. Relationship of the elements of the Business Plan & Business Case

The Business Plan and the Business Case documents can be seen as the final outcomes from the Conception and the Planning stages of the start-up framework. The BP document is fed by the business data emerged in the Strategy stage. Hence the SP document will provide the BP with relevant strategic information and will map the course of actions to be implemented. Equally, the BM will shape the Strategy in terms of organisation alignment and will provide the BP with the relevant information to ease the implementation of the action plans. In other words SP will inform the BP the "what" to do and the BM informs the "how" to do it, hence the in the BP document, organisations portray the specific actions to be executed to facilitate achievement of the organisation's objectives.

A BC has been primarily designed for the approval of projects within and organisation, however some organisations, especially SMEs also use this document for the specific objective to obtain financial resources either from new investors or from credit institutions. Also a Business Case captures the

business justification for initiating a task or project, thus the BC is a document or a 'decision-making tool' mainly used in large organisations to determine the effect of a particular "decision" will have on profitability. In both cases, a BC should contain information necessary and relevant to analyse the financial outcomes of an organisation as an overall or individually through the approval of projects within the organisation (Al-Debei & Avison, 2010). The uses that organisation gives to the BC can be summarised in five objectives:

- o To demonstrate the business need for a given action;
- o To confirm that a project is feasible before expending significant funding;
- o To consider the strategic internal and external drivers for the project;
- o To assess, compare and contrast the costs and benefits (both monetary and non-monetary) of choosing one course of action over another.
- o To seek approval for funding the project

Following the definition of the BC from above, in this study the BC refers to the document used to confirm the feasibility of the project and to search for funding (Investors, incubators and Credit institutions). Hence the BC can be seen as a financial document to aid organisations to seek funds and approvals for projects and programmes thus, does not contain exclusive information that only belongs to this document. In the contrary, the BC is basically derived from the information emerged in the BM (Value finance dimension) and the financial chapter of the BP. However in some cases, the BC can be created separately, as long as the project is a new project within an established organisation with a well-defined Strategy on place. Otherwise, if the BC is part of a new venture (as is the case of e-trade), the BC needs to take information from the overall Strategy and BM, BP documents.

Following with the above premises, the BP and the BC have a strong link from the financial point of view. Actually some Business Plans include in the financial chapter information related to funding the project, dividing this information in two subchapters: information for investors, and information for bankers. Both closely resemble the BC, thus the BC can easily be accommodated as another chapter of the BP.

Regarding to the relationships between the building blocks of each document (the internal relationship) it can be observed a sequential series of steps and information to fill up each document (BP and BC). Contrary to the BM and the SP where the building blocks are interconnected in many parts of the document, The BC and BP follow a series of 'sequential' steps or actions that constitute the business document. However there are still some building blocks that need several iterations between Strategy and BM building blocks before agreed in the activity (action plan) to be executed.

Figure 6.5 presents the relation between the BP and the BC and includes the BC as another chapter of the BP for two main reasons: the first reason is that the BP is a document broadly used among companies of any size and in any sector of the economy. The principle of the BP has been adopted for

276

many companies as the main document produced and used in projects. Conversely the BC is mainly used for large organisations when they want to test the feasibility of new projects or products development, and mainly uses financial information which can be extracted from the BP alone of in combination with the BM. Hence the hierarchy of the BP is highest and the BC can easily be contained in the BP. Secondly, during the execution of the AR study. SME-MX was referring to this document only to the search of funding, which in essence is very similar to the financial chapter of the BP.
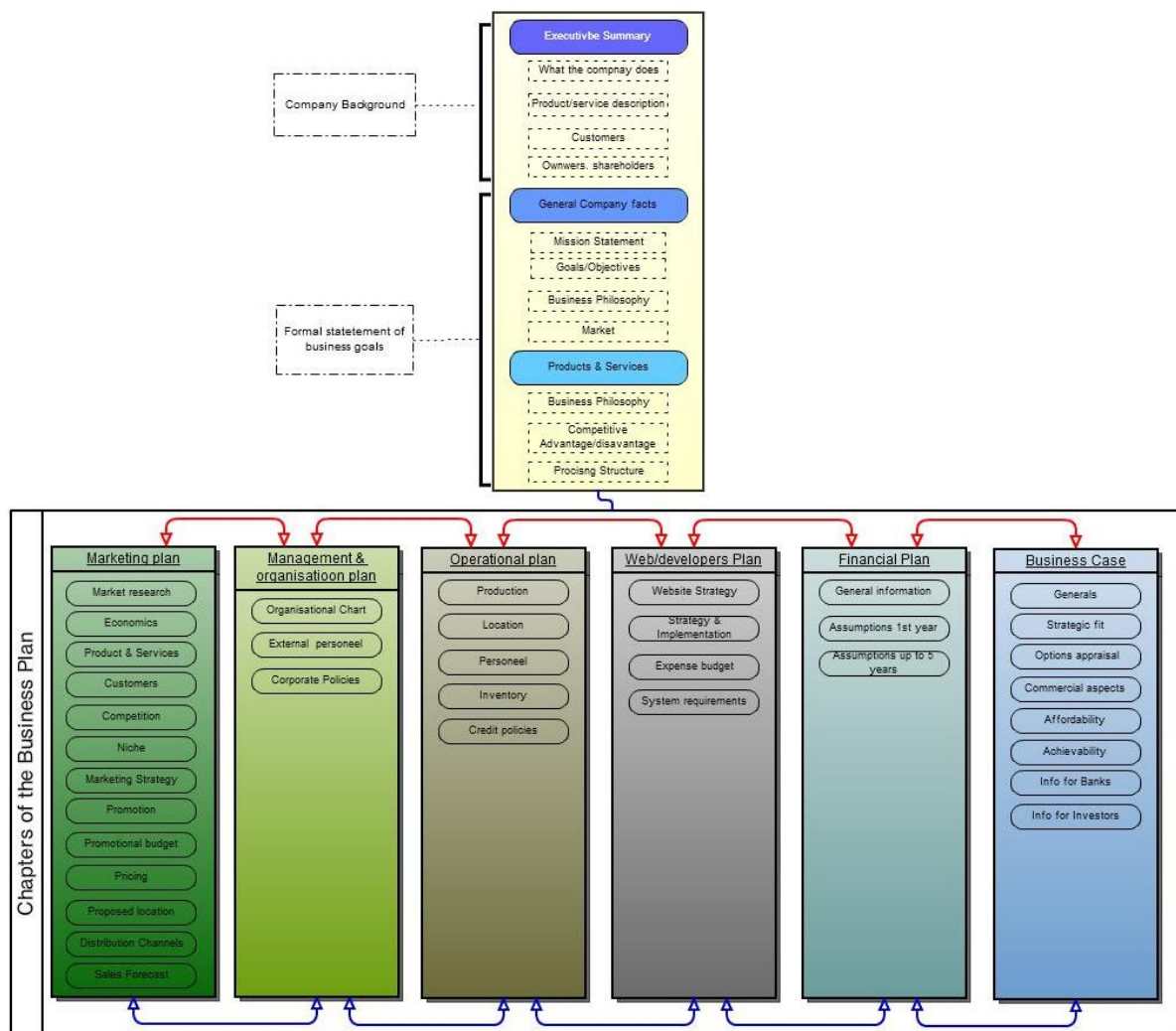
Figure 6. 5: The relationship of the BP and the BC

The first part of the diagram in figure 6.5 shows the links with the information from the Strategy Planning and Business Model documents and are further analysed in the next sections. The lower part of the figure is a subdivision of the BP into small specific chapters who targets explicit information according to the organisation's needs. There is not a formal sequence to populate these chapters, and although they seem to be very particular and objective focused, each chapter shares and uses information from the other chapters; hence there is not a starting or finishing point.

6.5.4. Linking the Business Documents (From Strategy to Implementation)

This section presents the links and relationships between the building blocks of the different business documents used along the project from the strategic point of view. The literature in the area (see Osterwalder, 2002) indicates that the first level to be accomplished is the Strategy level. Moreover, the start-up framework resulted from the AR study highlighted the importance of the Strategy in the development of a new venture. Hence the Strategy follows the business idea (conception stage) and is the starting point in the framework for starting a company. Consequently the mapping between the building blocks needs to be executed in the same structural way: from top to bottom, starting from the analysis of the components of the Strategy Planning and investigating the links between these concepts and the components of the remaining business documents (BM and BP). The following analysis of the building blocks among the different documents is presented following the structure of the Strategy Planning document.

Once the building blocks of the different business documents have been identified (SP, BM, BP and BC), the following step was to build the relationships between them by reviewing the literature and the results from the QDA of the AR study completed with SME-MX. A summary of the main reflexions of the literature is presented below.

The literature has paid little attention to issues related to the fit of the Strategy/structure and other structural forms of organisation. However (WebFinance, 2011; ANSEC, 2010) address this gap by introducing the company's Business Model; a contingency factor that captures the structure of a company through analysing how the company's Business Model and market Strategy interact to impact business performance.

Zott & Amit (2008) argue that the Business Model and the Strategy are complements, not substitutes, which evidence the strong relationship among these concepts. Also the authors made clear that the entrepreneurs and owners of organisations can identify customers' needs and map then against the product and services offered while defining the Business Model. Hence the Business Model and the Strategy design may be created all together (McGranth and MacMillan, 2000; Zott & Amit, 2008), however there is not a clear explanation of these relationships. Similarly Zott & Amit (2008) argues that every successful organisation is build on a Business Model basis, even when the mangers or owners do not called Business Model, and he argues that "*a Business Model is not the same thing as Strategy, even though many people use the term interchangeably today*"(P.94). The Business Model describes a system (organisation) and how all the pieces fit together, however the Business Model do not look into a critical dimension of performance, "competition", which in practice "competition" it is dealt from the Strategy point of view (Magretta, 2002). Hence from the work of Magretta (2002) it can be assumed that the

Strategy spells out how an organisation will do better than their competitors, and doing better as Magretta states, "*by definition doing better is doing differently*".

In their research to explore the fit between Business Model and product market Strategy, Amit and Zott (2008) conducted a categorisation of the Business Model based on their design themes, this categorisation (the design themes) describe the holistic shape of an organisation's Business Model and facilitate its conceptualisation and measurement which also has been useful for this analysis. Amit and Zott argue that the Business Models will support and enhance the effectiveness of the strategies (Zott & Amit, 2008).

These studies have brought valuable insights for the development of these relationships, nevertheless it seems that not enough research has been conducted on the area related on how Business Models have evolved and in particular, how the BM is integrated within the overall Strategy and the market of an organisation (Zott & Amit, 2008). Furthermore, literature on Strategy seems to be more concerned with the competition between firms, whereas Business Models are more concentrated with the core logic of the business to create value (Zott & Amit, 2008), hence did not focus on the understanding of the relationships among these concepts.

In this research, information from the literature and from the analysis performed during the development of a new venture has been considered for the identification of the building blocks and the mapping, linkage and relationships between these building blocks. This analysis is presented from top to bottom.

Business Definition

This building block is a summary of what the business does and how it operates. The definition *per-se* does not have a direct impact with the BM, but as a summary section, this element depends directly from the Strategy and the Business Model elements.

Definition of the Supporting technology

The supporting technologies are those used by the organisation to leverage, develop and maintain the platform to be used by customers (either primary or secondary consumers). This building block is further divided into the sub-elements depicted in the Web Plan (see action plans) which is the Plan needed for the development of a website, portal or site.

Vision
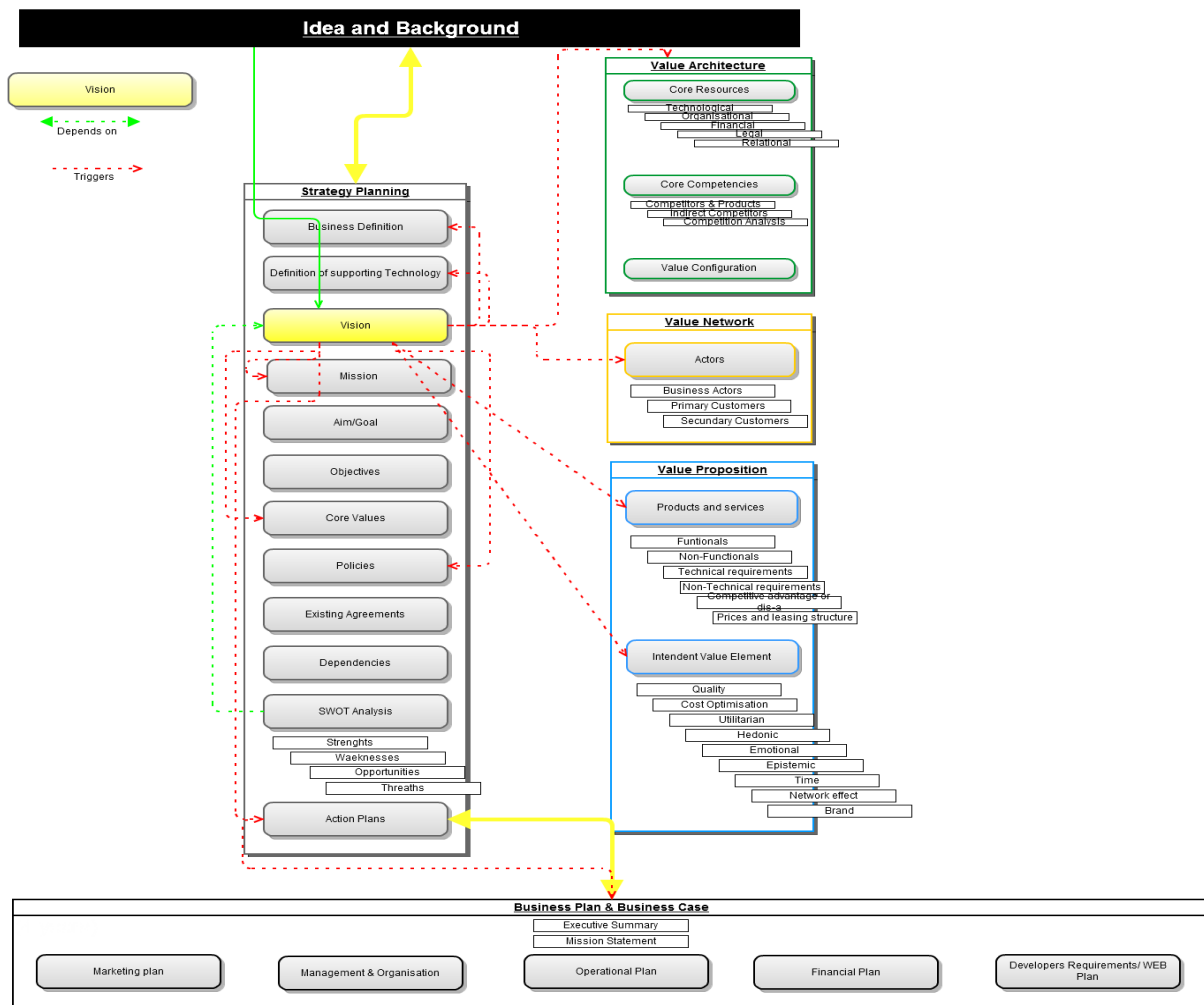
Figure 6. 6: Links & relationships of 'Vision'

The vision of the business is seen as the long term aspirations of the company, therefore the main trigger of the vision is the business idea at the origin, and triggers and works as basis of all the information needed for the development of the Strategy and the Business Model.

This element predominantly affects the entire organisation's **value architecture** (resources, competencies and configuration), the design of the **value network** mainly in relation with the actors, and the **value proposition** in terms of product and services offered and the intended value element, but not in the target market, as this element is considered more in detail in the Mission.

The Vision directly affects the Mission, The core values, Policies and the Action Plans in all their forms. Also it plays a central role in the Business definition and the definition of the supporting technology.
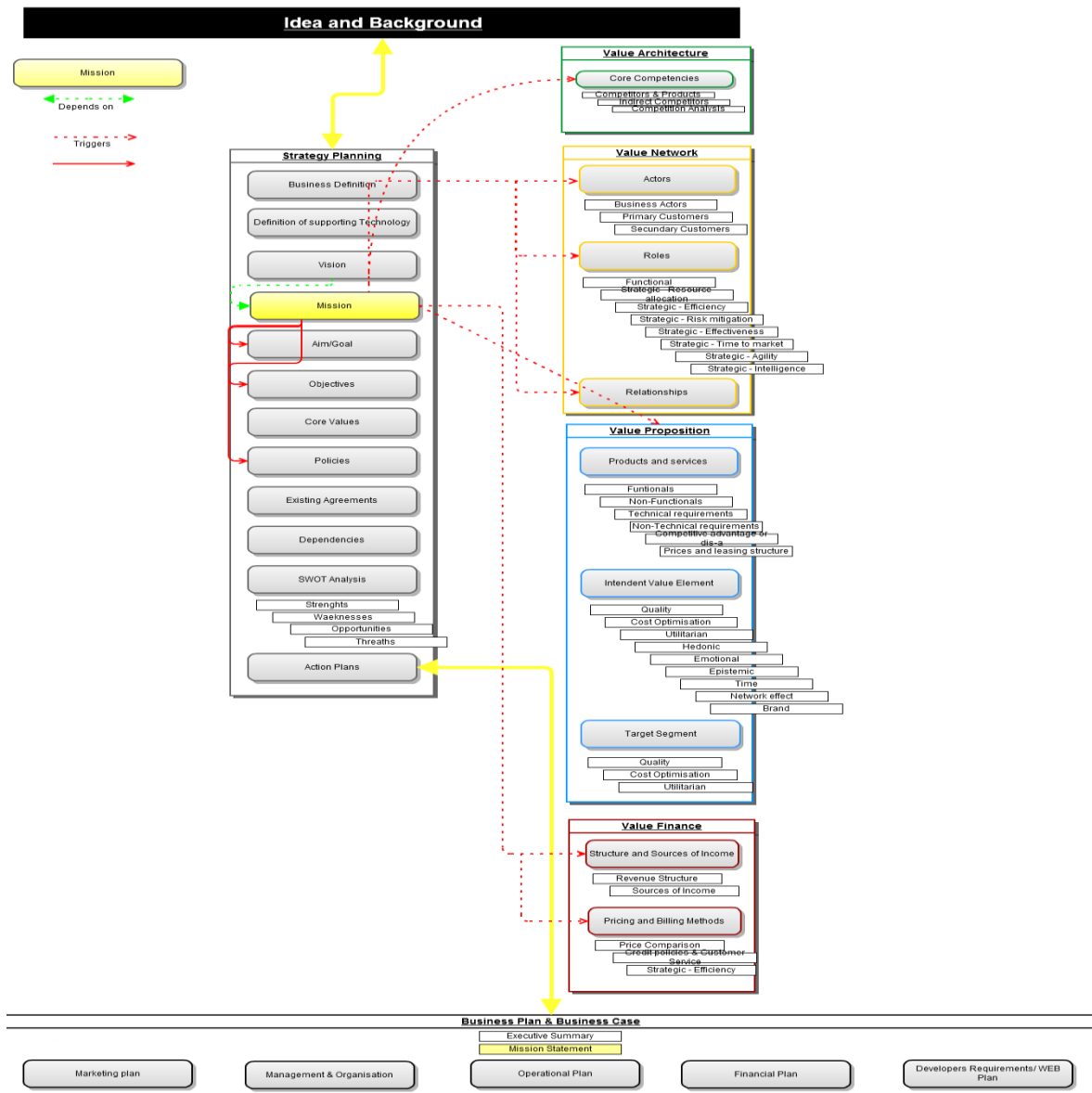
Mission

Figure 6. 7: Links & relationships of 'Mission'

This element fundamentally affects the **value proposition** configurations in terms of product and services, value added elements and target segment. It also considers information from the **value architecture** in terms of core competencies as the analysis of the competition's products and services is an important aspect to consider. Mission also affects the **value network** element, triggering information mainly in the Actors, roles and their relationships. Finally mission affects the **value finance** in terms of sources of income, revenue structure and price comparison.

Aim/Goals
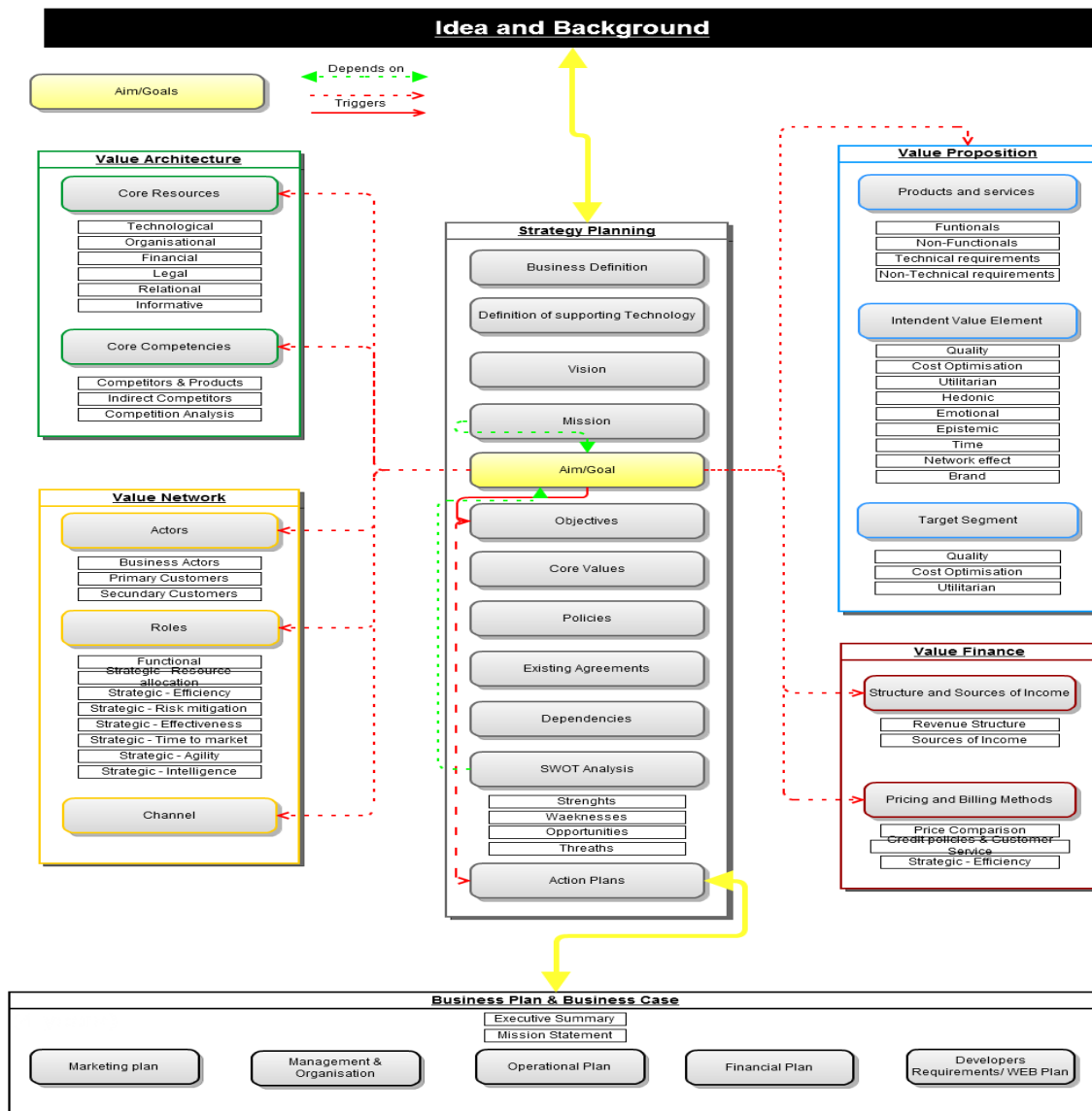
Figure 6. 8: Links & relationships of 'aim & goals'

A goal is a representation of a part of the mission; therefore organisations can have different goals depending of the particularities of the mission. Also a goal will impact certain parts of the Business Model and also can be used for set up objectives within the different business implementation documents, such as Business Plan and Business Case.

Also this building block will impact certain parts of the BM in a direct or indirect way. First the aims will be strongly related with the **value proposition** in terms of the products and services offered the intended value element which will delineate the product Strategy and evidently, the target segment. The **value architecture** will be affected in the core resources and the (what the organisations have) and the core competencies (comparing with the competition). Referring to the **value network**, the aim and goals triggers information for the actors, their roles and the channels used to communicate

organisation's goals. The goals and therefore the objectives are reflected in the **value finance** in terms of the pricing and billing methods to be use and the structure and sources of income.

Objectives
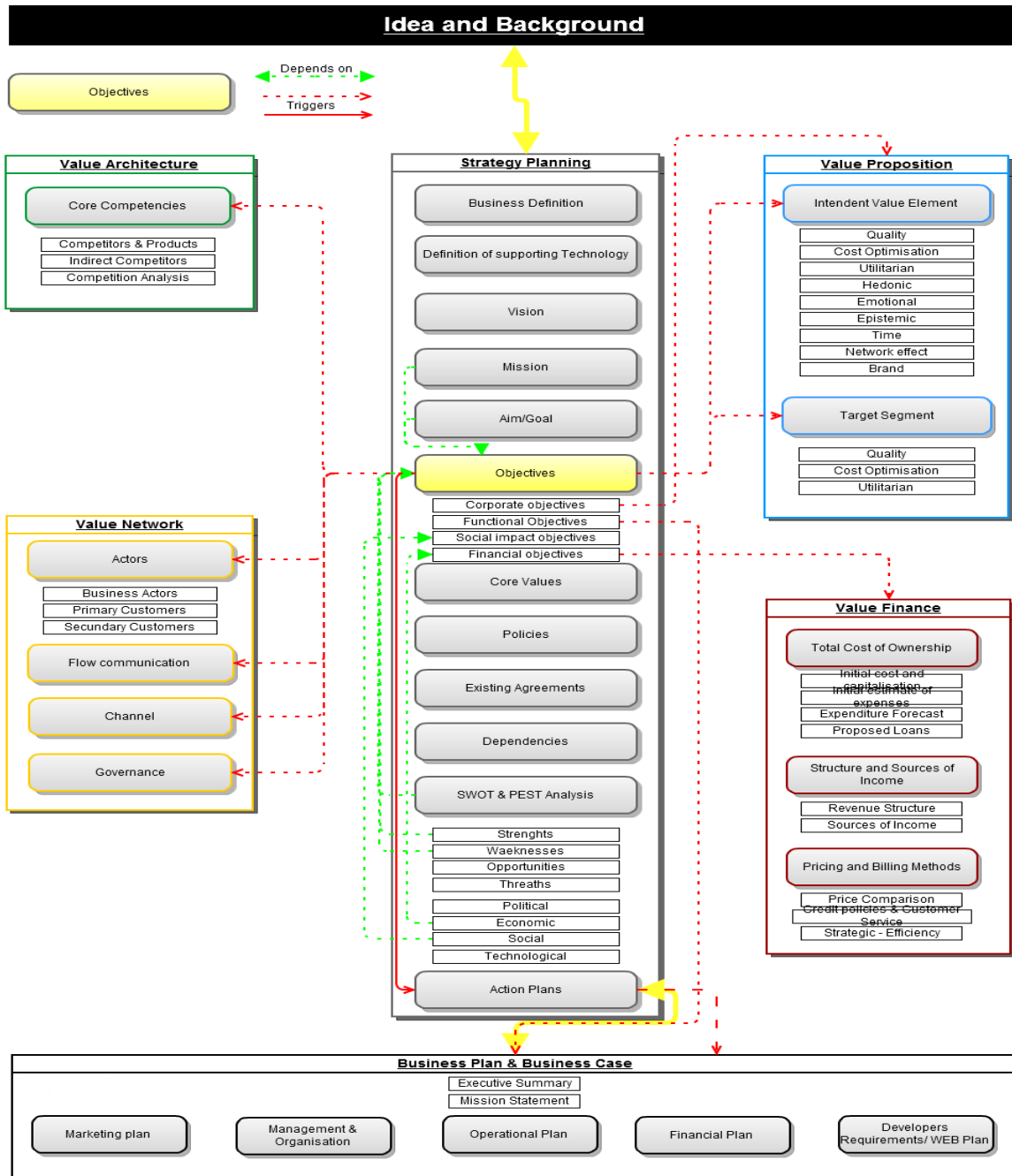
Figure 6. 9: Links & relationships of 'Objectives'

This building block predominantly affects the entire organisation's **value finance**. The financial objectives are directly linked with the value finance, and there are, if not the main, one of the principal objectives, as in this block the organisation describes how they will obtain the income and by which means.

The corporate objectives affect mainly the **value proposition** and in detail, the *intended value element* and the *target segment*. In terms of the **value architecture**, this element affects the organisation's core competencies in the way of adapting the objectives accordingly with the products and services offered and the competitors involve in the target segment. The objectives affects and provides information to the **value network** in the form of how organisations will deal with the different *actors* how to communicate with those business actors (*flow-communication*), through which *channels* and the level of control and authority of each actors involved (*Governance*).

Corporate Strategy

This strategic building refers to how the organisation will be different from the competitors. Hence, it will affect the value proposition in terms of products-services features, and other value elements to be created. The conception of the overall Strategy will affect the kind of resources and capabilities needed within the organisation and also the choice of target segments, which also will affect the pricing model. Additionally, in terms of the different levels of the corporate Strategy described in (Linder & Cantrell, 2000); corporate level Strategy and operational Strategy level, and Business unit Strategy level, the corporate Strategy will directly influence the policies in the SP document and the actors, roles and governance within the BM.

Policies
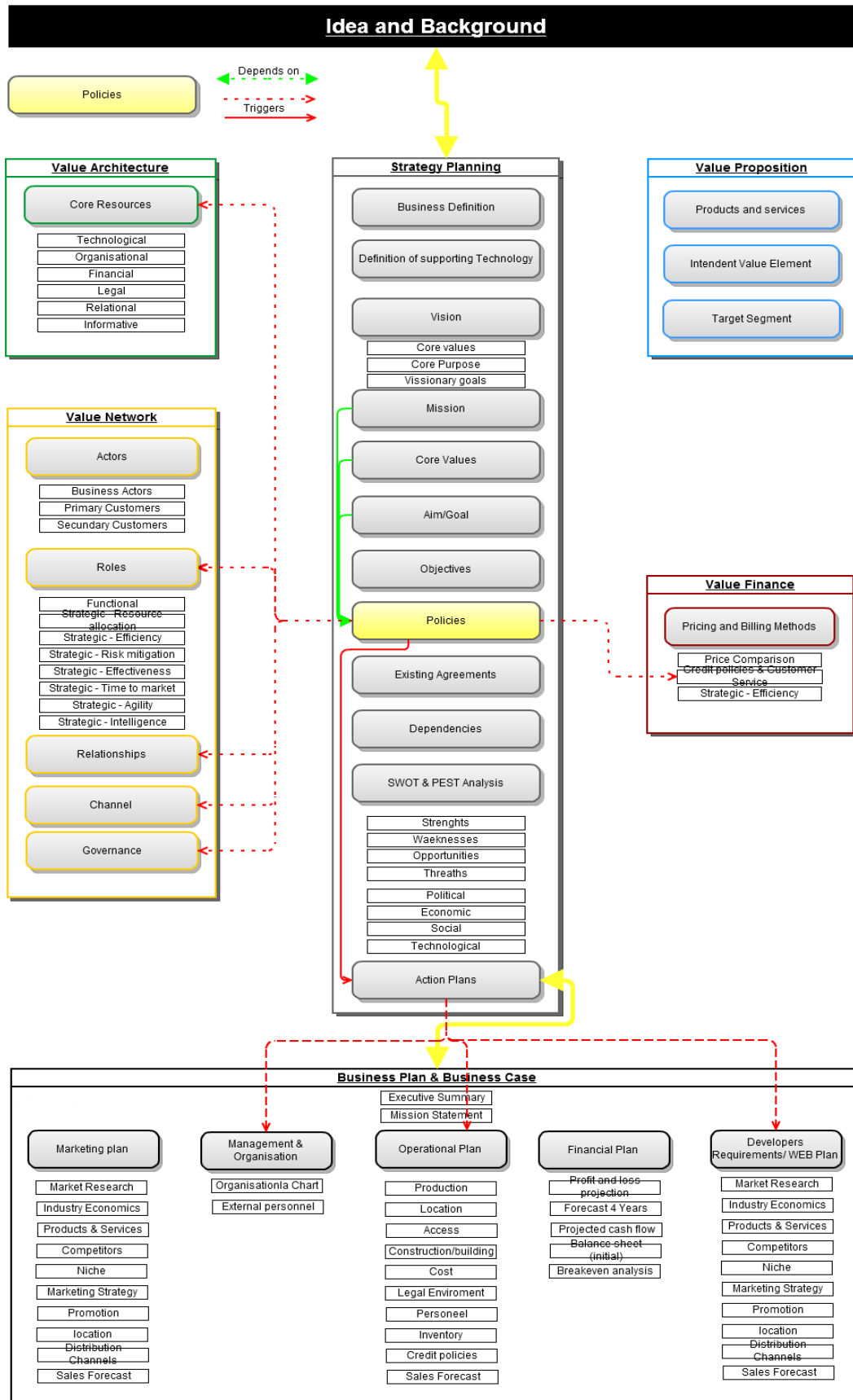
Figure 6. 10: Links & relationships of 'Policies'

This element highly affects the design of value network dimension, defining the roles, relationships and governance elements, as well as the channels.

Policies affect also the design of **value architecture** in terms of the core resources as it helps to examine the assets and resources needed to develop product and services. Moreover, Policies are linked also with the **value finance** dimension, particularly in the credit policies and customer service as part of the pricing and billing methods building blocks.

Also the policies will shape the organisation's attitude towards the staff, consequently linked with the **management and organisation plan** (BP). Moreover this building block is linked with the development and selection of suppliers which will affect directly the **operational plan** and the **Web plan** among other functions (BP).

Existing agreement
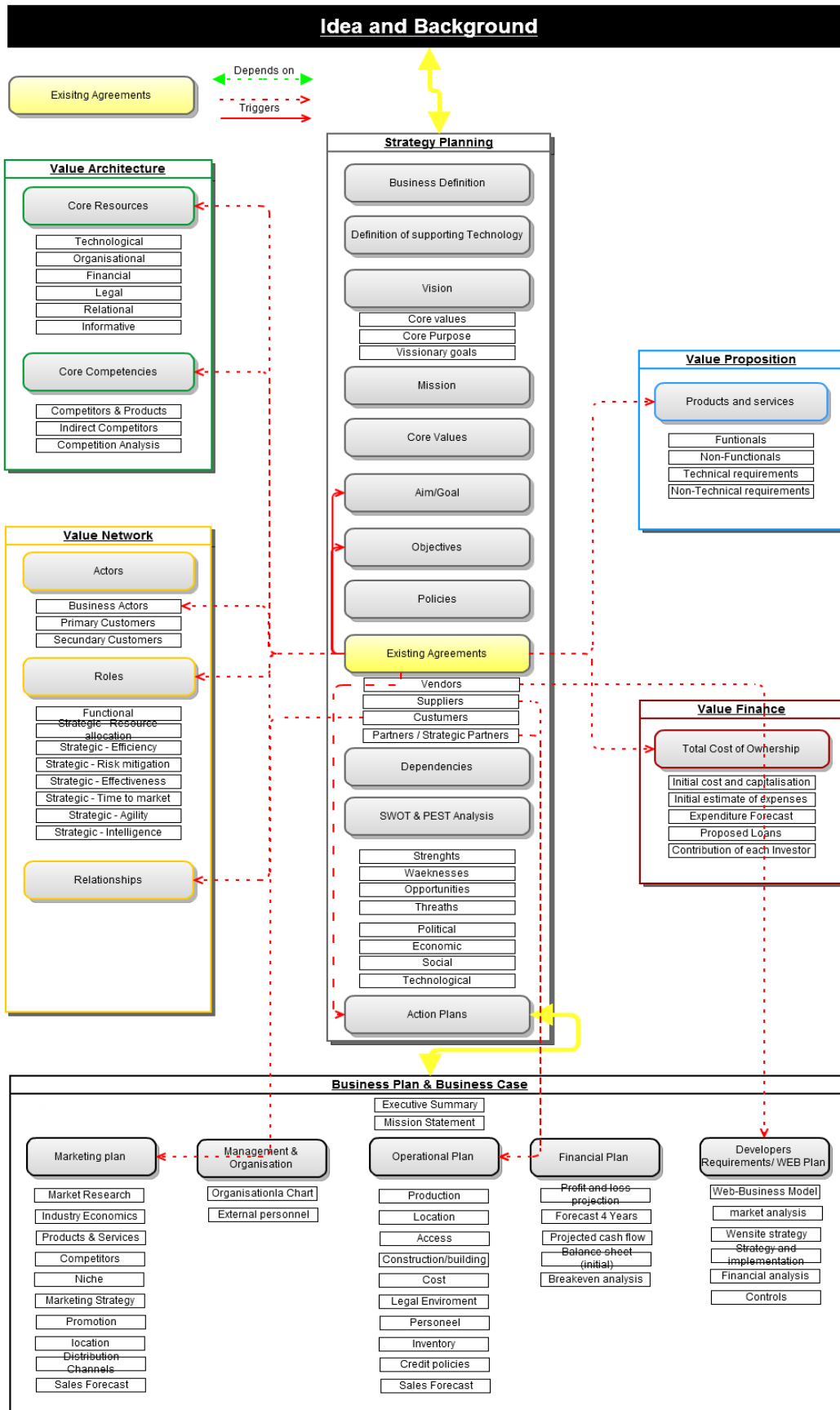
Figure 6. 11: Links & relationships of 'Existing Agreements'

The existing Agreements with one or more *actors* in an organisation will affect the **value network** dimension particularly to the *roles* and the *relationships* between them; it also will affect the **value architecture** dimension modifying the *core resources* and *competencies* accordingly with such agreements. Moreover, the agreements could change the *total cost of ownership* in the **value finance** dimension and the *product and services* offered in the value **proposition dimension**.

Moreover Agreements with vendors will trigger information directly to the **Developers requirements/ Web plan**. In the same way, agreements with suppliers and partners/strategic partners will affect the **operational plan**; and agreements with costumers will affect the **marketing plan**.

Dependencies
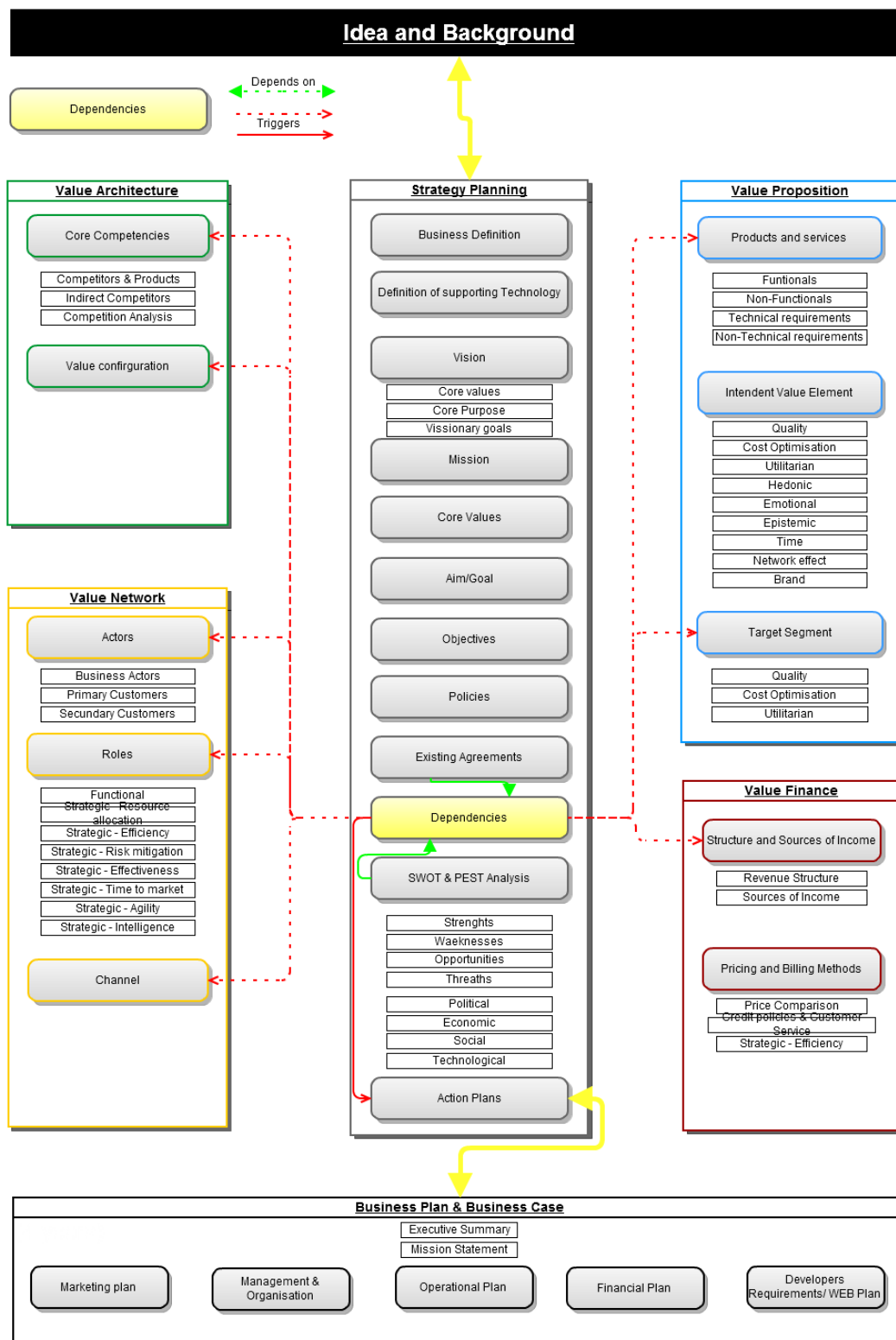
Figure 6. 12: Links & relationships of 'Dependencies'

In the case of an essential dependency exist in an organisation (e.g exclusivity with suppliers or contracts with customers), this building block will affect the development of the Business Model in some parts of the four dimensions. For instance, in the **value network** dimension, the dependencies will

outline the *roles* of the each *actor* and probably how the communication between the actors will flow (*channels*). Subsequently, in the **value architecture** dimension, dependencies will certainly affect the *core competencies* and the (*value*) *configuration* of the organisational and technological resources.

In the **value proposition**, the dependencies can affect the *product and services* offered, and most likely the dependencies will assist to define or modify the *target segment*. Finally in the **value finance** dimension, the dependencies could modify the *structure of the sources of income* in a part or as a whole, depending of how strong are the dependencies in relation to the core Strategy of the organisation.
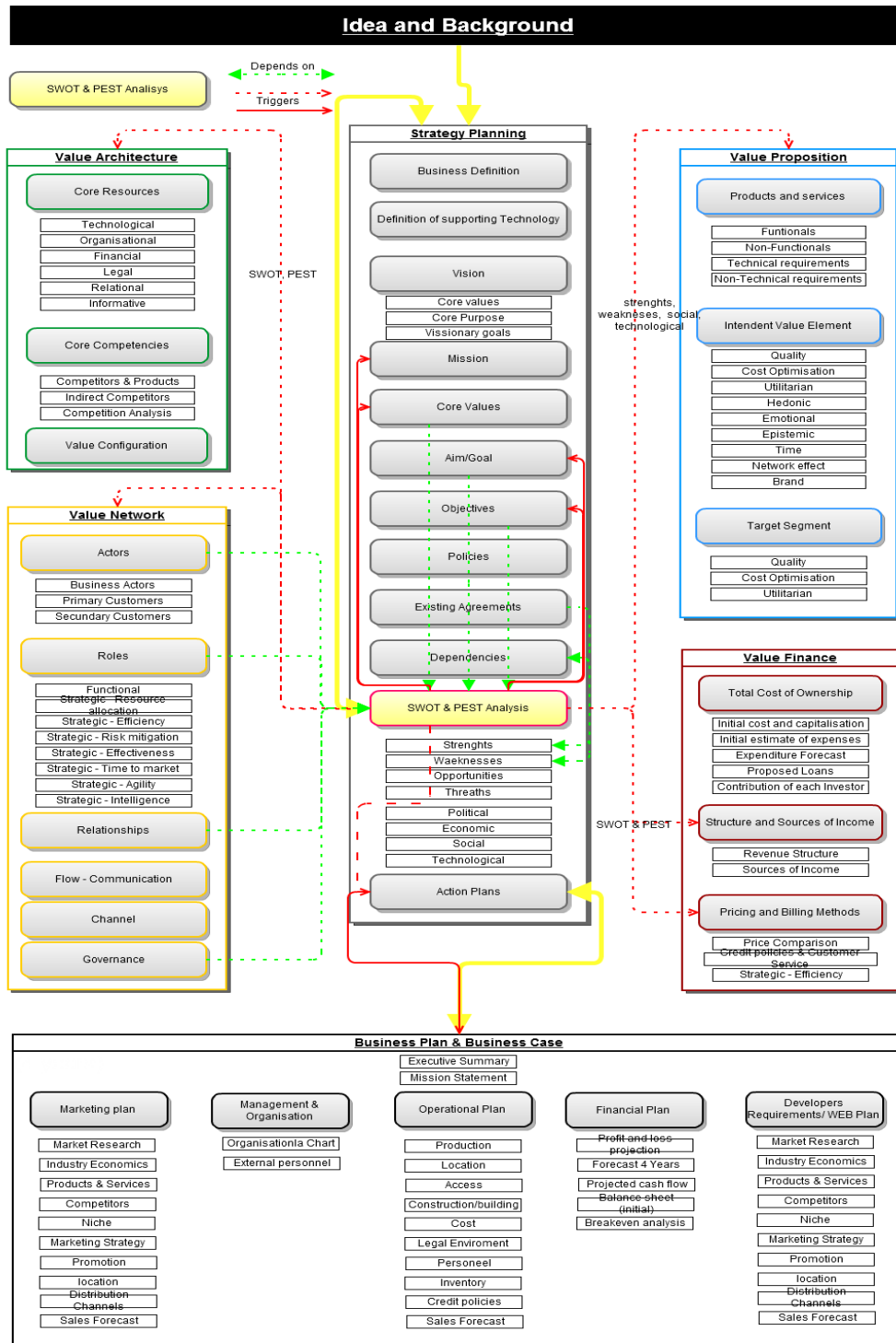
SWOT & PEST Analysis

Figure 6. 13: Links & relationships of 'SWOT & PEST'

In the **value network** dimension, a similar bidirectional interaction happens between the Actors, roles, relationships and governance building blocks, and the SWOT/PEST analysis. The *roles*, *relationships* and *governance* between the different *Actors* provide critical information to the different elements of the

SWOT/PEST analysis such as strengths and opportunities within the SWOT and technological factors within the PEST analysis.

At the same time the SWOT/PEST analysis provides information to the **value network** dimension to align the Strategy with the communication and collaboration that the organisation conducts with all the actors including customers, suppliers, vendors, partners and strategic partners (Johnson, Scholes & Whittington, 2008).

With regards to the **value architecture**, the SWOT /PEST analysis provides with information to the entire dimension and it helps to identify the optimal (value) *configuration* of the *core resources* and *core competencies*.

The SWOT and PEST analyses, mainly the strengths and weaknesses (SWOT) and the social and technological (PEST) factors are clearly related to the entire **value proposition** dimension, affecting the *products* and *services* offered, the *added value* and the *market segment*.

Regarding the value **finance dimension**, the SWOT and PEST analysis are required in order to design the appropriate structure and sources of income and the pricing of the product and services, as well as the billing methods and the credit policies.

Action Plans

The Action plans are the final output of the development of the Strategy and the Business Model. Hence there is a direct connection with the action plans and the Business Plan document, both have the aim of execute the necessary activities in order to formally and legally start the operations of the new venture or project.

As a result of this research the Business Plan document was broken down into 6 chapters (or plans) that form part of the BP: Marketing Plan, Financial Plan, Operational Plan, Management and organisation Plan, Web or Developers Plan, and also the Business Case. These chapters can be seen as "specific" Business Plans used for different purposes within the organisation. However, the objective of these chapters is to implement the action plans derived from the planning stage of the start-up framework. Hence each of these chapters have strong influence from all the building blocks of the SP, with emphasis on the mission, aims and goals, polices, existing agreements and SWOT/PEST analyses. Also these chapters are influenced by specific parts of the BM depending of the objective of the plan, as presented in the figure below.
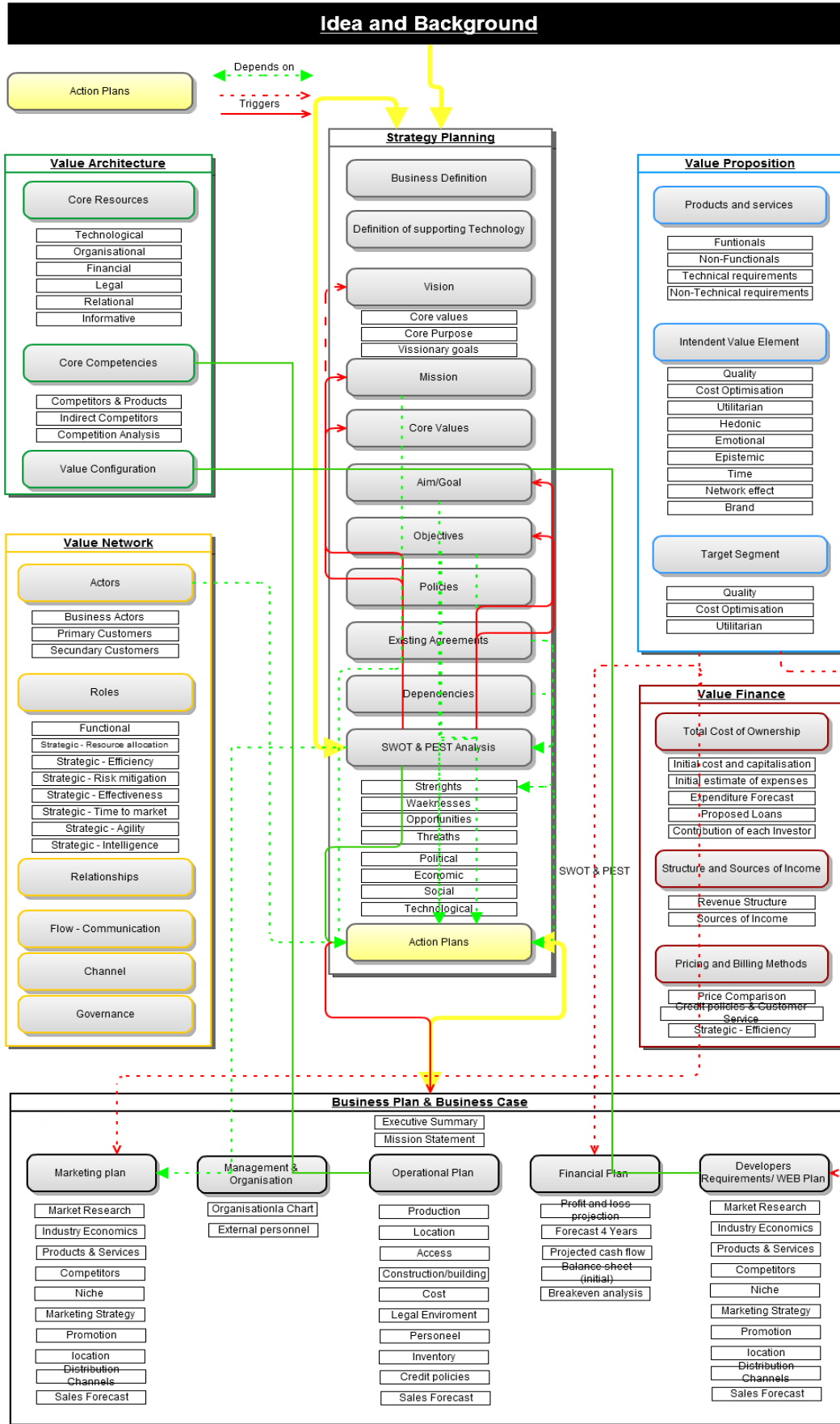
Figure 6. 14: Links and relationships of the Action plans

The marketing plan is strongly dependant of the SP document, mainly with the SWOT and PEST analyses but also with mission, aim goals and objectives. Additionally the Value proposition of the BM will provide the marketing plan with information related to the target market, the products/services offered and the intended value element. It depends in a way of the value finance element by assigning budgets, and also the value architecture if needed.

The management and organisation plan depends basically of the value network and value architecture dimensions of the BM, and the policies within the SP.

The operational plan takes information from the majority of the building blocks of both, the BM and the BP, for the reason that this chapter (plan) describes all the actions needed in order to operate, and produce (if the case), and run the day-to-day activities of an organisation, although the main building blocks affecting this plan are the **value architecture** and the **value network** dimensions in the BM and the mission and the objectives in the SP.

The financial plan chapter of the BP and the Business Case document are strongly linked and the building blocks of these two components are used interchangeably. Hence both are mainly affected from the information derived form the **Value finance** dimension but not exclusive. Also the financial plan will depend of the existing agreements and dependencies in the SP.

Finally the developers or web plan is directly linked with the value architecture dimension and the value proposition of the BM. Furthermore, in the case of *dot-com* organisations, this plan will be also linked with the value finance dimension. The web plan needs to be aligned with the Strategy of the organisation therefore it relates with the whole Strategy Planning document.

6.5.5. Creating the framework (mapping) between SP-BM-BP

The final revision of the framework for start-up an e-Business initiative involves the mapping of the Business Documents into the framework and explains the relevance of those documents with the start-up process. Hence this section portrays the links of the business documents with each stage of the start-up framework as showed in the figure below.
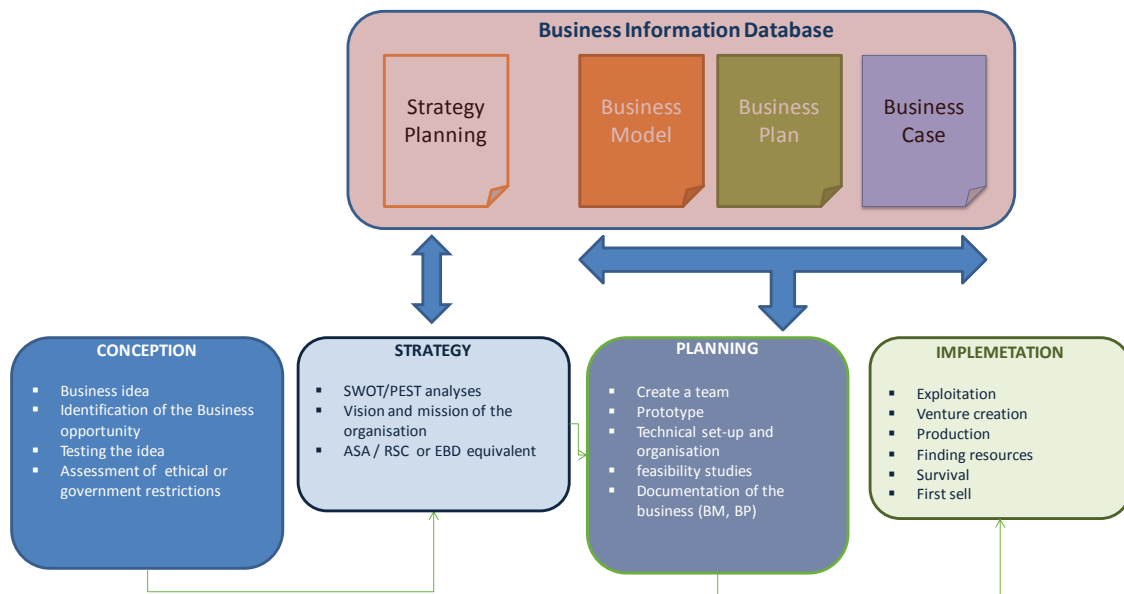
Figure 6. 15: The start-up phases and the Business Documents

6.6. Validation of the artefacts produced in this research

The two main artefacts derived from this research are the framework for start-up *dot-com* companies and the Business Information Database (BID). Although in principle these two artefacts have been validated through each of the 4 previous cycles of this CAR, a validation of the final versions of these were conducted to obtain final results. Three more interviews within SME-MX were carried out to discuss with the SME-MX team the usability of the framework, comparing it with the participants past and e-trade project experiences. The interviews also were used to verify the building blocks for each document of the BID. In addition to this, an analysis of two SMEs is included to examine their experience in the developing of new ventures. To this end, the following sections briefly describe the roles and background of the aforementioned SMEs, followed by the analysis in terms of the proposed framework and the BID.

In order to validate the framework and the BID resulted from the CAR, the researcher have make use of final interviews (post AR) with the main participants of the organisation under study, and making use of two additional short case studies. The two additional case studies were used in this research with the aim to confirm that the analytical procedure employed and the final results proposed are valid for any SME who wants to incursion into the *dot-com* domain. Moreover the results of the validation phase had helped the researcher to draw the final conclusions of this study.

Roles of participants

The final cycle of this research involves the participation of two companies used to validate the final artefacts resulted from the AR; MailboxMovies Limited, and Minimoko Limited. Hence the roles of each

participant and their involvement in this research are clarified in this section followed by the description of the companies under study.

SME2 (mailboxmovies.com)

Mailbox Movies Ltd. consisted of 5 members as shown in the table below.

Board of directors	
Name	**Position/Responsibilities**
Phil Moss	Director/Company Secretary/Founder/Website development and content
Mark Durnford	Director/Founder/Coding - PHP, Sql
Simon Economides	Logistics/Director
George Webb	Silent Investor
Mark Smith	Investor

Table 6. 12: Board of directors of mailboxmovies at the time of selling

From this executive board, only two members were involved in the creation of the project; Mark Durnford and Phil Moss. Mr Moss has worked on the content (business idea), development of the business Strategy and branding as well as in the development of the BP and website development within the mailboxmovies.com project. Hence his involvement in the project was essential in the assessment of the process of starting-up a *dot-com* initiative, and the challenges faced during this process. Mr Moss has also participated in the creation of a brick-and-mortar company; Jungle Moss Ltd, a web-design and graphic-design company with an initial investment of £10,000. Also Phil is currently owner of "Serious Onions Ltd.", a brick-and-mortar Kent based company, who transform digital images into hand made canvas art.

SME3 (Minimoko)

Minimoko has only two partners at this time: Harry Mylonadis and Helen Amygdalaki who are two entrepreneurs, with experience in branding design and IT/Strategy development respectively. Mr Mylonadis has successfully obtained a Master degree in Information Systems, and he has working experience as Information Systems Manager at Service Management International Ltd. Mr Mylonadis specialises on: Simplicity, Branding, Experience Design, Information System Management, Creative Problem Solving, Change Management, and Story Telling. As co-founder of Minimoko, the collaboration of Mr Mylonadis in this research has been useful to examine the start-up process followed in the creation of this company and to assess the start-up framework proposed in this study.

Table below summarises the roles of the participants in the evaluation cycle of this research.

Role in the project	Participants's name used in this thesis	Cycle intervention
Owner and CEO of SME-MX. Leader and champion in the e-trade project	Owner, Champion, Director, Entrepreneur	all cycles
PM @ e-trade and VP of Business Innovation at SME-MX	PM2, Coordinator 2	cycle 3, 4 & evaluation
IT Consultant @e-trade / Tony's IT advisor & researcher @ brunel	IT Consultant, Academic 1	all cycles

Role in the project	Participants's name used in this thesis	Cycle intervention
Entrepreneur, Partner in mailboxmovies.com (uk), owner of Serious onions	Mr Moss	evaluation cycle

Role in the project	Participants's name used in this thesis	Cycle intervention
Entrepreneur, Image and branding consultant, owner	Branding leader, Mr Mylonadis	evaluation cycle

Table 6. 13: Participants in the validation cycle

The Case Studies' context

SME2: Mailboxmovies.com. Mailbox Movies Limited or also know as mailboxmovies.com was an online movie club allowing members to pay a set monthly fee in order to receive unlimited DVD/Games rentals every month. The concept of this company was based in the original idea from the North American companies; Video Mailbox and Netflix.

Video Mailbox was a company founded in the mid 1980's in the USA with the innovative idea of renting videotapes through the mail. Back in the late 80's - early 90's the video stores become popular and many people become members of a local brick-and-mortar video stores. Those businesses usually had a simple BM in which costumers rent one or two movies from their very limited selection and pay a fee for each movie rented in a day basis. Conversely Video Mailbox came up with several breakthrough and pioneering ideas which lead into a innovative BM with the following characteristics: users will be aloud to rent as many videos as they like for a flat monthly fee, the movies would be shipped to the customer via mail using a special pre-paid mailer, give to customers a huge selection of movies and, the use a sophisticated software program to create and manage customer's favourite movies in a "queue" to ensure that videos were dispatched quickly and efficiently. Although, some years later (1997) Netflix presented and patented a similar BM, thus the origins of this idea are still in dispute between those companies.

Phil Moss and Marc Durnford, two British national entrepreneurs, completed a background research on these North American companies, and as a result they saw the opportunity to invest in the European

concept and BM of Netflix, which at the time, there were no UK competitors in the market. Mailboxmovies.com started operations in January 2002 under the *dot-com* umbrella and copying the Netflix BM to operate mainly in the UK market.

After three years of operations, mailboxmovies.com had some constrains with the initial investment made, and together with the entrant of new and stronger competitors, in 2005 Mr Moss and his partners decide to merge mailboxmovies.com with DVDs365 which has already MovieTrak and Qflicks as sister companies. DVDs365 was eventually sold to ScreenSelect in 2005 and one year later (2006), ScreenSelect was merged with LoveFilm. LoveFilm as today know, is the larger on line video/rental club in the UK, now under the full control of Amazon who acquired LoveFilm in 2011. Figure below presents the original home page of mailboxmovies.com and their evolution to today's LoveFilm website.
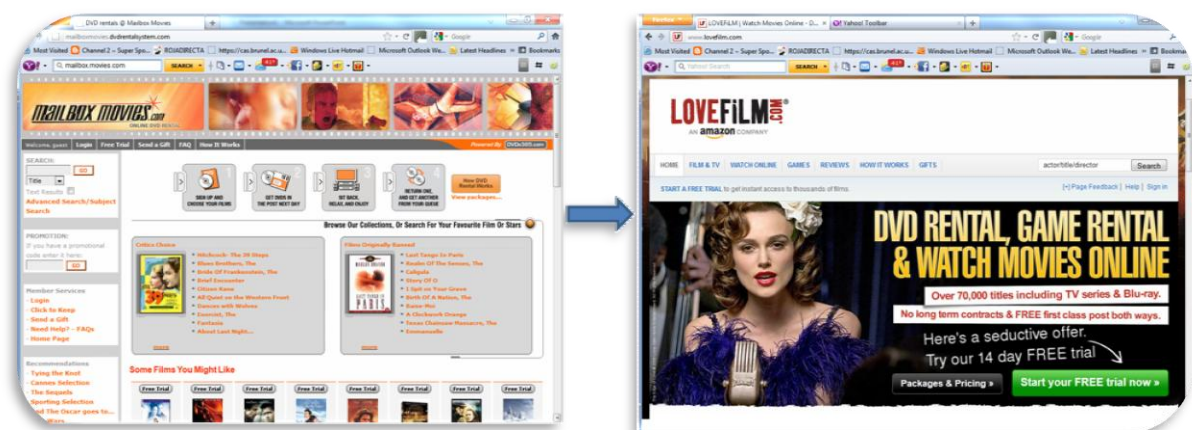
Figure 6. 16: mailboxmovies.com - LoveFilm "home page"

Mr Moss actively participated in the start-up process of this *dot-com* company, hence the understanding of the main actions performed during this process (starting this business initiative) was helpful and rich in information to validate the outcomes of this research. Hence, this information has valuable insights to be compared against the start-up framework proposed in this study, and the information provided by Mr Moss, was useful to understand the start-up process followed by matchboxmovies.com and the reason of selling the company.

SME3: Minimoko. Minimoko is a London-based Branding and design studio which was created in October 2009; SME3 is run by Miss Amygdalaki and Mr Mylonadis, a dynamic duo that joined their forces and knowledge in entrepreneurship, business and creative thinking. Minimoko works very close with SMEs assisting them in the process for construct strong brands that differentiate from their competitors and make them successful. The concept of Minimoko is minimalistic, thus their focus is to simplify the world and help Start-ups and SMEs reach their full potential through a simple but meaningful branding experience. Although Minimoko started as brick-and-mortar Company with physical presence (offices), rapidly move towards the Internet sector, and it can be considered a *dot-*

com firm since their main channel of communication with their customers is trough an innovative intranet that allows users to communicate and review the project progression. However Minimoko cannot be considered in the e-Business domain because their main operations are still not based on the Internet, most of the meetings and workshops with the clients are in person and the relations with suppliers and strategic partners are also through traditional networking systems. Figure below presents the actual 'home page' of Minimoko's website.
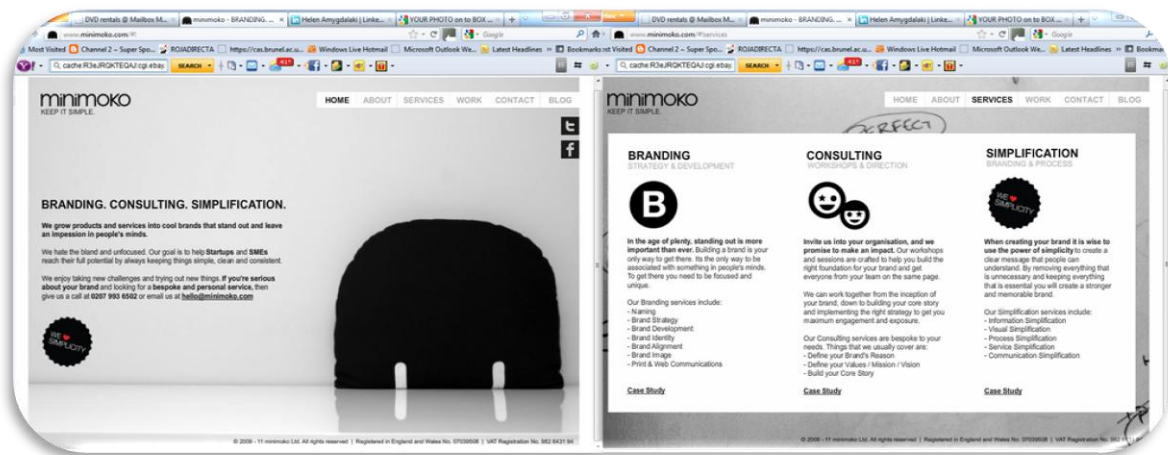
Figure 6. 17: Minimoko "home page" and "services" offered

Mr Mylonadis and his partner have recently experienced the start-up process, hence their know-how was useful to compare the process followed by Minimoko against the e-trade project; looking at similitude and differences among this process, also the intervention of Mr Mylonadis was useful to validate the framework proposed in this study. Moreover, the closed relationship of Minimoko with SMEs and start-ups has been useful to portray (in Mr Mylonadys words) the process that his clients follow to start-up a new venture.

Collection and organisation of data

The information collected to analyse and validate the framework proposed has followed a similar process than previous cycles; the data was collected through three main datasets; Field notes, Documents review and Interviews. The contend of each dataset was divided into three primary nodes representing each company under study, as a result the table below summarises the information extracted from each company under study and used to evaluate the findings of this research.

Organisation	Field Notes	Documents	Interviews No.	Lenght
mailboxmovies.com	3	2	2	01:59:15
minimoko	2	1	2	01:53:11
e-trade		3	3	03:48:06
researcher	3	1		
Total	**8**	**7**	**7**	**07:40:32**

Table 6. 14: organisations and data collection during the evaluation cycle

6.6.1   Validating the framework

To validate the framework, the start-up process of two SMEs, namely mailboxmovies.com and Minimoko were analysed with their corresponding owners. Additionally some interviews were performed in the organisation under study (SME-MX) after the CAR has finished, with the objective of enriching the Framework and BID with their reflections and feedback. However these reflections were not taken into consideration in this dissertation in order to avoid influencing the participants' thinking and to have a more realistic view of the participants.

a)   *Mailboxmovies.com start-up process*

Characteristics of the entrepreneur

The company (Mailbox movies Ltd) was a SME founded in 2002 by means of two British entrepreneurs who have strong background in graphic/web design and programming, also both have previous experiences creating and participating in the start-up process of different SMEs. Mailboxmovies.com was a company born under the *dot-com* sector copying a Business Model that already proved to be successful in North America.

The start-up process of Mailboxmovies.com

In order to identify the process followed to started-up this company, the researcher has interviewed one of the main participants in the project. During these interviews, Mr Moss has explained the main steps followed in this process. Hence the following activities were identified and described as follows.

- o   The idea and the origin of the business opportunity were initiated whilst participating in other project. Previously to mailboxmovies.com, Phil Moss has actively participated in the development of Jungle Moss Ltd. This company was a media company, specialising in Web design and graphic design media. As Mr. Moss explained, "*the idea of mailboxmovies.com emerges from a casual conversation between me (Mr Moss) and my partner Mark (Mr. Durnfold) whilst developing a web site for one of our clients and after read an article about the success of the BM of Netflix*"
- o   After some conversations between the founders (Mr. Moss and Mr. Durnfold), the following formal step was a background research about the American company Netflix.
- o   After looked at the Netflix model the next step was to develop mailboxmovies' own methodology
- o   After reviewed and developed the 'methodology' to follow, the next action was developing relationships with DVD wholesale companies.

- o Subsequently the Website and content was built (The development of the software took about 4 months).

- o Before open to customers, an initial DVD stock was purchased from different wholesalers.

- o Finally at this stage, Phil and his partner started looking for investors as they detected that a major funding was needed in order to make this project work and growth.

The main steps followed to start operations, were 4 core activities as described by Mr Moss:

- o Front end website design (design and content)

- o Back-end PHP, SQL database development (software development)

- o Build up video Stock

- o Online marketing (first advertised in Google)

Mapping Mailboxmovies process into the proposed framework

Conception Phase: The steps followed by Mailboxmovies in this phase were clear and specific, and matching with the requirements of the conception phase of the framework, such as the identification of the business opportunity (USA market has certain similitude with UK market and by the time of conception there were not too many competitors), and the validation of the idea (The BM has proved to be successful in North America).

The background of both entrepreneurs has been essential for the clear and smooth start-up processes presented in this company. Both (Mr Moss and Mr. Durnfold) have a strong IT knowledge and also the necessary skills to perform all the activities needed for the start-up process. In this relation, the literature in the entrepreneurial arena has emphasised the importance of the background and knowledge of the entrepreneur. Thus it seems that a better knowledge and understanding of the business, the better are the results. Furthermore, the action of consulting the Netflix BM during this stage was particularly helpful to direct and clarify the subsequent activities

Strategy phase: In terms of Strategy, Mailboxmovies completed this phase instinctively during the definition and conception of the idea, and the identification of the business opportunity, in the conception phase. The fact that the entrepreneurs have studied Netflix's BM, has facilitated the recognition of the building blocks of the Strategy, such as the aim/goals, objectives, dependencies and SWOT analysis. Although the entrepreneurs did not actually document the Strategy as such, they did have a clear idea of what to do and the direction of the project was well defined. Moreover some actions were made at this level such a SWOT analysis of the business idea in the UK.

Planning Phase: The planning phase in this project was rich in information but particularly short in time, therefore the process of planning activities was easy and straightforward, this can be mainly

attributable to the existence of a well design 'methodology' which had helped to delineate activities. As previously mentioned, Mr Moss and his partner have based their methodologies in the Netflix BM, thus, in a way Mailboxmovies had already delineated the activities and procedures to follow which resulted in the smooth planning and implementation process.

Documentation of this project: Akin to the framework proposed, Mailboxmovies used Business Documents during this phase, particularly the Business Plan. This document was claimed to be the only one used and was mainly created for two reasons: to document the information of the company for planning purposes, such as marketing strategies, and to present the company to possible investors. Hence a revision of this document was performed and as a result the building blocks contained in the BP used by this company are presented in table below.

Building block level 1	Building block level 2
Executive Summary	Summary of the business and content of the document
Background of the project	Key personnel
The Market	Market growth, Competition, Treats, summary
Value proposition	Value offering (services/products provided) Benefits of the services/products Description of the services/products Distribution channel of product/services System and Applications (website and software development. Inventory/stock control Potential of diversification
Sales and Marketing Strategy	Marketing strategies: description of the activities
Operations	Overhead costs: (Occupancy, website hosting, telephone/ADLS line, hardware-software, postage & packaging, and others)
Financing	Total cost of operations and marketing budget
Risk to business	Marketing, Growth, Film distributors, Competition, security
Appendix 1	SWOT Analysis
Appendix 2	Mission Statement

Table 6. 15: The mailboxmovies BP

It was noticeable that the mission statement and the swot analyses were presented as a separate appendix of the BP, and the absence of other building blocks such as vision and the definition of the supporting technology which is the connection with the software development.

In terms of the BM, Mailboxmovies claimed to not have used one, however the analysis showed that Mailboxmovies used the 'methodologies' described in the Netflix patent, and have adapted those methodologies to the Mailboxmovies project. The methodologies described in Netflix's patent, are the description of the Netflix BM used in North America, therefore Mailboxmovies actually used a BM.

Implementation Phase: The implementation of the activities resulted from the planning phase, were reported to be smooth and easy to implement. However some changes in the software were made afterwards, for further developments based on customer's requirements.

b) *Minimoko start-up process*

Characteristics of the entrepreneur

Minimoko is a small company in the service's sector, selling consultancy services in the area of branding and Strategy development with specialisation in the SME sector, including 'services' and '*dot-com*' companies among their primary customers. The founders of Minimoko are two *first-time* entrepreneurs who created the business concept through personal motivations and individual background in Design, Business and Marketing. Mr. Mylonadis have strong IT background. However, do not have experience in the e-Business and *dot-com* sectors.

The Minimoko start-up process

Mr. Mylonadis expressed that they did not follow a particular structure or steps to create Minimoko. Mr Mylonadis and his partner followed an intuitive process based on their experience, hence it is noticeable the absence of a market research to challenge the business idea. The fact that they do not followed any formal process, however, does not mean they were unstructured, as Mr. Mylonadis later explains. The main steps tracked in Minimoko's start-up process were described as follows:

- o The conception of the business idea: the idea has been in the minds of the entrepreneurs since few months before the formation of Minimoko. Hence, the idea was already well defined by the time they formally embarked in this process.
- o 1st movement: After formally come to a decision to start the company, the following actions were taken as the initial movement towards the development of the company: Design considerations; selection of the name, domain designs, logo design, and legal considerations; register with HMRC, register domain, etc.
- o 2nd movement: The next action carried out was to look for different alternatives to promote Minimoko (they have used use web 2.0 as part of these strategies)
- o Development of the website: Finally the last step followed was the development of the website, which took them about 4 months from the moment of the conception of the idea.

Mapping Minimoko process into the proposed framework

Conception phase: This phase of the framework matches entirely with the process followed in Minimoko. As many companies, Minimoko undertook this phase quite easily as the background of the founders were strong in terms of the knowledge needed. Mr. Mylonadis, for example, has a strong IT Background and also has experience related to Business, problem solving and design, also Miss Amygdalaki has a strong background on graphic design and branding development. Previous experiences of both have facilitated the conception of the business idea.

It was evident that Minimoko has already accomplished during this phase some elements belonging to other phases of the framework, such as the legal constitution of the company and the branding and logo design. The former can be positioned in the planning stage and the latter at the Strategy level.

Strategy phase: The Strategy was build based on the business idea and personal feelings, thus they did not perform a market research to confirm the feasibility of the project, which shows this development unstructured and very intuitive. The main observation from this phase, was that Minimoko did not document the Strategy , and similarly to e-trade, the Strategy of the business was only in the entrepreneurs mind. Mr. Mylonadis argued that the reason to not having documented the Strategy was because the nature of the business requires a very flexible Strategy, thus cannot be documented at this point.

Planning phase: Similarly with the Strategy phase, Minimoko followed certain structure to develop plans, except that was based on instinct and previous experiences and not in any template or formal information. Hence Minimoko did not have a proper Business Plan documented. However Minimoko planned and achieved activities in a structured way, still not documented but once again, Mr Mylonadis emphasises the need to perform activities with a planned approach, he mention "*remembering and quoting one of my Master lecturers, he says; Planning is essential but Plans are useless*", which exemplifies the structured way of Mr Mylonadis work, but the absence of settled Business Plans. The reasons for not having a BP are summarised as follows:

o   Time and complexity: the BP templates consulted were rather complex and also more product oriented, hence it will take him time to create such document. Therefore he did not have the time to develop a BP as he was responsible of the development of the project and the conception of the business idea.

o   Business Plans are more used to present the organisation to possible investors: Mr. Mylonadis argued that "*the BP is a document created to present the organisation to possible investors, credit banks and providers*", similar to the definition of the "Business Case", and for that reason he does not needed a BP, since he was not looking for investors at this stage.

Implementation phase: In the case of Minimoko, the process of start-up the company was relatively fast as it was done in about two months. Mr. Mylonadis explained that this process was straightforward mainly because his business does not required of external or complicated resources, as the only resource needed is their knowledge and a basic initial investment.

Web 2.0: Mr Mylonadis stated that there is not web 2.0 Strategy for Minimoko, however after the interviews, it was noticeable they use forums, blogs, and social network sites to promote his business.

Mr Mylonadis explained: "*The blog is one of the essential tools in terms of building brand, promoting the business, and getting into market*". And also confirms that some of the main customers have come from this source, and from the use of LinkedIn and tweeter.

c)   Overall Conclusions of the evaluation of the framework

As part of the CAR, the proposed framework has been validated through the 4 previous cycles. The intentions of this section were to obtain more insights that could be used to evaluate the usability and practicalities of the proposed framework. From the analysis exposed before it can be concluded that most of the start-up processes follow a very similar approach to that proposed in the framework. Therefore it can be said that this framework can be used as the strategic guidelines when embarking in these kinds of projects. The framework, however, should not be considered as a *panacea* to solve the problems nor to be used in a rigid manner. The experience derived from SME-MX, SME2 and SME3 suggest that, as long as there is some fundamental structure, an organisation can follow separate paths to develop a start-up company in a successful manner. The key component is to have a structure to kick-off the project in one well-defined direction. In this sense, the main functionality of the framework is precisely to offer a structured way to organise the overarching phases a project of this nature. Both Mailboxmovies and Minimoko had in place a structured way to develop their projects and manage to implement the business idea, whereas e-trade failed on this aspect and as a consequence the project is in stand-by. The owner and the PM2, however, indicated that they would follow a more structured approach to this project if they had to start again. The proposed path from both actors was closely related to SME2, SME3 and the framework proposed in this research.

Finally, it can be said that the main difference between the start-up processes of a brick-and-mortar organisation from a *dot-com*, is mainly related to the software development components and the definition of the supporting technology. Brick-and-mortar companies tend to orient their strategies to marketing activities and use supporting technologies to other areas, such as having a presence in the web and to benefit from web 2.0 tools. In the case of *dot-com* initiatives, on the contrary, the Strategy is strongly related to the software development; hence these need to be developed in synchrony and should be planned in the same way, as the framework suggests.

All the information derived from SME-MX, SME2 and SME3 were used to finalise the last version of the framework, which will be fully explained in chapter 7 as part of the contributions of this research.

6.6.2   Validation the BID and relationship of the building blocks

The development of the BID can be seen as the mayor contribution of this research and emerged from the evolution of this project during each of the 4 cycles. Consequently, the evaluation and validation has been performed in each cycle, particularly in the fourth and final one. During the final interviews

conducted to SME-MX, SME2 and SME3, the participants were asked to comment on the final BID to obtain final insights. The most relevant comments are presented next. These will be considered to elucidate the conclusions presented in chapter 7.

SME-MX owner:

BID: The owner sees the building blocks too abstract, and sometimes the terminology used is complex. Although the definitions of the building blocks have been provided, there are still some concepts that are not clear and other seems to be repetitive. No specific cases were elucidated.

Validation of the links/dependencies: after the revision of the links and dependencies of the building blocks, the owner acknowledged the value of these relationships. However he (the owner) still seems to be confused about some information related with some building blocks and the value of these relationships. He comments that the links of those building blocks have clarified some of his doubts, but the amount of relationships among the blocks is still complex.

Web Plan building blocks: finally in terms of the building blocks of the web plan (part of the BP), he still believed that these building blocks, specially the ones related with web 2.0, are part of the technology, therefore he (the owner) thinks that this is not an important part of the development of the project, and associate the concept with platforms, programming, bandwidth and so on. The owner believes that this is the job of the web developers (sienna).

SME-MX PM2:

BID: in terms of the BID development he comments that this activity was not concluded in the e-trade project because there were still many holes in the Strategy, he comments: "*the entrepreneur is not formal or structured; they only create documents when they need to look for investment or loans with credit institutions*". However he mentioned that entrepreneurs should benefit from the BID and the business documents not only guide the direction of the business, but also "*these documents should be part of the metrics of the company, in order to assess the achievement of task and objectives along the project. Hence the importance of developing those documents at the early stage of the project, such as the BM and tie the knot with the BM for the entire process*".

Validation of the links/dependencies: PM2 have easily understood all the building blocks and dependencies presented in the framework and he claimed that the information is very useful and enriched. However, he (PM2) was pessimist about the usability of these relationships, as he believes that SMEs only create these documents when it comes to seek for investment. He also commented that the Business Model should be the path to follow for an organisation as he believes is the right place to start. Thus the BM will provide with the information necessary to execute a Business Plan and the BC.

The business documents: Although there are many documents needed to develop a *dot-com* initiative *PM2* thinks that these documents are necessary to create a company, and in higher or lesser grade the documents will help to shape the organisation. *PM2* recognised the differences between the documents and their use. However PM2 comments that his previous experiences with fellow entrepreneurs suggest that Mexican entrepreneurs do not really use these documents, he comments, "*The Mexican entrepreneur wants to operate, not to plan. Hence these documents are perceived as aspirational and impractical, hence they tend to not use any documentation*". PM2 also comments "*unfortunately the lack of information about these documents and their usability among Mexican entrepreneurism is normal*" he continues "*I don't know globally, but in Mexico there are many SMEs that are already operating and do not even have a BP or even worse they don't know what is a BP, nor a BM*".

Minimoko

Minimoko was asked to populate the BID with his own business data in order to assess his understanding of the functionality of the database. His observations are summarised as follows.

BID: Mr. Mylonadis mentioned that there are many concepts in the BID, making it complex to understand, and some repetition between the building blocks could be observed, although he recognised that repetition is needed at some points as there are relationships between elements and documents. Mr. Mylonadis was not able to fill some of the building blocks because "the information needed in some of the building blocks is not clear or rather needs a deeper understanding of the business, which may not be the case of as first-time entrepreneur like me (Mr. Mylonadis)." Additionally, Mr. Mylonadis argued that the BID contains information that is generic and not business specific. Hence, he comments that it was necessary to include some building blocks in order to personalise the BID according to Minimoko needs. For example, he suggested the addition of the building block "branding" into the BID. After reflecting on the relationships of this block, branding was positioned into the Strategy Planning document since Mr. Mylonadis explained that the branding development process depends on the building blocks of the Strategy such as; mission, vision, core values, swot and but also is linked with the value proposition block of the BM or BP. Also Mr. Mylonadis comments that in terms of *dot-com* companies, branding should be very much integrated with the web development since, the website is the product of the organisation, hence need to be aligned to their vision and mission statement.

Mr. Mylonadis also commented that due to the complexity of the BID, the entrepreneur is required to have high business knowledge or someone within the organisation with knowledge in the BID in order

to understand and take advantage in full of the database. He also added that guidance and support when developing each element would substantially eliminate complexity.

Finally Mr. Mylonadis acknowledged that this method was indeed valuable to understand the links and value of the building blocks, and also can help organisations to identify their gaps or need and planned further actions accordingly. Also in terms of the inclusion of web 2.0, he comments planning these activities is important but still not a major part of the business, hence should be considered as part of other activities. He added that Blogs have been an essential tool that have added value to his business. Twitter and Facebook have also helped him to attract traffic to his website.

Mailboxmovies.com

Unfortunately Mailboxmovies did not complete the validation of the BID. Mr Moss was not keen to perform the exercise of populating the BID, not even the BID light. He argued that the information of Mailboxmovies was old, obsolete and he did not remember most of the essential information regarding the building blocks. However, some building blocks were detected during the analysis of the Mailboxmovies project, as observed in the BP document presented and analysed as part of this study. Furthermore, Mr Moss made some comments and observations to the BID during an informal conversation, however the information obtained regarding the validation of the BID was not enough to add value to this research, and thus it was not included.

6.7.   Summary

This chapter presented the evolution of a longitudinal action research approach aimed to portray the process of creating of *dot-com* venture within the SME sector. This chapter summarised the analysis resulted from four cycles of CAR carried out within the e-trade project and the results of this study produced two main contributions:

➢   A framework for the development of *dot-com* ventures for SMEs, and
➢   The Business Information Database (BID).

The framework and the BID presented were derived from one action research study (SME-MX) thus required to be validated in other context. Hence, in order to validate the framework and the BID, two more SMEs (case studies) were consulted and the results presented in this chapter too. Finally, a last QDA was performed with the information resulted from these studies and the conclusions are presented in chapter 7.

Chapter 7:
Learning and Reflections

Azael Serrano
Brunel University

Contents

Chapter 7- Learning and Reflections

7.1.   Introduction

The opportunities identified in the literature gave rise to the aim of this research, which was to identify the process involved in the development of a *dot-com* company, and to provide an understanding of how SMEs operates in this sector. Furthermore, the research objectives described in chapter 1 have been achieved through the analysis of a CAR study and two short case studies. These studies have been essential for developing the start-up framework for the development of a *dot-com* venture and the Business Information Database, thus contributing to both theory and practice. The following sections describe in more detail the contributions of this research in terms of theoretical, practical and methodological contributions.

The individual elements of the contribution made by this research steam from different components in this thesis: from the contextual information provided in chapter 1 and 2, to the research methodology reported in chapter 3, the description of the four cycles of CAR reported in chapters 4 and 5, trough the empirical analysis of the cases and the revision of the framework and BID presented in chapter 6. Subsequently, this chapter presents the last phase of the last cycle presented in this study, namely learning and reflections. This phase portrays the results of all research cycles, which in turn, can be considered the contributions to theory and practice of this research. Contributions to theory can be seen in two outcomes: the final framework and the business information database (BID). Because the former was develop rather implicitly during each of the research cycles, the final version of the framework is presented first in section 7.2 in a simplistic manner so the reader can clearly identify each of the components that constitute it. Subsequently, section 7.3 explains in detail the contributions that both, the proposed framework and the BID, have brought to theory and to the IS domain.

Contributions to practice are then presented in section 7.4 as a series of recommendations to entrepreneurs looking to enter the *dot-com* market. Section 7.5 presents the reflectionson the methodological selection made and the reflectionson the research process followed in this research. Finally section 7.6 describes the main limitations of this research followed by section 7.7 describing further research avenues that can be derived from this work.

7.2.   The start-up framework: Final version

As consequence of the validation cycle and the additional findings, the last version of the framework is presented in this section. This framework aims to be used by entrepreneurs who would like to

participate in the development of a *dot-com* venture within the SME context. The figure below presents the final framework resulted from this research.
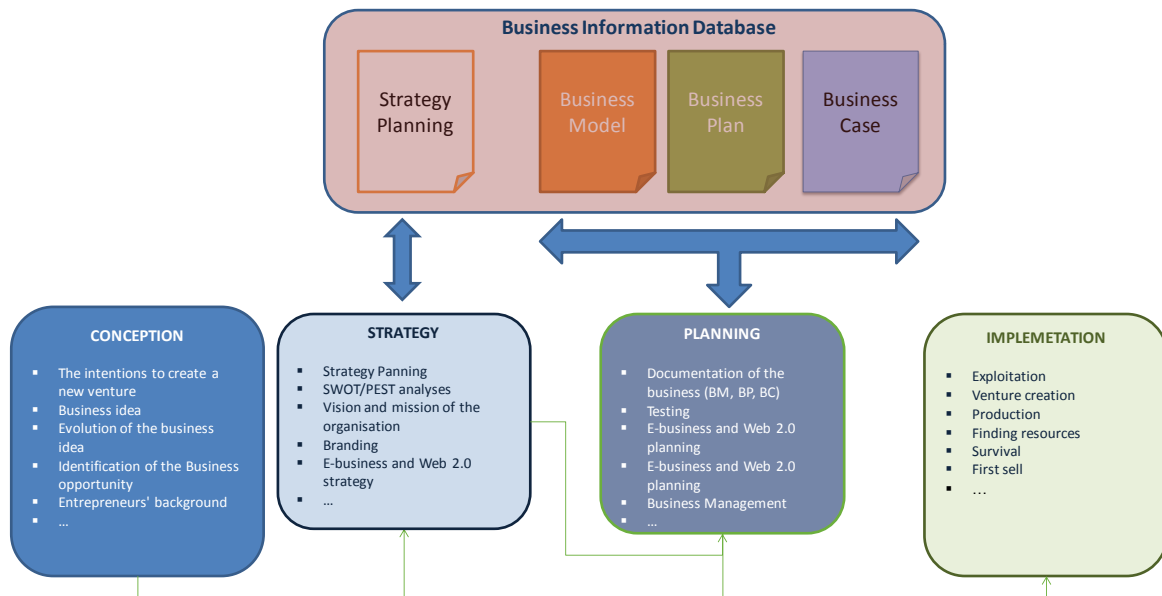
Figure 7. 1: The Framework to start-up a dot-com initiative

The framework was initially based in the literature and was enhanced with the findings of the CAR cycles of this study. The final framework is divided in the 4 stages/phases explained in the next subsections.

7.2.1. Conception phase

Figure 7. 2: The Conception phase

The initial phase of the process of stating-up a *dot-com* firm involves primary the origin of the business idea and the identification of the business opportunity, however other important

characteristics were identified to belong to this phase, such as the characteristics of the individual (Entrepreneur, owner) and an initial assessment of the idea. Additionally this phase include a review of the ethical & government restrictions, among others (see figure 7.2)

The conclusion of this phase provides the entrepreneur with the information necessary to start developing the Strategy which is the next phase, also the information resulted from this stage will be used to shape the Strategic Planning document which forms the link with the BID, as presented in figure 7.3.
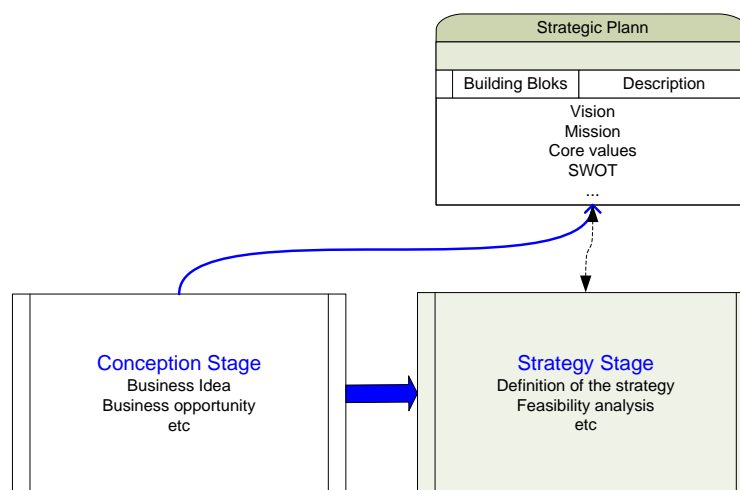
Figure 7. 3: Conception phase links

7.2.2. Strategy phase

Figure 7. 4: The Strategy Phase

In this phase the development of the overall strategy is shaped, thus the definition of a unique position in the market and the SWOT/PEST analyses are the essential components of the phase. Also vision and mission statements are outlined during this phase, together with the clarification of the

trade-offs. The business information used to shape this phase is documented through the Strategic Planning (SP) and corresponding building blocks, as showed in the figure below.
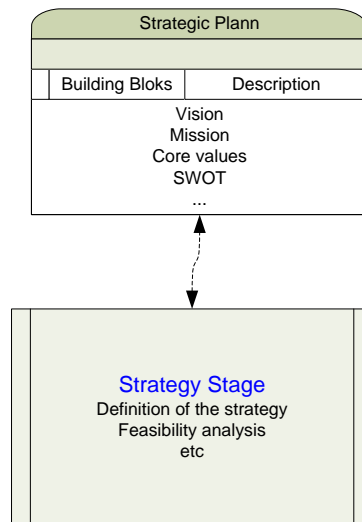
Figure 7. 5: Strategy phase links

7.2.3. Planning phase

The next natural step in the start-up process is to plan the way the entrepreneur/owner will carry on with the idea. Therefore, this stage is designed to assist entrepreneur to transfer the business idea into a plan. The principal characteristics of this phase involve the documentation of the strategy, the configuration of the business idea and the plans to implement the idea. Other activities are to be completed during this phase such as the creation of the team, feasibility studies, and prototyping the software (website). Figure 7.6 presents the activities that delineate the planning phase.

Figure 7. 6: The Planning phase

The planning phase is the connection between the Strategy and the Implementation of the business idea. Hence this phase provides the necessary information and actions needed to develop a new venture and the actions designed during the planning phase are implemented in the next stage. This phase is predominantly shaped by two business documents: the Business Model (BM) and the Business Plan (BP). Although some organisations use a Business Case in this phase, in this research this document is included as a building block of the Business Plan (BP), See figure 7.7.
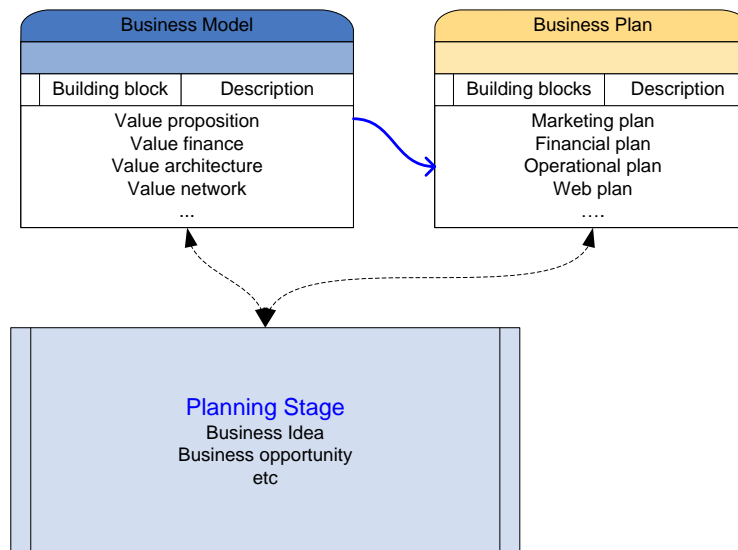
Figure 7. 7: Planning phase links

7.2.4. Implementation phase

The implementation phase occurs when the business starts to operate or is launched and during this phase all the planned actions are implemented. Hence this phase is also shaped through two business documents: the Business Model and the Business Plan, although the BP is the principal document in this phase, as it contains the actual plans to be implemented.
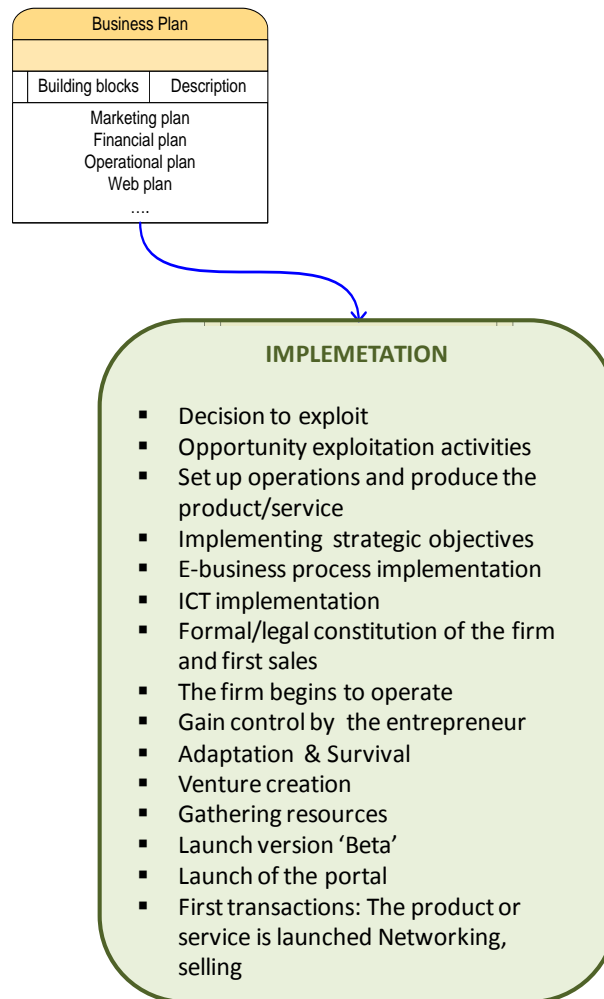
Figure 7. 8: The Implementation Phase

7.3.   Research contributions: Learning and reflection for theory

The theoretical and most important contributions of this research stem from the findings that were identified in the current CAR on e-Business start-ups. In chapter 1 and 2, this study identified the limitations of previous studies in the field of e-Business start-ups, particularly within the SME domain. One of the limitations that were highlighted was the lack of a clear and inclusive framework delineating the main activities to create a new venture, particularly within the SME and the *dot-com* domains. By introducing the start-up framework and BID concept in this research context, this study has therefore made contributions to the theory in the IS domain, particularly in the domain of SMEs and *dot-com* and provides an opportunity for further research in the area.

The main focus of this research was evidently the development of the BID, as it was the fundamental reason of this research, explicitly requested by SME-MX during the diagnosis phase of each CAR cycle. The proposed framework, however, was also developed during each of the cycles in an implicit way, as this was not a direct requirement from SME-MX, but it was needed to frame the development of

the BID. Hence this section presents the contributions that the start-up framework brings to theory, offering details of how to be used, and describing its relationship with the Business documents and corresponding building blocks (BID). Researchers in similar fields such as e-Business and other studies concerning SMEs can apply the framework that has been developed in this research. Similarly, the BID can be particularly useful to provide specific guidelines for identifying the main relationships between the building blocks among the different business documents used in the development of *dot-com* initiatives.

Studies considering Business Models in e-Business and entrepreneurs might also find this framework and BID particularly useful. Additionally, this study was set in Mexico; hence it might be useful for researchers considering start-up process in other countries. Consequently, the following two subsections present and explain the start-up framework (section 7.3.1) and the Business Information Database 'BID' (section 7.3.2) together with their theoretical contributions.

7.3.1. The start-up framework

This framework is designed to visualise, from a strategic perspective, the stages that an organisation have to go through in order to initiate a new *dot-com* venture, and to highlight the strong relationship existing between the ICTs and the dot-com domain. The basic definition of the framework can be summarised as follows: The conception phase is the stage in which entrepreneurs and organisations visualise the business opportunity, hence information regarding the general business idea is gathered at this stage and used to develop the next phase: Strategy. The strategy phase is one of the most important phases during the start-up process, as during this phase, the organisations (or entrepreneurs) describe the visualisation of the business concept and gives further direction by settling goals and aims. Furthermore this study has identified that the ICT's strategic objectives plays an important role at this stage, thus contributing to the IS domain. Therefore the vision, mission and ICT's building blocks are the main sources of information to continue with the next expected stage: Planning. The planning phase is generally complex in terms of the business information needed to complete this stage. During this phase the main activities (action plans) to initiate the business are planned together with the planning of the IT to be used to start-up a *dot-com* organisation. Therefore, the entrepreneur has to answer many questions before they move to the next and final phase: Implementation. The final phase of the framework marks the end of the start-up process and during this phase the action plans are implemented. In layman terms: the framework describes how a project (organisation) moves from the begging (The business idea) to the end of the process (first operation) through a description of the sequential stages of the start-up process.

The identification of the phases and corresponding activities (building blocks) of the framework may possibly be useful for future exploration in the areas of start-ups, SMEs, and e-Business, thus contributing to theory. Furthermore this research has contributed to the IS discipline, by providing the relationships of the ICTs and the start-up process, highlighting the strong relevance of these technologies in each phase of the start-up framework, also it has been found that the ICTs have to be considered from the strategic phase, particularly for the dot-com domain.

The framework has been designed with the intentions to be self-explanatory, so that organisation/entrepreneurs can follow the phases described in the framework on their own. Is proved that organisations have, directly or indirectly, followed specific steps related to the phases described in the framework. Hence new entrepreneurs can use the phases of the framework to facilitate and ease their start-up process looking at the main features of each phase.

Organisations already embarked in the development of a new venture can be benefited from the framework in a similar way. Organisations can easily position themselves in the framework by answering the questions (features) of each stage. In other words they can position the project within the framework by identifying the business information they have. Consequently the framework will direct them to the information that is still missing and needed. For example if an organisation has already information related to the vision, mission and a SWOT analysis, then the company will be positioned in the Strategy phase of the framework, similarly if the organisation has already started with the development of the IT strategy, then the company will be positioned in the strategy phase. Consequently, the organisation will know that the next stage for them will be the planning phase, hence further actions can be planned accordingly to this phase, such as create the team, make feasibility studies and son on. Another example could be a programmer that has already developed a product (e.g. a mobile app). He/she can use the framework for planning the future strategy of the product on hand.

Previous studies demonstrate that the phases of the start-up process depend on the entrepreneur's characteristics and background. The background and previous experiences of the entrepreneur have a direct relationship with the way they work, and consequently, a direct impact with the start-up process. Therefore, in this research context, this study may well provide valuable information within the entrepreneur domain. For example, on one side, structured and experienced entrepreneurs may not need to follow the framework in the order specified, as it was the case of Mailboxmovies. In this venture, the IT background of the founders and the existence of a BM facilitated their start-up process and helped to infer some phases of the process, such as the strategy phase. On the other side, unstructured entrepreneurs, as is the case of e-trade, proceeded in an ad-hoc basis and in an

unstructured way. The main difference of both cases is the structure in the activities performed. Hence the aim of the framework is to provide a structure to SMEs.

The majority of SMEs do not normally follow a framework or steps whilst embarking in new ventures. Some new ventures have been developed without structure and only based in a strong value proposition. Hence the structure seems to be a determinant factor for a successful start-up process. For this reason the framework proposed in this study has the initial aim to provide the structure needed in this process. The structure is achieved by providing the information needed to complete each phase of the process and by showing the links among this information.

Aside of the framework proposed and as part of the main contribution, this research concentrated on the development of a database (BID) containing all the elements and components (building blocks) used to document the business under different perspectives such as funding, strategy, sources of revenue and so on. The BID is made of the building blocks of 4 major business documents used in the industry (SP, BP, BM, BC). Each of these documents are linked to business information used during the phases of the framework. Figure 7.9 shows the relationship of the business document with the framework. Each phase must be documented trough a business document, which in turn, can be seen as the tangible output/input of each phase.
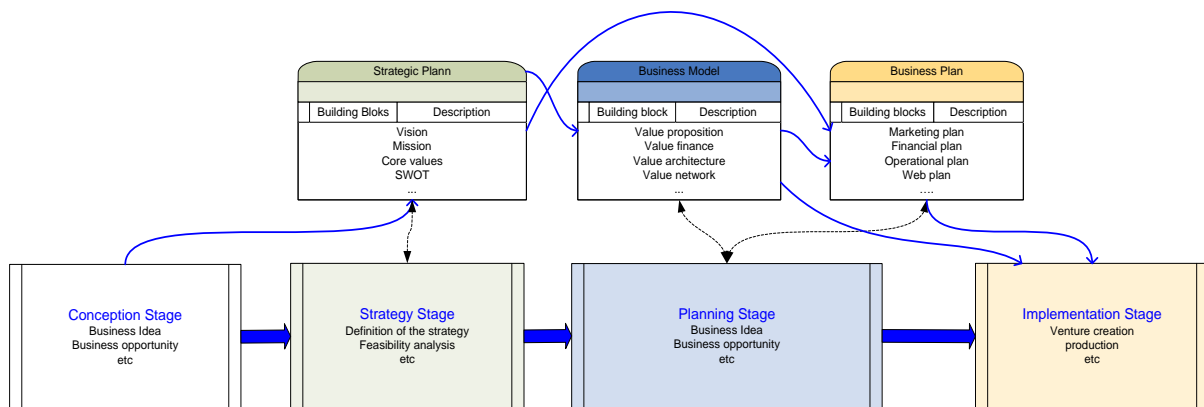
Figure 7. 9: relationships of the BID with the Framework

Each document has different functions among the start-up process. For instance, the SP document is used to document the Strategy, BC is used to seek for investment, BP is used to plan activities such as marketing and operations, and the BM is used to construct the relationships among customers, products, the IT structure and suppliers in order to generate revenue. Subsequently these documents and their corresponding building blocks are interconnected between them in order to align the business information of the project and also are useful to connect the phases of the framework.

318

In summary, the phases of the framework can be seen as the high level representation of the start-up process, whilst the BID is the actual information of the company and works as the backbone that support the business.

7.3.2. The Business Information Database (BID)

By introducing and developing the BID concept in this research context and the identification of the main relationships and dependencies between the building blocks, this dissertation made theoretical contributions to four research domains; Strategy or Strategy Planning, Business Models, the start-up framework and the IS domain. The BID was constructed under two premises: to identify the main documents (and corresponding building blocks) used in the industry, such as the SP, BM, BP, and BC; and to identify the relationships among the building blocks of all the documents identified, with emphasis of the building blocks corresponding to the ICTs. The main constituents of the BID are the building blocks of the business documents. The business documents can be defined as a set of related activities that are linked to a business goal (or part of it). Business documents are used to document specific information about an organisation such as the strategy or the plans. However the variety of documents, and therefore the building blocks used, has created problems for entrepreneurs and organisations to understand the information needed in each stage of the start-up process. Hence the BID was created to structure the information generated during the start-up process of a *dot-com* initiative. This research therefore contributes to the IS domain, particularly to the start-up process area by identifying the different levels of the building blocks and their relationships and dependencies.

The BID and related documents can be used to identify how a particular piece of information (e.g. building block) affects other aspects of the business. For example, the building block "SWOT analysis" belongs to the strategic plan document, which in turn is linked to the strategic phase. This particular block depends on the information generated during the conception phase, such as the business opportunity. Moreover this block will provide with information to the entire "value network" and the "value proposition" blocks, which in turn belongs to the business model that normally is conceived during the planning phase. Similarly the "objectives" block will shape parts of the "value finance", "value proposition" and "value network" building blocks of the business model and also some parts of the business plan such as the "marketing plan", "developers plan" and "financial plan" blocks. In this way the practitioner can visualise the dependencies between these blocks and hence to prioritise their development.

The BID can also be used as an independent artefact to assist organisations through the structure of the business documents in the start-up process, even if the organisation is not following a specific framework. Hence the BID itself can assist entrepreneurs to start-up firm without the need to have an

overarching framework. Furthermore, as part of the main contributions to the IS domain, the BID evidenced the strong relationships of the ICT and corresponding building blocks with the different business documents used to start a new venture.

Finally the BID provides to the entrepreneur with the flexibility to adapt the BID to the organisation needs and accordingly to the business opportunity. The entrepreneur is able to add or exclude building blocks (information) accordingly to the project needs. For example in the case of Minimoko, the BID was adapted in order to include the block "branding" into the building blocks of the strategy planning document, for the reason that this block is highly relevant to the company (Minimoko) and their business process. Moreover the prototype of the BID can assist the entrepreneurs to create their own business documents, as the case of the e-trade project creating the developers plan in order to transfer system requirements to software developers.

7.4.   Research contributions: Learning and reflection for practice

In terms of the learning and reflection for practice the following recommendations believed to ease the problems arisen during the start-up process. These recommendations aim to be considered by practitioners and stakeholders interested in developing new ventures within the *dot-com* domain.

7.4.1. Recommendations to the Champion/Owner/Leader

The characteristics of the champion, owner or leader of this kind of initiatives play an important role during the start-up process. Depending on these characteristics the project will smoothly progress or will be hindered. During the research process it was found a strong relationship between the pace and tempo of the start-up process, with the background of the entrepreneur/champion, his/her level of IT literacy and his/her management skills. For example, in the case of a *dot-com* venture, it is highly desirable that the champion/owner of the project should have a good understanding of the use of these technologies and is somehow familiar with the software development process. Furthermore the champion may need as well a good understanding of the functionality of Internet tools, such as web 2.0 technologies among other characteristics. These characteristics are ideal as in a *dot-com* venture as technology is at the core of the project, and technology is also the platform where the business will evolve (e.g. the Internet). If the owner/champion lacks of knowledge in these areas will be very difficult for him/her to understand the constraints and relationships that technology poses to the business development, as it was the case for the e-trade project owner.

On the other hand, if the champion/entrepreneur is not IT literate, it is highly advisable to identify a team that can complement the entrepreneur limitations. With this approach, however, the entrepreneur needs to be prepared to trust and depend on the team expertise, a situation that may

be complicated as he/she is usually the investor in the project, and hence to place his investment on somebody else's knowledge may not be an option.

Another aspect that was evident during the development of the project is related to the management style of the SME entrepreneur. As suggested in the literature and corroborated in this study, SME owners tend to work in a disorganised manner and to be heavily involved in all areas of the company. This approach works in many instances in brick-and-mortar businesses, mainly due to the fact that these businesses are not necessarily big projects and usually can be managed in an ad-hoc basis. Developing *dot-com* initiatives, however, are intrinsically medium/large projects as they strongly depend on software development to offer their services. The more complex is the software the more time the project will take. Therefore, it is highly advised to entrepreneurs to consider these types of projects to be potentially medium/large, and thus, a more structured management style needs to be considered. Alternatively, the recruitment of a project manager needs to be considered as it is explained in the following section.

7.4.2. The role of the PM

During the development of this project a particular phenomenon was noticed in relation to the roles of the owner and the project manager. It was clear that the owner of SME-MX was the creator of the *business* idea and the investor. As investor and owner, he was also the decision maker. As many SME entrepreneurs, however, the sources of income to invest in this project came from the main business activities of SME-MX (wholesale) hence he was not fully dedicated to this project as he needed to manage the other side of the business. At the time the project grew and more time was needed from the SME-MX owner, the decision to add a project manager emerged. This decision, however, did not alleviate the problems as it has been described in previous chapters. The main reasons this approach may not have worked can be summarised next.

A project manager in principle is used to coordinate and manage all the activities related to a project. A PM, however, does not necessarily need to be a decision maker or champion. In the case of e-trade, "potential" partners of the project filled the role of PM and hence decision-making was also shared within the role. Whereas this approach could be appealing to SMEs as there is no need to spend capital hiring a PM, it could also be problematic to the project as there is not a binding contract with the PM and hence he/she could leave the project at any moment, particularly if the project is the conception and strategy phases of the project. This was the case in the e-trade project and the main reason of the *parade* of PMs. Therefore it is advisable to separate decision making from the PM role for this and other reasons. For instance, in the case of the entrepreneur has the skills required to be a PM, he/she usually has many other activities inside and outside the project that have higher priority

than PM activities, hence there are little chances that he can cope with the demands of a PM. Secondly, decision-making activities, like those needed during the conception and strategy phases of the project, can only be done by those empowered in this area and require of higher skills than those of a PM. Hence is preferable to spend time on those, than on PM activities. For all these reasons it is advised to recruit a PM and have a budget for those services early on the project. More specifically, the PM is not necessarily needed in the conception phase, but he/she will be necessary at the point of developing the strategy. The characteristics needed for this role are outlined next. These are not thought to be exhaustive but to provide the reader with a starting point for recruitment.

- **IT literate**. As the project will involve software development, it is desirable the PM has basic knowledge on IS and in the software development process.

- **Business entrepreneurship knowledge**. The propose framework and BID provide a thorough description of the areas and knowledge needed of these type of ventures. A PM that is familiar with those concepts will help to manage the project more successfully.

- **Excellent Communicator:** The Project Manager is the central information repository for a project like this, and many times the timeliness and thoroughness of his/her communication can be critical to the success of the current tasks and the project as a whole.

- **Negotiator:** During an implementation of a *dot-com* organisation, there may be time on the project when the PM will have to play the role of negotiator. The most obvious negotiations of the PM, is when the scope of the project changes or extra activities are included. Hence the Project Manager converts into a negotiator, as he or she has to deal and present the changes in the project to the owner of the initiate and 'sell' them on the additional work that is required.

- **Leader:** A weak PM will lose control of the team, the owner, the scope, and eventually their job. Hence a good leader need to be ready to take charge and not afraid to make tough or unpopular decisions.

7.4.3. Specialised Training: enhancing the relationships between SME and academia

Another practical outcome of this research is related to the knowledge that the entrepreneur is required for entering into the dot-com market. In the case of e-trade, the business idea behind the project was perceived by all of the actors to be feasible and therefore worth to pursue. This idea came directly from the working experiences of the owner of SME-MX. The owner, however, lacked of fundamental technological knowledge to assess the feasibility of the project. For instance, SME-MX business operations (wholesale) are supported with basic technology such as spreadsheets, word

processors, Internet access, etc. SME-MX has never being involved in the development of software that can aid them on their operations. Therefore, his awareness in the area of software development was very limited. In addition to this, his involvement with the Internet has also been very scarce. He barely interacts with Internet technologies such as social networks, online auctions and shopping websites, for example. Consequently, the owner was not able to assess the feasibility of the project in an instinctive manner, neither he was able to assess the length, size and complexities of the project. He initially thought to be operating within 6 months after the first meeting with the Brunel research team, a situation that anyone with some experience in software development would have realised it was not possible, considering the circumstances of the e-trade project. This situation prevailed during the whole project, as he insisted on moving to software development before having gone through basic phases needed to design the software (e.g. conception and strategy phases of the framework). In addition to this, his knowledge on corporate strategy, such as the proposed framework, was also limited.

The characteristics exposed by the owner of SME-MX fits very much with those found in the literature. SME-MX, however, made an important step by contacting the academic community (e.g. Brunel team) to aid him to complement those skills needed. This collaboration, however, did not alleviate the problems of the owner, as the project did not advance as much as he desired. It is clear that this challenge was not due only to the owner's characteristics but also to the way academia tends to support the SME community. The experience derived from this project strongly suggests finding alternative ways to support this community. For instance, one way to overcome this problem is to provide this community with specialised training courses for entrepreneurs with those characteristics that aim to explore the *dot-com* market. More specifically, a training course that could package basic knowledge on business models, strategy, Internet trends (e.g. social networking, e-business), and market research could be very beneficial for these types of entrepreneurs. This could also be complemented with basic software development knowledge (e.g. Software development Life-cycle (SDLC), software requirements). Current courses in academia, however, are not presented in this way, as they tend to be mainly in the form of MSc courses. These are not optional for entrepreneurs as they are long and demand time. The type of knowledge needed for these types of entrepreneurs need to be short and specific. Traditional training courses offered by companies in this sector have similar problems than MSc courses. Hence, they will probably not solve the problem. Having said this, within the final meetings with SME-MX owner it came to the light that during the last cycle when the project was put on hold, the owner travelled to Silicon Valley to take an internet-entrepreneur boot camp course namely TechBa (http://www.techba.org/en/home). This initiative is funded by the Mexican

government and is aimed to support entrepreneurs like SME-MX. Academia can learn from this experience and develop training courses that can help entrepreneurs to acquire the desired skills.

7.5.   Reflections on the research process

This research has been part of the researcher's life for at least 4 years, from the conception and planning of the research, to the analysis of the empirical context through a CAR process, and finally to the development of the framework and BID as part of the conclusions of this research. Therefore the researcher has experimented many ups and downs during the completion of this study. However the experience of participating in such a study has also been an enjoyable experience of learning and reflection. Consequently this section presents the main outcomes learnt from the empirical work and from the choice of the research method used in this study.

Firstly it was found that the CAR approaches used and recommended in the literature were insufficient and that it was necessary to include additional culture-sensitive strategies for gaining access into the research setting before proceeding into the researching process itself. Therefore one of the first actions that researchers need to look at, even before exploring the research questions, is to get access to the organisations wishing to study. Therefore, the researcher has to deal with unexpected drawbacks, and sometimes the planning of the research has to adapt to the circumstances and the information available.

Building on the use of Action Research introduced in Chapter 3, this research has adhered to the principles and guidelines of CAR to effectively apply the Action Research process and to add rigor to the research strategy selected. However, this study suggests that flexibility is still required in AR if the collaboration of the stakeholders is at risk or can be hindered. It would be helpful to conduct future studies to determine optimum levels of adherence to detailed principles versus the benefits of flexibility. This study has benefited from a degree of flexibility, evidenced by the improved understanding of the start-up process with SME-MX. However adding rigor and relevance to a research through the principles of CAR may result in losing some of the flexibility to adapt to the circumstances of the study, which is one of the main characteristics of the AR. Therefore, as Avison et al (2004) suggested, it may be inappropriate to precisely follow the 5 principles of CAR, thus following a strict recipe may not be the best approach in this type of studies. However, as a young researcher, following rules and guidelines is essential to achieve the desired rigor and relevance that makes a good research. Therefore this area is still to debate by the experts in this domain.

The several iterations needed in Action Research resulted in a vast amount of data to be analysed. The use of different sources of information along different participants (such as Interviews, field notes and

document reviews) increased the data collected. Therefore the organisation of this information is a time-consuming process and not straightforward, which can be avoided by the use of a well defined data management strategy.

Organisations and companies normally are not interested in theoretical contributions that research can bring to the arena, as was the case of SME-MX in which the company requested practical outcomes that can help them to solve their problem. This disjunctive is particularly challenging in AR, where the researcher has to elucidate pragmatic contributions to theory and practice. Thus the researcher has to learn to deal with the twofold foundation of action and research. Furthermore AR is a method in which the researcher actively participates in solving the problems encountered, however this study has helped the researcher to elucidate the difficulty to influence the different groups of stakeholders, which at times, makes very difficult the realisation of the objectives of this research. Consequently the reflections derived from this method are the foundations for further research and probably following a different approach to influence the stakeholders will facilitate the obtainment of the desire objectives.

Finally, the research considering the start-up process by SMEs can be particularly challenging. This is because no SME is the same as another. This study considers not just one but three SMEs and in each case the process of start-up were different. The differences in the SMEs studied have made obvious that their needs and aspirations are utterly different. While this research is beneficial to other researchers carrying out research into SMEs, it also demonstrates that with SMEs, particularly in the dot-com domain, there is no one 'general' solution that can be applied to their technological needs and strategies. Particularities of SMEs, their lack of awareness and exposure to research results all add to the challenge of carrying out research in this area.

7.6.   Limitations of the research

Most of the research processes have limitations and this is not the exception. For instance, the fact the project selected for the study was not implemented at the time of writing this dissertation, did not allow testing the feasibility of many of the components of the BID in practice. It would have been beneficial for the BID and the proposed framework to go through the entire implementation cycle to test the rest of the building blocks and the framework.

The results presented here are based mainly on the findings from SME-MX with its corresponding characteristics. Other projects and organisations with different characteristics may derive different information that could help to have more comprehensive view of this domain. Therefore further

325

research using alternative research methods, such as quantitative methods, will overcome this possible pitfall.

Also, Interpretative research is often criticised for the subjective influence the researcher's interpretation might have on the findings, since the researcher never assume a value-neutral position, particularly in AR where the researcher is always implicated in the phenomena being studied. This possible drawback has been acknowledged in this research by using material of various sources and the views of different stakeholders. For instance, in depth interviews were employed to guarantee that the views of the stakeholders are expressed as they observe the phenomena and not as the researcher does. Furthermore it was analysed in chapter 3 that AR is also criticised for the lack of rigor and relevance in their approach and the limitations stemmed from the choice of this research method. This pitfall has been acknowledge and addressed in this research by the use the principles of CAR in order to improve theoretical quality and at the same time preserve relevance. However as Avison et al. (2004) outlined in their study; *"it is unrealistic, even inappropriate, to indentify a single, seminal published report of CAR that precisely follows all five principles and 31 criteria"*.

Finally, the CAR focussed on the start-up process and relevant BID only in Mexico. Although the validation of the framework was done through two short case studies base in the UK, still this information cannot be generalised and further research regarding cultural and economic factors need to be accomplished.

7.7. Further research

The most recognisable research avenue that can be derived from this study is the development of the BID in a comprehensive and technical manner. At this point the BID presented in this work was aimed to describe the building blocks and corresponding dependencies between them. The actual implementation of these concepts was made with basic technology, such as spreadsheets and Microsoft Access database. The prototyping of the BID in Access helped to visualise that the software needed for this process has to be much more comprehensive. The software requirements for this application grew considerably during the study. Thus, more research is needed to understand the requirements of the BID from a technological point of view, and to test the effectiveness of the BID in a practical setting in a more comprehensive manner.

Also, this application could potentially grow in a social network venture, where entrepreneurs could use the platform to design their own building blocks, populate the data, exchange experiences, expand their networks, and be trained in an online environment in the areas mentioned in section 7.4.3. Hence further research in this domain could potentially enhance the reliability and scope of the

BID. Further research can also examine the diffusion of other technologies associated with the development of a start-up framework, particularly in the *dot-com* domain, such as the web 2.0 technologies. The literature suggests that is still a relatively new avenue for research, mainly regarding the benefits that such technologies bring to business.

As highlighted in chapter 1 and 2, most of the studies that have examined the *dot-com* domain have focused on already established organisations and/or large organisations. This approach has helped researchers to understand and compare the adoption of e-Business initiatives. This study considered small and medium organisations and more importantly, start-ups. Hence the need to carry out other field studies involving these types of organisations is needed in order to compare how SMEs are performing under the *dot-com* domain. Other field studies, such as case studies, could complement the outcomes of this research and would be beneficial to draw conclusions.

Finally, other variables and factors need to be considered whilst studying the start-up process, such as, cultural factors, difference between economies (developing vs. developed), different sectors (bartering, government, and so on), among many others. For instance, the process to start-up a *dot-com* initiative could also be sought in different economies other than developing countries such as Mexico, in this way the start-up process can be compared with their counterparts (developed countries) thus provide further implications on the relevant phases of the framework and what their experiences are while populating and making use of the Business Intelligence Database. Additionally the views of companies from different sectors and with different backgrounds could also be examined to explore the factors that ensure a smoother start-up process. Their views could also be compared to determine whether there are similarities in their start-up experience and the use of the building blocks.

7.8.   Summary

The main contribution of these research, theoretical and practical, are summarised in the table below.

Research Contributions	
Contributions to Theory	
Framework for the creation of dot-com ventures for SMEs	The framework proposed in this study has the initial aim to provide the structure needed to start-up a new dot-com venture. The structure is achieved by providing the information needed to complete each phase of the process and by showing the links among this information. This framework is presented in section 7.2 and 7.3.1.
Business Information Database	The BID contained all the elements and components (building blocks) used to document the business and is made of the building blocks of 4 major business documents used in the industry (SP, BP, BM,BC). Each of these documents are linked to business information used during the phases of the framework, see Figure 7.9. The BID and related documents can be used to identify how a particular piece of information (building block) affects other aspects of the business. The BID can be also be used as an independent artefact to assist organisations through the structure of the business documents in the start-up process, even if the organisation is not following a specific framework.
Contributions to Practice	
Recommendations to the Champion/Owner/Leader	The characteristics of the champion, owner or leader of this kind of initiatives play an important role during the start-up process. it is highly desirable that the champion/owner of the project has a good understanding of the use of these technologies and familiar with the software development process. Furthermore the champion may need as well a good understanding of the functionality of Internet tools, such as web 2.0 technologies among other characteristics, see section 7.4.1.
The role of the PM	This research found a series of characteristics needed or desirable for the PM role: IT literate, Business entrepreneurship knowledge, Excellent Communicator, Negotiator and Leader. However these characteristics are not thought to be exhaustive but to provide the reader with a starting point for recruitment.
Specialised Training: enhancing the relationships between SME and academia	Another practical outcome of this research is related to the knowledge that the entrepreneur is required for entering into the dot-com market. This research detected a need to provide this community with specialised training courses that aim to explore the dot-com market. More specifically, a training course that could package basic knowledge on business models, strategy, Internet trends (e.g. social networking, e-business), and market research, complemented with basic software development knowledge could be very beneficial for these types of entrepreneurs.

Figure 7. 10: Research contributions

List of abbreviations

AR: Action Research

B2B: Business to business

B2C: Business to costumer

BC: Business Case

BID: Business Information Database

BL: Business logic

BLS: Business Logic System

BM: Business Model

BP: Business Plan

C2C: Customer to Customer

CAQDAS: Computer Assisted Qualitative Data Analysis Software

CAR: Canonical Action Research

CEO/CEOs: Chief executive officer(s)

CPM: Cyclical Process Model

DA: Decision Analysis

eBM: e-Commerce Business Model or e-Business Model

e-Business: electronic business

e-Commerce: electronic commerce

EDI: Electronic Data Interchange

EFT: Electronic Fund Transfer

EU: European Economy

GDP: Gross Domestic Product

ICT/ICTs: Information and communication technology/technologies

IPA: Interpretative Phenomenological Analysis

IS: Information system

OGC: The Office of Government Commerce

PMI: The Project management Institute

PMO: The Project Management Office

QDA: Qualitative data analysis

SME/SMEs: Small and Medium Enterprises

SP: Strategic planning

TA: Thematic Analysis

V^4 BM: The digital Business Model

WBSs: Work Breakdown Structures

Appendix Section:

Appendixes A to F

Azael Serrano
Brunel University

APPENDIXES

A. Web 2.0 Technologies Tools and Applications: Classification, Definitions and use

A Brunel University Research for eTrade.com (Report 3 revised)
Azael Serrano
Brunel University West London
Department of Information Systems and Computing
Mar 2011

This report is a synthesis of the information available in the literature and the Internet, created only for information purposes and to present to SME-MX with the latest finding on this topic. Consequently, some of the information is directly copied from the source.

Introduction:

While the Web has always been a tool for collaboration, only in the last few years has permitted individuals to use it as a platform for true collaborative activities. Web 2.0 is about users and content, instead of just surfing on the Internet. It's about what the Internet can do for an active collaborator, rather than a passive viewer.

A number of online tools and platforms are now defining how people share their perspectives, opinions, thoughts and experiences. Web 2.0 tools such as weblogs, RSS, video casting, social bookmarking, social networking, podcasts and picture sharing sites are becoming more and more popular.

"Web 2.0" refers to the second generation of web development and web design that facilitates information sharing, interoperability, user-centred design and collaboration on the World Wide Web. The arrival of Web 2.0 led to the development and evolution of web-based communities, hosted services, and web applications. It does not refer to an update to any technical specifications, but rather to cumulative changes in the ways software developers and end-users use the Web.

The characteristics of Web 2.0 are: rich user experience, user participation, dynamic content, metadata, web standards and scalability. Further characteristics, such as openness, freedom and collective intelligence by way of user participation, can also be viewed as essential attributes of Web 2.0

Examples include social-networking sites, video-sharing sites, wikis, blogs, mashups and folksonomies. There is a large number of Web 2.0 websites, some of the more popular ones are: Blogger, Wordpress, Myspace, Youtube, Metacafe, Del.icio.us, Digg, Twitter, Flickr, Facebook. Also, the social media tools can be classified or "tagged" in categories depending on the use or subject matter of those tools, examples of such classifications are:

share(551)	secure(50)	date(20)	itunes(9)	scrapbook(4)	chess(1)
tool(514)	tv(50)	invoice(20)	p2p(9)	semantic(4)	coffee(1)
social(457)	buy(48)	Live(20)	phone(9)	wedding(4)	collaboartion(1)
search(401)	e-learning(48)	realestate(20)	private(9)	broker(3)	copyright(1)
create(375)	event(47)	webcam(20)	profile(9)	diet(3)	courier(1)
community(354)	im(43)	art(19)	restaurant(9)	film(3)	delivery(1)
video(262)	finance(42)	album(18)	stock(9)	forum(3)	digg(1)
blogging(241)	virtual(42)	card(18)	baby(8)	garage(3)	doocument(1)
photo(240)	news(41)	radio(18)	bill(8)	helpdesk(3)	do-to(1)
engine(218)	sell(41)	startpage(18)	college(8)	karaoke(3)	drive(1)
network(209)	calendar(40)	conversation(17)	gift(8)	law(3)	e-mail(1)
mobile(208)	comment(38)	realtime(17)	reminder(8)	lending(3)	engin(1)

management(185)	website(38)	Recommendation(17)	snailmail(8)	movie(3)	firefox(1)
track(183)	family(36)	hotel(16)	spreadsheet(8)	navigation(3)	frame(1)
music(158)	playlist(35)	mindmap(16)	toolbar(8)	outlook(3)	girl(1)
download(157)	analytics(34)	paint(16)	magazine(7)	portal(3)	go2web20(1)
organize(153)	marketing(34)	player(16)	neighborhood(7)	sixapart(3)	hd(1)
content(150)	identity(33)	channel(15)	print(7)	soical(3)	hotsing(1)
fun(145)	plugin(33)	facebook(15)	stickies(7)	tip(3)	letter(1)
business(142)	voice(33)	flickr(15)	clothing(6)	wifi(3)	lyrics(1)
media(140)	kids(32)	form(15)	mom(6)	wii(3)	magic(1)
collaboration(137)	question(32)	language(15)	myspace(6)	word(3)	Neighbour(1)
twitter(118)	health(31)	mashup(15)	pets(6)	amazon(2)	newspaper(1)
communication(117)	draw(30)	opensource(15)	quote(6)	birthday(2)	parking(1)
mapping(117)	book(29)	sport(15)	real-time(6)	competition(2)	Password(1)
email(106)	link(29)	addressbook(14)	show(6)	converstation(2)	personalize(1)
file(106)	podcast(29)	Ask(14)	store(6)	meeting(2)	politics(1)
storage(105)	presentation(29)	slideshow(14)	ticket(6)	menagement(2)	pride(1)
money(88)	to-do(29)	webconference(14)	trade(6)	package(2)	psp(1)
widget(84)	document(28)	poll(13)	traffic(6)	pet(2)	recipes(1)
chat(82)	list(28)	air(12)	button(5)	rent(2)	remind(1)
group(80)	answer(27)	newsletter(11)	connect(5)	skype(2)	rights(1)
most-popular(76)	e-commerce(27)	recipe(11)	domain(5)	translation(2)	sale(1)
design(74)	student(27)	resize(11)	remote(5)	wallpaper(2)	Shooping(1)
messaging(74)	wiki(27)	wine(11)	screencast(5)	wishlist(2)	social.fun(1)
build(73)	browser(26)	animation(10)	weather(5)	work(2)	Software(1)
rss(73)	generator(26)	contact(10)	cameraphone(4)	albume(1)	song(1)
lifestream(71)	project(26)	Gps(10)	celebrities(4)	answare(1)	webcard(1)
knowledge(68)	chart(25)	party(10)	color(4)	callege(1)	wordpress(1)
audio(67)	convert(25)	teacher(10)	coupon(4)	career(1)	connection(23)
feed(67)	gallery(25)	timeline(10)	dictionary(4)	office(50)	alert(22)
travel(65)	hosting(25)	Tree(10)	fan(4)	advertising(57)	collection(22)
visual(63)	job(25)	band(9)	graph(4)	lifestyle(57)	food(22)
bookmarking(62)	sms(25)	comics(9)	highlight(4)	text(56)	task(22)
marketplace(59)	parent(24)	friendfeed(9)	overlay(4)	meet(54)	time(22)
game(58)	record(24)	green(9)	ringtone(4)	desktop(51)	car(21)

Table i: Categories of Social Media Tools 2.0

Web 2.0 websites typically include some of the following **features/techniques**. Andrew McAfee used the acronym SLATES to refer to them:

- **S**earch: The ease of finding information through keyword search.
- **L**inks: Ad-hoc guides to other relevant information.
- **A**uthoring: The ability to create constantly updating content over a platform that is shifted from being the creation of a few to being constantly updated, interlinked work. In wikis, the content is iterative in the sense that users undo and redo each other's work. In blogs, content is cumulative in that posts and comments of individuals are accumulated over time.
- **T**ags: Categorization of content by creating tags: simple, one-word user-determined descriptions to facilitate searching and avoid rigid, pre-made categories.
- **E**xtensions: Powerful algorithms that leverage the Web as an application platform as well as a document server.
- **S**ignals: The use of RSS technology to rapidly notify users of content changes.

Definitions and use of the Web 2.0 tools:

Many people have already used some of these Web 2.0 tools at least once, websites like "Facebook or Twitter" are a typical example of it, however the need to explain the main Web 2.0 tools/applications is necessary for the correct selection and application of these tools.

Podcasting: A Podcast is syndicated audio, or video produced by traditional media such as radio and television or by individuals passionate about a particular subject. For example, if an individual was interested in video games, they might search a podcast submission Web site (like Podcast.net) and download an audio review of a game to listen to on their computer.

Blogs: Is a type of website, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. A blog or Weblog, is a chronological, online diary. Individuals can subscribe to a person's blog, which allows them to read it and to write comments in response to blog posts.

RSS: If this weblog has an RSS feed in place, subscribers to the blog can choose to be automatically notified of this new blog post. RSS (or Really Simple Syndication), is a method for delivering regularly changing Web content. Many blogs and Internet publishers syndicate their content as an RSS Feed to allow people to subscribe to it easily.

Mashups: A mashup is a web page or application that combines data or functionality from two or more external sources to create a new service. The term mashup implies easy, fast integration, frequently using open APIs and data sources to produce results that were not the original reason for producing the raw source data. An example of a mashup is the use of cartographic data to add location information to real estate data, thereby creating a new and distinct Web service that was not originally provided by either source.

Folksonomies: A folksonomy is a system of classification derived from the practice and method of collaboratively creating and managing tags to annotate and categorize content; this practice is also known as collaborative tagging, social classification, social indexing, and social tagging. A term "collaborative tagging", also known as "social tagging" or "social bookmarking", comes from the Internet and it describes a method of adding tags to shared resources, by various users, and creating so called "folksonomies" – user generated categories that are used for searching, organizing and managing various types of content. Examples of applications that use collaborative tagging include the popular social bookmarking site. Delicious allows you to: access your bookmarks from any browser, anywhere discover great handpicked websites with less spam than other search sites share what you love, hide what's private

Wikis: Wikis are collaborative Web sites that allow users to change the content of pages easily; can help your organization share information. (Examples of it are Wikipedia, travellerspoint, etc)

Tags: A tag is a collaborative labelling system that allows you to categorize online content like Web pages, photos, and links.

The Categorization of content by creating tags is: simple, one-word user-determined descriptions to facilitate searching and avoid rigid, pre-made categories

Social Bookmarking: This individual may decide that they would like more people to be able to see and remark on the blog post. They could do this by submitting the blog post to a social bookmarking site like Del.icio.us. Social bookmarking sites are Web sites that allow shared lists of user-created

Internet bookmarks to be displayed and commented on. Social bookmarking sites allow you to organize your bookmarks by allocating a number of 'tags' to them. This makes it easy for other people who may be interested in a particular group to find related bookmarks. For example, if the tag 'games reviews' was added to a bookmark, people searching the bookmark site for 'games reviews' information could easily find it.

Social Networking: People who visit the bookmark site for this 'games review' tag are likely to see your bookmark. As more people find your bookmark and comment on it, you'll find yourself part of a collection of people who have a shared interest in video games – This is 'social networking' and this is why some social bookmark sites like Digg or linkedin are also classed as social networking sites. Another example of it is Twitter**,** which is a free social networking and micro-blogging service that enables its users to send and read messages known as tweets. Tweets are text-based posts displayed on the author's profile page and delivered to the author's subscribers who are known as followers.

Aggregators: (Content aggregators or Portals) A site or program that gathers data from multiple sources and organizes the information to present in a new, more streamlined or appropriate format. Digg.com is a top aggregator site. So is Slashdot for the more technical people. And of course, Google (and any other search engine for that matter) are the mothers of all aggregators.
Aggregator refers to a web site or computer software that aggregates a specific type of information from multiple online sources (wiki).
Portals is another name for this aggregators and are Web sites that seek to give users a one-stop page to catch up on news, email, social interactions, weather, etc. that is personalized for them and updated continuously.
Apart from the standard search engine feature, web portals offer other services such as e-mail, news, stock prices, information, databases and entertainment. Portals provide a way for enterprises to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different entities altogether (wiki)
Content aggregators is also name: applications allowing users to fully customise the web content they wish to access. These sites make use of a
technique known as Real Simple Syndication or Rich Site
Summary (RSS).
Examples: iGoogle - Originally launched as "a way for people to quickly and easily personalize their Google experience with all the information on the web that was most useful to them. Other examples are: Pageflakes, Netvibes , Protopage , Symbaloo
Blogs (web-log): The term web-log, or blog, was coined by Jorn Barger in 1997 and refers to a simple webpage consisting of brief paragraphs of opinion, information, personal diary entries, or links, called posts, arranged chronologically with the most recent first, in the style of an online journal (Doctorow et al., 2002). Most blogs also allow visitors to add a comment below a blog entry.
Examples: Blogger, LiveJournal, Tumblr, WordPress, Posterous

Collaborative editing Web tools are used collaboratively to design, construct and distribute a digital product
Collaborative editing is the practice of groups producing works together through individual contributions. Effective choices in group awareness, participation, and coordination are critical to successful collaborative writing outcomes.[Lowry, Paul Benjamin, Aaron Mosiah Curtis and Michelle Rene Lowry. "A Taxonomy of Collaborative Writing to Improve Empirical Research, Writing Practice, and Tool Development," Journal of Business Communication (JBC), Vol. 41, No. 1, pp. 66-99, 2004.]
Generally, managing such work requires software;[2] the most common tools for editing documents are wikis, and those for programming, version control systems
Examples: Wikipedia is an example of a collaborative editing project on a large scale.

Collaborative Writing Web based collaborations and communication in real time.

The term collaborative writing refers to projects where written works are created by multiple people together (collaboratively) rather than individually. Some projects are overseen by an editor or editorial team, but many grow without any oversight. In a true collaborative environment, each contributor has an almost equal ability to add, edit, and remove text. The writing process becomes a recursive task, where each change prompts others to make more changes. It is easier to do if the group has a specific end goal in mind, and harder if a goal is absent or vague (wiki)

Examples: Wikipedia,

Communities (Content) Websites organising and sharing particular types of content.

Examples: Video sharing: http://video.google.com, www.youtube.com, http://etsylove.ning.com, Photos sharing: http://www.fl ickr.com , Social Bookmarking www.digg.com , http://del.icio.us and publicly edited Encyclopedias, www.wikipedia.org, http://en.citizendium.org/wiki/Main_Page

Conversational arenas: One-to-one or one-to-many conversations between internet users

Examples: Chat rooms

Folksonomies: User generated categories that are used for searching, organizing and managing various types of content. One of the key practices behind Web 2.0 is tagging, this involves locating and marking or classifying a webpage with a metadata label. Tagging 'enables users to create subject headings for the object at hand…[and]…to add and change not only content (data), but content describing content (metadata)' (Maness, 2006: 8). Tags act as metadata operating behind webpages enabling them to be organised into classified networks. The result is that tagging makes 'lateral searching easier' (Maness, 2006: 8). We can move in non-linear directions from one page onto pages that have something in common, or, when finding similar pages tag them to enable other users to make the same connections.

Examples: Del.is.us.com

Forums / bulleting boards

Sites for exchanging ideas and information usually around special interest (Constantinides, 2008)

Bulletin boards: is a surface intended for the posting of public messages, for example, to advertise things to buy or sell, announce events, or provide information. Internet forums are becoming a global replacement for traditional bulletins. Online bulletin boards are sometimes referred to as message boards. The terms bulletin board, message boards and even internet forums are interchangeable, although often one bulletin board or message board can contain a number of internet forums or discussion groups. An online board can serve the same purpose as a physical bulletin board.

Examples: Epinions.com, Personaldemocracy.com, python.org

Mashups: Mashups are 'hybrid applications, where two or more technologies or services are conflated into a completely new, novel, service' (Maness, 2006: 9). The term has been appropriated from pop music where a DJ takes, for example, a vocal track from one song and combines it with the instrumental track of another to produce something new. Many Web 2.0applications are, in fact, mashups of various sorts (Maness, 2006: 9). Mashups are used to create various applications, although they 'often (but not always) have a mapping component' (Lerner, 2006: 1). One infamous example not based on maps is Gizoogle (http://www.gizoogle.com), which converts webpages into politically incorrect Snoop Dogg style discourse (Burrows, 2007)**.** Digital media content containing any or all of text, graphics, audio, video and animation drawn from pre-existing sources, to create a new derivative work. Web or cloud computing based applications are a combination of separate parts brought together with the use of the open architecture of public Application Programming Interfaces API. For example, a mashup between Google Maps and Weather.com could be made available as an

iphone application, where the content and context of that content are drawn from outside sources through the published API. (wiki)

Examples: Sites using existing technologies for an entirely new purpose (Blogspot,2006) like WikiMapia.org. It takes the functions of a wiki and overlays it with Google Maps for an entirely new kind of map.

Media Sharing: Uploading and downloading media files for purposes of audience or exchange (Becta Report, 2008)**.** The resources being shared by web tools are not just limited to text, and the rise of systems for sharing, modifying and storing photo, video and audio - based content is set to accelerate (web2.0 wiki, 2010).

Media sharing occurs through online social networks and digital communities with a comprehensive platform and diversified interfaces to aggregate, upload, compress, host and distribute images, text, applications, videos, audio, games and new media. (wiki)

Examples: Flickr - Flickr is almost certainly the best online photo management and sharing application in the world. Show off your favourite photos and videos to the world, friends or family. deviantART, Ember , Picasa Web Albums , YouTube, Digg.com

Micro-blogging: A derived form of blogging, the micro-blog is gaining more and more popularity. It is a combination of blogging and social networking, adding the vantage of both and thus manifesting the features of Web 2.0 to a even greater extent. Users express their opinions in a timely and free manner; they keep track of each other and seek to be informed at the most in-time moment. Micro-blogging increases communication within the context of a superficial-reading era in which we are exposed too increasingly huge amounts of information. People tend to select those pieces of information they are interested in and then post short thoughts on the topic (140 character limit on Twitter, for example.) It simplifies the way people communicate and hence communication suddenly become much easier. Instead of making a lengthy phone call, they publish a micro-blog and get a simple response from their community of followers. If further communications are needed, they can then get into e-mail, instant messaging, telephone, or even meet face-to-face. Professional organizations and more and more commercial entities use micro-blogging to spread news and plans - the latest form of advertising. (web 2.0 wikki, 2010)

Examples: Twitter, Plurk, Jaiku, Yammer for twitting within the company. Communication platform for companies

Online games and virtual worlds: Rule-governed games or themed environments that invite live interaction with other internet users

<u>Virtual worlds</u>: A virtual world is a genre of online community that often takes the form of a computer-based simulated environment, through which users can interact with one another and use and create objects.[Bishop, J. (2009). Enhancing the understanding of genres of web-based communities: The role of the ecological cognition framework. (International Journal of Web-Based Communities, 5(1), 4-17)

<u>Online games</u> can range from simple text based games to games incorporating complex graphics and virtual worlds populated by many players simultaneously. Many online games have associated online communities, making online games a form of social activity beyond single player games <u>Massively multiplayer online games</u> commonly depict a world very similar to the real world, with real world rules and real-time actions, and communication. Players create a character to travel between buildings, towns, and even worlds to carry out business or leisure activities. Communication is usually textual, with real-time voice communication using VOIP also possible

Examples: Secondlife

Online Operating Systems: Online operating systems are one of the next steps in the evolution from Web 2.0. Web 2.0 is certainly characterized by moving activities or work that used to be done offline

onto the online environment. Such is the case with these online operating systems, but instead of moving specific tasks or applications, they move a user's entire traditional desktop experience into the "cloud." Certainly, in their current state, they are not desktop replacements (some are closer than others.) But they do represent, possibly, the next permutation. The ability to login through any browser in the world and access your TOTAL computing environment without dependency on personal hardware being powered on, connected to Internet, and not having to be restarted during the session could provide opportunities that users don't even know they need yet.

Examples: eyeOS - EyeOS is a cloud computing platform that includes an Office Suite, Groupware applications and the toolkit to develop specific web applications that you or your customers need, Glide - Glide OS 4.0 is a comprehensive Ad-Free cloud computing solution, oos.ccStartforce - One of the most polished services - has Microsoft Office 2007 available for use. Free accounts have 5 GB of storage

Podcast (Audio and video (videocast)): Audio or video recorded, and ready to download from the internet, with different information or topics, normally produced by traditional media (Radio, TV)**.** Podcasting is a method of publishing audio files (usually MP3s) to the Web, which are then made available through subscription and automatically downloaded to a personal computer or portable MP3 player.

Examples: iTunes - The iTunes Store puts thousands of free podcasts at your fingertips, Odeo - Odeo makes it easy to find, play and enjoy the latest audio & video from around the web, Hipcast, Yasssu - Customize your media world - with Yasshu you can experience your personalized media online, mobile or via every mobile phone - anywhere, anytime

Recommender systems: Recommender systems, recommendation systems, recommendation engines, recommendation frameworks, recommendation platforms or simply recommender form or work from a specific type of information filtering system technique that attempts to recommend information items (movies, TV program/show/episode, video on demand, music, books, news, images, web pages, scientific literature such as research papers etc.) that are likely to be of interest to the user. Typically, a recommender system compares a user profile to some reference characteristics, and seeks to predict the 'rating' that a user would give to an item they had not yet considered. These characteristics may be from the information item (the content-based approach) or the user's social environment (the collaborative filtering approach).

Websites aggregate and tag user preferences for items in some domain and thereby make novel recommendations

Examples: lovefilm.com use this recommender systems.

Signals (Syndication) The use of RSS technology to rapidly notify about updates, news, and any content change**.** Users can "subscribe" to RSS feed-enabled websites so that they are automatically notified of any changes or updates in content via an aggregator (Becta report, xx)

Web syndication is a form of syndication in which website material is made available to multiple other sites. Most commonly, web syndication refers to making web feeds available from a site in order to provide other people with a summary or update of the website's recently added content (for example, the latest news or forum posts). The term can also be used to describe other kinds of licensing website content so that other websites can use it. Applications allowing users to fully customise the web content they wish to access. These sites make use of a technique known as Real Simple Syndication or Rich Site Summary (RSS) (Constantinides, 2008).

Examples: http://uk.my.yahoo.com/, http://www.google.com/ig, http://www.netvibes.com/

Social Bookmarking

Users submit their bookmarked web pages to a central site where they can be tagged and found by other users (Becta Report, 2008)

Tagging and social bookmaking is an extremely easy and effective way of sharing and filtering interesting links based on social networks. It allows people to subscribe to the bookmarks of others in their network or group, or to a particular 'tag' (keyword) assigned to bookmarks stored by others. Tagging and social bookmarking is ideally suited to classroom use as it enables groups to build up a collection of resources very easily around a particular topic such that each individual can benefit from the work of others (web2.0 wikki, 2010).

Examples: del.icio.us, Digg - The best news, videos and pictures on the web as voted on by the Digg community. Breaking news on Technology, Politics, Entertainment, and more!, Diigo - is a powerful research tool and a knowledge-sharing community

Social Library Tools (social media site): Communities or social media sites books oriented: Shelfari (Shelfari is a community-powered encyclopedia for book lovers.), Delicious Librar, LibraryThing (library catalogue that connects people (community))

Social Media (see at the end)

Social media are media for social interaction, using highly accessible and scalable communication techniques. Social media is the use of web-based and mobile technologies to turn communication into interactive dialogue. (wiki) Andreas Kaplan and Michael Haenlein define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content."[Kaplan, Andreas M.; Michael Haenlein (2010). "Users of the world, unite! The challenges and opportunities of Social Media". Business Horizons 53 (1): 59–68. Businesses may also refer to social media as consumer-generated media (CGM). A common thread running through all definitions of social media is a blending of technology and social interaction for the co-creation of value User-generated content like blogs Examples:

Communication

- Blogs: Blogger, ExpressionEngine, LiveJournal, Open Diary, TypePad, Vox, WordPress, Xanga
- Microblogging: FMyLife, Foursquare, Jaiku, Plurk, Posterous, Tumblr, Twitter, Qaiku, Google Buzz, Identi.ca Nasza-Klasa.pl
- Location-based social networks: Foursquare, Geoloqi, Gowalla, Facebook places, The Hotlist
- Social networking: ASmallWorld, Bebo, Cyworld, Diaspora, Facebook, Hi5, Hyves, LinkedIn, MySpace, Ning, Orkut, Plaxo, Tagged, XING , IRC, Yammer
- Events: Eventful, The Hotlist, Meetup.com, Upcoming
- Information Aggregators: Netvibes, Twine (website)
- Online Advocacy and Fundraising: Causes, Kickstarter

Collaboration/authority building

- Wikis: PBworks, Wetpaint, Wikia, Wikimedia, Wikispaces
- Social bookmarking (or social tagging):[21] CiteULike, Delicious, Diigo, Google Reader, StumbleUpon, folkd
- Social Media Gaming: Empire Avenue[22]
- Social news: Digg, Mixx, NowPublic, Reddit, Newsvine
- Social navigation: Trapster, Waze [23]
- Content Management Systems: Wordpress, Drupal, Plone
- Document Managing and Editing Tools: Google Docs, Syncplicity, Docs.com, Dropbox.com
- Collaboration: Central Desktop

Multimedia: Photography and art sharing: deviantArt, Flickr, Photobucket, Picasa, SmugMug, Zooomr Video sharing: sevenload, Viddler, Vimeo, YouTube, Dailymotion, Metacafe, Nico Nico Douga, Openfilm, Livecasting: Justin.tv, Livestream, OpenCU, Skype, Stickam, Ustream, blip.tv, oovoo

Music and audio sharing: ccMixter, Pandora Radio, Last.fm, MySpace Music, ReverbNation.com, ShareTheMusic, The Hype Machine, Groove Shark, SoundCloud, Bandcamp,Soundclick,imeem.
Presentation sharing: scribd, SlideShare

Reviews and opinions: Product reviews: epinions.com, MouthShut.com, Business reviews: Customer Lobby, Yelp, Inc. Community Q&A: Askville, EHow, Stack Exchange, WikiAnswers, Yahoo! Answers, Quora, ask.com

Entertainment: Media and entertainment platforms: Cisco Eos, Virtual worlds: Active Worlds, Forterra Systems, Second Life, The Sims Online, World of Warcraft, RuneScape, Game sharing: Kongregate, Miniclip, Newgrounds, Armor Games
Brand monitoring: Social media measurement: Attensity, Statsit, Sysomos, Vocus

Social Networking: Websites focusing on connecting people with other people directly and Websites that structure social interaction between members who form subgroups of 'friends' (becta report). Applications allowing users to build personal websites accessible to other users for exchange orf personalcontent and communication (Constantinides, 2008). Social networking sites (SNS) are perhaps the most socially significant of the Web 2.0 applications, particularly as the number of users continues to escalate and as they converge a range of other Web 2.0 phenomena (Burrows, 2007). A social networking service is an online service, platform, or site that focuses on building and reflecting of social networks or social relations among people, e.g., who share interests and/or activities. A social network service essentially consists of a representation of each user (often a profile), his/her social links, and a variety of additional services. Most social network services are web based and provide means for users to interact over the internet, such as e-mail and instant messaging. Online community services are sometimes considered as a social network service, though in a broader sense, social network service usually means an individual-centred service whereas online community services are group-centred. Social networking sites allow users to share ideas, activities, events, and interests within their individual networks. (wiki)
The main types of social networking services are those which contain category places (such as former school year or classmates), means to connect with friends (usually with self-description pages) and a recommendation system linked to trust. Although some of the largest social networks were founded on the notion of digitizing real world connections, many networks focus on categories from books and music to non-profit business to motherhood as ways to provide both services and community to individuals with shared interests.
Examples: MySpace, LinkedIn, Bebo, Facebook , MySpace, Twitter –

Tags or tagging: Users are allow to categorize online content like Web pages, photos, and links.
a tag is a non-hierarchical keyword or term assigned to a piece of information (such as an Internet bookmark, digital image, or computer file). This kind of metadata helps describe an item and allows it to be found again by browsing or searching. Tags are generally chosen informally and personally by the item's creator or by its viewer, depending on the system.
Tagging was popularized by websites associated with Web 2.0 and is an important feature of many Web 2.0 services. It is now also part of some desktop software (wiki). Example of tagging: Facebook, del.icio.us

Trading: Buying, selling or exchanging through user transactions mediated by internet communications (Becta report, 2008). Online trading is The increasingly popular activity of buying and selling securities over the internet, or to a lesser extent, through a broker's proprietary software.
Examples: Ebay, Mercadolibre.com , Amazon.com

Video (videocast) the same as podcast

Video podcast (sometimes shortened to **vodcast**, **video podcast** or **vidcast**) is a term used for the online delivery of video on demand video clip content via Atom or RSS enclosures

Virtual Community (same as online game and virtual world): According to Encyclopedia.com, a virtual community is defined as "community mediated by the Internet or other electronic communication technologies—an increasingly important form of indirect social relationship. Such relations are "virtual" in the sense that they generally involve no face-to-face contact or physical gathering of members (web2. Wiki, 2010)
Examples: ActiveWorlds - 3D Virtual Worlds Chat at its finest. Create your own 3D world, chat with others in Virtual Reality environments Habbo - Check into the world's largest virtual hotel for free!
IMVU - IMVU is a social network and 3D virtual world where millions of people meet, chat and have fun in animated 3D scenes, Second Life

Web Applications: Online programs that can do virtually everything your existing software programs can do. A web application is an application that is accessed over a network such as the Internet or an intranet. Web applications are popular due to the ubiquity of web browsers, and the convenience of using a web browser as a client, sometimes called a thin client. Common web applications include webmail, online retail sales, online auctions, wikis and many other functions. (wiki)
An application in which all or some parts of the software are downloaded from the Web each time it is run. It may refer to browser-based applications that run within the user's Web browser or to rich client applications that resemble local applications (PC Magazine Acceced 2011).
Example: Browser applications typically include simple office software (word processors, online spreadsheets, and presentation tools), with Google Docs being the most notable example, and can also include more advanced applications such as project management, computer-aided design, video editing and point-of-sale. Zoho for instance can replace your Microsoft Office programs

Wikis: A web-based service allowing users unrestricted access to create, edit and link pages (Becta report)
A wiki is a webpage or set of webpages that can be easily edited by anyone who is allowed access (Ebersbach et al., 2006). In an educational context, wikis have an extremely practical role to play in allowing students and teachers to quickly and easily explore an area of knowledge, developing only as much structure as they need along the way. By placing structure at the service of content, groups of people have freedom to build on each other's work and build up resources in a genuinely collaborative way(web2.0 wiki, 2010). Can be understood as user-generated resources constructed and edited by anyone who wishes to contribute, the most well-known example of which, as we have already discussed, is the online encyclopaedia Wikipedia. Other examples of wikis include http://www.encyclopedia.com, http://www.martindalecenter.com, and http://www.onelook.com. The pages generated on these Wikis are linked together by a network of live hyperlinks in the text that allow users to skip through to related pages. The term Wiki is an abbreviation of "Wiki Wiki" meaning "quick" in Hawaiian and has been in use for describing this phenomenon of open collaboration for around 10 years (Burrows, 2007).
Examples: Wikipedia, @Wiki - @Wiki wiki host services is completely free BluWiki - Imagine a world where everyone can publish online. Without censoring, popups, or banner ads Wikispaces

Trust building services Are the foundations for the collective intelligence services (ratings, voting, likes, pokes and similar)
Examples: Rating system in eBay, Like in Facebook

How Social Networking can help Organisations:

Web 2.0 is a category of 'new' Internet tools and technologies, (also know as Social Networking tools or social software), created around the idea that the people who consume media, access the Internet, and use the Web shouldn't passively absorb what's available; rather, they should be active contributors, helping customize media and technology for their own purposes, as well as those of their communities.
The table below shows the social network tools, summarising accordingly with the use of the tool and examples of those tools.

	Tool	Use	Examples of sites
1	Podcast	Audio or video recorded, and ready to download from the internet, with different information or topics, normally produced by traditional media (Radio, TV)	Youtube www.youtube.com, Podcenter de ESPN http://espndeportes.espn.go.com/podcast/, BBC Podcast www.bbc.co.uk/podcasts/ ,
2	Blog	Chronological online diary, in which users can post histories, experiences, or comments from a variety of topics, and can allow other users to post or make comments.	The Bear Club www.thebearclub.co.uk Blogcritics *www.blogcritics.org*
3	Signals	the use of RSS technology to rapidly notified about updates, news, and any content change	ESPN RSS , BBC RSS *www.newsrss.bbc.co.uk*
4	Mashups	Is the use of (at least) two different sources of information and combines them, into a new source of information	Fotoland: Add your own private photos from flickr by tagging them to a geographic location on the map. http://fotoland.us/
5	Folksonomies	user generated categories that are used for searching, organizing and managing various types of content.	del.icio.us http://delicious.com/
6	Wikis	users can and are allowed to change the content of pages easily	Wikipedia http://www.wikipedia.org/ , Travellerspoint http://www.travellerspoint.com/
7	Tags	Users are allow to categorize online content like Web pages, photos, and links	Del.icio.us http://delicious.com/
8	Social Bookmarking	Social bookmarking sites allow you to organize your bookmarks by allocating a number of 'tags' to them.	submitting the blog post to a social bookmarking site like Del.icio.us http://delicious.com/
9	Social Networking	free social networking and micro-blogging service that enables its users to send and read messages known as tweets	Twitter www.twitter.com , Digg http://digg.com/

Table ii: *Description and examples of Web 2.0 tools*

B.   A comprehensive review of the start-up process

A number of studies have offered models and frameworks exploring the characteristics of the start-up process, among these studies the most significant in terms of this research are presented below and further summarised in table 2.6 in chapter 2.

One of the first studies analysing the start-up process is dated on 1985. Gartner (1985) developed a framework for the creation of a company base in four dimensions or major perspectives; (1) characteristics of individuals, (2) the organisation, (3) the environment and (4) the process by which the new organisation is started, see figure i.
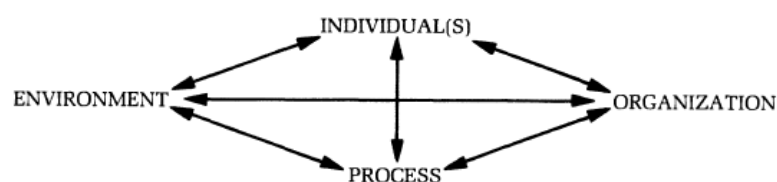
Figure i: Gartner's New venture process framework. Source (Gartner 1985)

Gartner (1985) proposed that the interaction of the entrepreneur's behaviour, the environment, and the characteristics of the firm, led to the process of entrepreneurship, including start-up process and growth (Gartner 1985, Carland et al. 2000). Although, Gartner made an extensive analysis on the literature, and listed each variable of new venture creation illustrating the potential of the high degree of complexity in the integration of these variables, and explain some of the relationships between those variables and perspectives in the creation of a new venture, his focus was on the characteristics of the entrepreneur, and do not really explain the process that organisations need to execute to start a new venture. Gartner's conceptual framework was developed to provide a way to analyse past research studies and investigate those aspects of new venture creation in companies already established, rather than study the start-up process from new ventures. In later work, Gartner (1989) revised the model and gives more importance to financial support and the existence of a supportive environment rather than the entrepreneurial personality as a main difference from the author's previous work.

Katz and Gartner (1998) created a theoretical and empirical framework that identifies an organisation in the process of creation. The study identified four properties that would be an indicator that an organisation is in the process of coming to existence (Carter et al. 1996b). The main limitation of Katz (1998) studies is that the properties are complex and the framework helps merely in the identification of organisations which are in the process of coming into existence and the properties occurs only after the organisation achieve particular size (Carter et al. 1996b, Katz et al. 1988).

Van de Ven et al. (1989) also explore the business conception process and suggest four main aspects for the business creation: (1) Strategy; how the business idea emerges over the time, (2) competencies; how the different functional competencies are created, (3) sustainable business; when and how these functional competencies are employed to create a new product or family of products believed to reach success, and (4) organisation and industry context: how theses business development efforts influence the organisation and the industry sector.

Additional research conducted in the late eighties produced different models for venture creation or start-up models, such as the model of Moore (1986) and Bygrave (1989). The first model describe the venture growth which is affected by personal characteristics as well as organisation characteristics, the second model is essentially the Model of Moore (1986). Although Bygrave expanded this model to highlight the "triggering event", in addition, the author describes a sociological foundation for that "trigger". Additionally (Manning et al. 1889) developed a model that attempts to totally remove individuals from the function, and includes only the characteristics of a new venture. However, none of these models describe how the factors drive the actual creation of a venture (Carland et al. 2000).

Later, in the early nineties, Vesper (1990) covered five key ingredients that are essential for the firm creation: (1) technical know-how, (2) product or service idea, (3) personal contacts, (4) physical resources and, (5) customer orders. Moreover, Vesper's book synthesises and organises previous research and each "ingredient" to develop a framework that includes the components presented in the table 2.6:

Basic
Feasibility of the Venture 1. Can the product or service work? 2. Is it legal?
Competitive Advantages of the Venture 1. What specific competitive advantages will the product or service offer? 2. What are the competitive advantages of the companies already in business? 3. How are the competitors likely to respond? 4. How will the initial competitive advantage be maintained?
Buyer Decisions in the Venture 1. Who are the customers likely to be? 2. How much will each customer buy, and how many customers are there? 3. Where are these customers located, and how will they be serviced?
Marketing of the Goods and Services 1. How much will be spent on advertising and selling? 2. What share of market will the company capture? By when? 3. Who will perform the selling functions? 4. How will prices be set? How will they compare with the competition's prices? 5. How important is location, and how will it be determined? 6. What distribution channels will be used—wholesale, retail, agents, direct mail? 7. What are the sales targets? By when should they be met? 8. Can any orders be obtained before starting the business? How many? For what total amount?
Production of the Goods and Services 1. Will the company make or buy what it sells? Or will it use a combination of these two strategies? 2. Are sources of supplies available at reasonable prices? 3. How long will delivery take? 4. Have adequate lease arrangements for premises been made? 5. Will the needed equipment be available on time? 6. Do any special problems with plant setup, clearances, or insurance exist? How will they be resolved? 7. How will quality be controlled? 8. How will returns and servicing be handled? 9. How will pilferage, waste, spoilage, and scrap be controlled?
Staffing Decisions in the Venture 1. How will competence in each area of the business be ensured? 2. Who will have to be hired? By when? How will they be found and recruited? 3. Will a banker, lawyer, accountant, or other advisers be needed? 4. How will replacements be obtained if key people leave? 5. Will special benefit plans have to be arranged?
Control of the Venture 1. What records will be needed? When? 2. Will any special controls be required? What are they? Who will be responsible for them?
Financing the Venture 1. How much will be needed for development of the product or service? 2. How much will be needed for setting up operations? 3. How much will be needed for working capital? 4. Where will the money come from? What if more is needed? 5. Which assumptions in the financial forecasts are most uncertain? 6. What will be the return on equity, or sales, and how does it compare with the rest of the industry? 7. When and how will investors get their money back? 8. What will be needed from the bank, and what is the bank's response?

Table iii: Start-up framework according to Vesper (1990). Source: Karl H. Vesper, New Venture Strategies, (1990) P.172.

Vesper (1990) research emphasised in the skills and knowledge that the entrepreneur need to acquire before starting this journey. Additionally Vesper (1990) identified five key elements that the

entrepreneur needs to acquire to start-up a new venture: (1) the venture idea, (2) physical resources, (3) technical know-how in the particular line of work, (4) personal contacts critical to the business, and (5) sales orders from customers. Being the venture idea, one of the most difficult ones to obtain and although very important for the success of the new venture (Vesper 1990).

Reynolds and Miller (1992) analysed 3,000 established firms under four key events on the gestation of a new firm: (1) entrepreneur's commitment, (2) initial hiring, (3) initial financing, and (4) initial sales. However, not all the organisations under study reported every possible sequence of events, being the initial sales, the most prevalent event among the sample studied. Reynolds and Miller research focused in the duration of the gestation period for start-ups, that starts with the commitment of the entrepreneur or owner of the initiative and finalises with the initial sales, which is the day which a new firm is an active participant in the economy "the birth-date".

Subsequent studies of Gartner (1995) develop and present a framework to describe the new venture creation phenomenon, outlining four dimensions that should be accounted for starting-up a new venture: (1) the individuals, (2) the activities undertaken, (3) the organisational structure and (4) the Strategy. However his framework has paid little attention to the activities undertaken for the firm creation.

Simultaneously to Gartner (1995), Gatewood et al. (1995) generated a list of 29 activities which was grouped into five major categories: (1) gathering marketing information, (2) estimating potential profits, (3) finishing the groundwork for the business, (4) developing the structure of the company and (5) setting up the business operations. The results from their study shows that successful and unsuccessful start-ups have spend the same amount of time to gathering information, estimating profits, completing know-how and structuring the company. However successful start-ups took the next step and devote full time to the business. Their results show that the critical difference among those entrepreneurs (successful and unsuccessful) might be the nature of the opportunity (the business idea), and the skills and abilities of the entrepreneur, which played an important role to match the business idea (opportunity) with their skills and capabilities (Gatewood et al. 1995).

Similarly, Carter et al. (1996) study addressed three questions, *"(1) what activities do nascent entrepreneurs initiate in attempting to established a new business? (2) How many activities do nascent entrepreneurs initiate during the gestation of the start-up? And (3) when are particular activities initiated or completed?"* (P.151). The study describes 14 activities that organisations or individuals need to undertake, these activities were further grouped into 6 core activities or stages: (1) search for

facilities and equipment, (2) search for and obtain financial support, (3) formed a legal entity, (4) prepared a team, (5) acquire facilities and equipment, and (6) devoted full time to the business.

One of the most cited models in the literature is the model of Timmons (1999). Timmons in his book "New venture creation" design a model considering four key factors (see figure 2.2): (1) the entrepreneur, (2) the founding team, (3) the opportunity, and (4) the resources needed to start-up a firm. Similarly to Timmons; Carter et al (1996), Katz (1990), Rotefoss and Kolvereid (2005) models have a key ingredient which is the entrepreneur and the understanding of the characteristics of the entrepreneurship. The innovative characteristic of the model of New Venture Creation described in Timmons' research is that the model is not linear, and provides an explanation of the relationships between the different key ingredients, highlighting the importance of the "communication", "the creativity" and the "leadership" of the entrepreneur along the process.
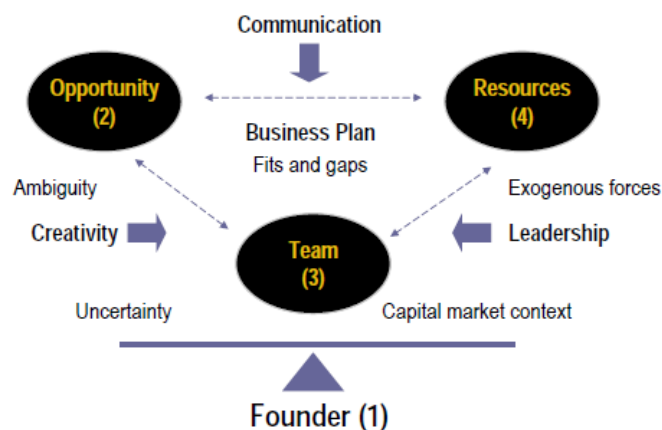
Figure ii: The Timmons Model of the Entrepreneurial process Source: Timmons (1999)

Similarly to previous studies, Carland et al. (2000) research focused in the entrepreneur as a main factor for the venture creation, and elucidate that venture initiation and creation are act of humans (entrepreneurs), and therefore there are the central component of this process. Carland et al. (2000) developed a model that begins with recognition of the idea and the entrepreneurial drive then couples the idea with knowledge, assisted with the creativity and experience of the entrepreneur, and finally filters the outcome through intuition to create an entrepreneurial vision.

According to Baker et al. (2003) there are two approaches when studying the founding process in entrepreneurship research. Once again Baker's Framework focused in the characteristics of entrepreneur, however, the authors differentiate between two approaches to create a new venture: (1) a "design-then-execution framework" that assumes a well-structured linear process in which start-up intentions and gestation typically lead to the creation of a plan which they subsequently attempt to execute. (2) and the "improvisation framework", where the design and execution of the start-up

join. In this case, founders may force the start-up process and the designing of the firm as they create it (Baker et al. 2003).

In the same way, Shook et al. (2003) developed an "organising model" to understand the process of venture creation emphasising the entrepreneurs' characteristics. Although the environmental context is visible missing from the model, it does not mean that the environmental context is not important for a start-up firm. This model presents four stages: (1) Entrepreneurial intent, (2) Opportunity search, (3) Decision to exploit, and (4) Exploitation activities (Serarols et al. 2008, Shook et al. 2003).

Similarly to Carter et al. (1996), LeBrasseur et al. (2003) described ten start-up activities that five entrepreneurs reported between the times of conception of the idea to the time the business was actually registered, the three main activities are Invested own money, create a Business Plan, devote full time to business and also conducted a market research.

Additional studies have focused on special factors influencing the start-up process such as: financing business start-ups (Burns 2007, Cassar 2004, Hamilton et al. 1998), the start-up survivals from the organisational performance and communication networks perspective, highlighting the importance of working networks to start a new venture (Raz et al. 2007, Romanelli et al. 1994), also the survival characteristics of start-ups has been studied in Almeida et al. (2008), and the value creation process in Esper et al. (2010). Similarly to Katz (1990), Rotefoss et al. (2005) have study the entrepreneurial experience and environmental resources along three different milestones in the start-up process; aspiring entrepreneur, nascent entrepreneur, and founder of a new business.

Start-ups within the SME context

The literature shows that almost all the frameworks and models attempting to explain the start-up process, do not talk expressively about SME organisations, however, most of the frameworks and models are build under the SME perspective, as they approach the concept of "entrepreneur or founder" as a single entity and not from the organisational side, see the research of (Katz et al. 1988, Birley et al. 1994, Carter et al. 1996a, Barrow 2009, Gartner et al. 1992a). For instance, Katz's definition of start-ups embraces the similarity between the concepts of start-ups and SMEs. Katz refers to start-up as "*emerging organisations which are likely to be small, fragile and volatile*" (Katz et al. 1988).

Although, the studies regarding the start-up process have implicitly embrace small businesses, there is specialised research with emphasis on SMEs such as the work of Gibb et al. (1982). Gibb presents six stages for the start-up process based on the framework from Watkings (1976). Additionally, Gibb et al. (1982) identify four key components: (1) the idea and the market, (2) resources, (3) the ability of the

entrepreneur and, (4) the motivation and determination that are basic for the successful development of a small business. Similar to contemporary research, Gibb's studies focus on the entrepreneurs as single entities and the social influences affecting the start-up process.

The literature in SMEs concerning the start-up process has mainly referred to success and failures examples of SMEs start-up, covering predominantly three areas (Watson et al. 1998): Motivations for business start-ups; (Storey 2002, Mayes et al. 1990, Mazzarol et al. 1999), Factors influencing success and failure; (Ray 1993, Richard L. Osborne 1993, Smalibone 1990), and growth of small business (Chong et al. 2007, LeBrasseur et al. 2003, Davidsson et al. 2006).

Start-ups within the dot-com context

Only in the last decade studies of *dot-com* organisation related to the start-up process have emerged, therefore there is limited information. Although the growing research in this area, still few studies have explored the process of venture creation in *dot-com* firms. The research of the *dot-com* firm is still in its emergent phase, and there is more to know about the phenomenon and the elements of the venture creation process (Serarols et al. 2008, Carrier et al. 2004, Jiwa et al. 2004, Westhead et al. 2005).

As a result of these studies new concepts have emerged such as the "cyber-entrepreneurs" Carrier et al., (2004) and "cybertraders". Serarols et al. (2008) embraces different definitions and are summarised with his own definition of cyber-traders as follows; "*new organisations that commercialise their products and services exclusively in the Internet*" (P.1)*. At present, these type of firms, known as *"dot-coms" or "cybertraders"* are playing an increasingly important role in the Internet and has become the source of a new form of entrepreneurship known as *"cyberentrepreneurship"* (Serarols-Tarres et al. 2006)*.

One of the few studies related to the *dot-com* sector is depicted in the work of Carrier et al. (2004). This study covers specially those firms essentially founded upon e-Commerce, and whose main activities are based on exploring networks using Internet technologies. This study identified six phases for the venture creation: (1) emergence of the business idea, (2) analysis of market needs (3) identification of the business opportunity, (4) feasibility, (5) search for support, and (6) venture creation (Carrier et al. 2004).

Although, empirical research in the area has found that no unique pattern or sequence of events is common to all emerging organisations (Hansen (1995), Reynolds et al. (1992). Moreover, an exploratory study on the entrepreneurial process of creating a firm on the Internet has revealed that the cyber-entrepreneurs are performing basically the same stages that "traditional" entrepreneurs

use for the creation of a new venture, despite the fact that they belonged to different industries (Carrier et al., 2004). Some other studies suggest additional steps need to be added to the common steps that are especially intended for *dot-com* firms or e-Business initiatives. E.g.; obtain a domain name and construct website and e-mail systems (Wilson 1999). However, Cyber-entrepreneurship is still in its emergent phase, and further research is needed on this subject. According to (Serarols et al. 2008) the stages cyber-entrepreneurs follow to create their firms still needs to be addressed.

C. Data Analysis and Data Management: Development of the e-trade Start-up Framework

This Appendix is divided in two parts. The first part covers the process of data management and theme development, which directs this research to the final framework. The second part of this section presents the data management document resulted from the analysis of the dataset "interviews", although due to restrictions of space, the other two datasets are not presented. However the process of data management was similar to the one presented in this appendix.

The first part presents the data analysis process followed in this research and how the start-up Framework emerges from the data analysis. This process contains the stages of data reduction, data display and conclusion/verification as explained in chapter 3. Furthermore the data analysis in this research is divided in two phases: Analysis during data collection and Analysis post data collection and each phase dealt with the three data sets to guaranty triangulation and rigour in the data analysis: *Interviews, Field notes* and *documents*.

The analysis during the data collection stage was conducted in the real life working settings as required in Action Research (Miles et al. 1994a), however is important to mention that the data collection took place during all the phases of each cycle, thus additional amount of pre/post intervention data was captured for further analysis. The analysis during data collection relied on other participants and their views and was primarily concerned with a pragmatic emphasis on 'solving the problem'. Conversely, the post data collection analysis was conducted once the researcher has finished the intervention phase. This stage is concerned with the researcher's views and the views represented in literature, hence more abstract and theory focused.

The use of computer software designed for the analysis of qualitative data, such as QSR NVivo, has been helpful in this study, especially for data reduction, data organisation and coding the data. However the main functions of the data analysis process were performed in traditional fashion.

This section will concentrate in the explanation of the data analysis process and the use of Thematic Analysis in this research. First the *data reduction and data condensation* process and the use of *NVivo* is explained, followed by the *coding process*, which is the 'core' of Thematic Analysis. Finally this section finishes with the *theme development* process and the relationships with the themes and the data analysed, and how these 'themes' lead to the start-up Framework.

Data management and data analysis methods: the Use in this study of CAQDAS

In order to guarantee the quality of this research, the researcher has used multiple methods for data collection to ensure triangulation of the data, the literature highlights the important to collect data

from different respondents who occupy different task or perform different activities within the project and also with divergent views of the problem. In this study, for example, interviews were carrying out among the different participants of the project, furthermore points of view from different stakeholders, such as software developers and consultants, were taken into consideration for the data analysis (Bailey 2007). Similar procedures were followed with the data collection from observations and archival records.

The analysis of data took place during and after the collection of the data, and the use of computer software designed for the analysis of qualitative data, such as **QSR NVivo**, has been helpful for the data reduction and examination of the collected data.

The data analysis method used in this research has followed and **inductive approach** or **data driven approach** within the **Thematic Analysis,** letting the research question emerge through the coding process of the data (Boyatzis 1998). For the first phase of the research when the AR cycle 1 was conducted, different data collection techniques were used, such as: observations, interviews and interpretation of documents, which were analysed by the use of **inductive thematic analysis (Data-driven approach)**. During the initial analysis of the data, three main themes were identified together with corresponding subthemes (or 'nodes' in NVivo language); this process is further explained in chapter 4 of this thesis.

During the second phase of the research when the AR cycles 2 to 4 were conducted, the same data analysis process was followed, except in this case the researcher has also considered 'prior data' collected from the first cycle of the AR study, thus the approach followed to analyse the data was **prior data or prior-research driven thematic analysis**. Base on the finding of the first phase and the new data, further conclusions were made given a clearer picture of the phenomena; this process is clearly described in the appendix section (see appendix C) where the analysis of the data for the CAR is presented. These processes took place before, during and after, the diagnosis, Action planning and Intervention phases, however the data collection process continue during all the study.

In the final phase of this study, a **multiple Case Study** was conducted in order to validate the findings of previous phases. In this phase, interviews were collected from two different SMEs and the findings from these two case studies were compared with previous findings and it is further discussed in chapter 6 were the general implications for this research are presented.

Finally in order to achieve a successful data analysis, six steps to doing thematic analysis recommended by (Braun et al. 2006) were used in this research and are presented below.

- *Familiarising*: during this step the empirical data (literature review) were analysed with the view to identify the main concerns from the stakeholders involve in the creation of *Dot-com* Company.

- *Generating initial codes*: In this step the data were organised into common themes, collecting relevant data in each 'code'.

- *Searching for themes*: during this step codes were collected and gather together into potential themes.

- *Reviewing themes*: Checking if the data sets created, matches with the potential codes and themes.

- *Defining and naming themes*: this step consists in an ongoing analysis to refine the details of each theme, generating clear definitions of themes and names.

- *Producing the report*: the final step involves the selection of compelling selected extracts examples from the data to support the story telling of the report.

Data analysis

The object of analysing qualitative data is to determine categories, relationships and assumptions that inform the respondents' view of the world in general and of the topic in particular (MacCracken 1996). In this research the analysis was a lengthy, complex and sometimes exasperating process, however, as Delamont (2002) warns, there are no timesaving methods for this process and not even the use of Computer Assisted Qualitative Data Analysis Software (CAQDAS) can accelerate this process. The analysis of qualitative data continues throughout the research and is not a separate self-contained phase (Ely et al. 1991).

Although this research has been aided by a CAQDAS especially for the data reduction and coding process, and this type of software have substituted some functions of the manual data analysis process such as the uncertain and slow process of manual searching and filling data, still the computer and the text analysis packages do not do the analysis for the researcher (Basit 2003), in this study the researcher have electronically created the categories, and manually segmenting and coding the data, and also decide what to retrieve and collate.

In this research several iterations between data analysis and data collection were carried out during the four phases of the e-trade project, both during the fieldwork and after its completion, this involved collecting documents and archival records, make annotation of observations, listening to the interview tapes; transcribing the interviews; translating interviews – which were in Spanish – into English; reading the transcripts a number of times; summarising the transcripts, detecting categories and choosing categories; coding statements; linking themes; selecting quotations; and ultimately, generating a Framework grounded in the data and writing it up in a coherent fashion.

Data reduction

(Tesch 1990) used the terms 'data condensation' or 'data distillation' as a description of the eventual outcome of a qualitative analysis, implying that the body of data did not merely become smaller and manageable in the analysis process because there was less to deal with, but was the result of interpretation and organisation. Tech (1990) states that the generation of categories and the data condensation is an important part of the outcome in qualitative studies.

This research have produced a large amount of information among different sources which needed to be distilled, filtered and reduced, hence QSR NVivo V9.1 software was employed in this task to support the data reduction activity and to assist in the coding process. The first step carried out in the data reduction phase was to input the information obtained from the study, which was mainly in form of recorded tapes and Microsoft documents. From this rich pool of information the researcher spend large number of hours organising and selecting relevant information from the data.

The data collection and subsequent data analysis was performed in three levels, each level dealt with a unique dataset to guarantee triangulation (see table 4.4). From these data, the first dataset; "Interviews", required additional time for the data reduction and analysis, consequently the analysis was time-consuming and not straightforward.

The process of data reduction involves the distillation of the three data sets; however the data set "interviews" required additional time for the data reduction, thus this process is explained first. The initial step in this process was to upload the "interviews" into 'NVivo', and then the recorded material was listened few times and the researcher made observations and 'tagged' parts the relevant information in the tapes. NVivo Software has a tool which allows users to "flag" parts of the recorded material and makes use of "Tags" to indicate relevant information related to the themes identified. This selected information was subsequently transcribed into word documents and uploaded into NVivo software for a second analysis, which helped for the identification of categories and codes and the relationships with the initial themes.

After completing the data reduction phase, the researcher starts coding manually and electronically. The initial analysis and coding process for the fist cycle was *Prior-research (Theory-Driven) approach*, hence the researcher had already agreed on the main categories based on the findings from the literature related to the start-up process. The initial themes and codes also called 'nodes' in NVivo were grouped as 'primary nodes', thus three initial categories or themes were created: *Conception, Planning* and *Implementation*. These three main nodes were each assigned a position on top of the three 'trees' that constituted the node listing for the project, then secondary nodes (codes) from the interviews were attached to these initial themes. However the rest of the coding process was data-

driven or inductive approach. An inductive approach to Thematic Analysis allows themes to emerge from the data, rather than searching for pre-defined themes, hence many more 'nodes' were added to the list as a consequence of the analysis of data during the four cycles of this research. Similar processes were followed for the remaining two data sets; Observations and field notes and Documents and archival records, and are further explained in the coding process and theme development process as follows.

Codes, Categories and Themes

Thematic Analysis is a process for encoding qualitative information in which a 'theme' or 'code' represents a pattern found in the raw data which at least describes and organises possible observations, also a 'theme' can infer aspects of the phenomenon under study. Codes, categories or themes are tags or labels for allocating units of meaning to the descriptive information compiled during this study (Boyatzis 1998). Therefore, Data Analysis is the most difficult and most crucial aspect of qualitative research, and Coding is one of the main steps to organise and make sense of textual data (Basit 2003).

Coding or categorising the data has an important role in this analysis; it involves dividing and subdividing the data as well as assigning categories (Dey 1993). These Codes were attached to a variety of words, phrases, sentences, or whole paragraphs, as well as fragments of audio recordings. Themes, codes or categories can come from theory, literature, research experience, conceptual frameworks and the data itself (Miles et al. 1994b). Hence themes can come from the rich "*pool of concepts that researchers already have from their disciplinary and professional reading, or borrowed from the technical literature*", and also can come from the words and phrases used by participants in the study (Strauss et al. 1990).

In this research, the initial themes used in the cycle 1 emerged from a combination of literature and conceptual frameworks and research experience. For the subsequent cycles, the words used by participants and the data itself were used for the creation of new categories. Additionally to guaranty rigor in this research, the data were collected from different participants and three main sources to guaranty triangulation; *Interviews, Observations* and *document reviews*. Moreover, during the coding process, the researcher identified two more phases to data coding as mentioned in (Gough et al. 2000): one focusing on meanings inside the research context and the other concerned with what may be meaningful to outside audiences, the first one was used to deal with SME-MX problem, and the second was used to draw the conceptual Framework.

The coding process and creation of categories occurred during the entire AR study. However each cycle produced a number of categories which were used to analyse the raw data and to develop

themes. The theme development and the relationship of those themes with the final framework is analysed in next section, therefore in this section the researcher presents a summary of the coding process and the elaboration of categories in each cycle.

Themes and categories emerged in each cycle

The data collection process involves the compilation of data trough the main sources or datasets; Interviews (Recording material of interviews, meetings, workshops and informal conversations), Field notes (Observations, emails, memos, meeting notes and field notes), Documents and archival records (Revision of documents, contracts, licences, diagrams, etc.) and also themes emerged from the literature were considered. Each cycle produced vast amount of information in each dataset, which in turn was clustered into categories or themes emerging from the data and the literature.

Cycle 1 – pre and post analysis

The data collection techniques used in this research are presented in Chapter 3 and Chapter 4 section 4.2.4, together with the use of Thematic Analysis (section 4.3.4), following this premises as foundation, the first cycle of the e-trade project was analysed using a *theory-driven or prior-research approach* in which the initial set of categories used for the analysis of data emerged from the literature and conceptual frameworks. From an initial analysis of the literature three main themes were created; Concept Phase, Planning Phase and Implementation Phase (Gartner 1985; Shook et al 2003; Serarols-tarres 2009), these initial themes were enhanced with the three tiers of the Business Logic System described in Osterwalder et al. (2002): Strategy, BM and Business process. As a result six matrices were produced. Subsequently, from the six matrices, a number of sub-themes were identified and found to be linked with one or more codes, which clearly illustrated that coding involved not just premeditation, but reflexive and reflective activity. After the first review of the data, several more themes appeared and subsequently more nodes were included in the code list.

For example within the initial theme "Planning Phase", the literature break up this concept in four different areas of research, such as; technology development, Strategy Planning, Business Plans and Configuration of resources. Similar analysis was followed for the remaining 5 initial themes, resulting in 16 categories emerged from the exhaustive analysis of the literature review and thus used in this research for the purpose of data collection and data analysis. The initial set of themes used to analyse the information resulting for the first cycle is presented in the table below.

Cycle 1		Total categories = 16
Literature	**Freq.**	**Node N**
configuration	1	1
market feedback	1	2
Formal legal constitution	1	3
Develop Prototypes	1	4
Precipitation	1	5
Initial vision	1	6
Finding resources	1	7
Potential customers	1	8
First sale	1	9
business idea	1	10
Produce, develop technology	1	11
Strategy Plannig	1	12
Antecendents and professional knowledge	1	13
Incubator	1	14
writte the business plan	1	15
Identify opportunities	1	16

Table iv: Themes and categories from literature used in the first cycle of the project

Post Data analysis: These initial categories or themes were used to analyse the data resulted from this cycle, following an inductive/data-driven approach. However, during the AR cycles different participants contribute in the elaboration of the Framework in different ways and those contributions were also categorised in form of themes. Those contributions are summarised in table 6.6.

The first review of the different datasets obtained from the first cycle was tagged within the initial 16 categories, which were the foundation to understand the raw data. However, after this initial analysis several more categories emerged and were used for subsequent post-data collection analysis, and to analyse the raw data resulted from the second cycle.

The data from the exploratory cycle was useful to identify and select the sources of information and the creation of more categories. An initial analysis using the software NVivo, provide the researcher with an initial set of themes to make an in-depth analysis of the data using Thematic Analysis. The initial analysis using the 'Frequency distribution method' and 'word counting' reports 31 new categories or 'classes' from the first cycle (also called nodes in NVivo), this new themes were added to the 16 themes from the literature making a total of 51 categories; the table below presents the themes resulted from the analysis of the datasets during the first cycle of the e-trade project, and used to compress the data emerged from this cycle. Also the second set of categories resulted from this first analysis was used to support the analysis of the data obtained from the second cycle and is presented in table 4.22.

Cycle 1		
Literature	**Freq.**	**Node N**

No.	Dataset	Freq.	No.2	Dataset2	Freq.2	No.3	Dataset3	Freq.3	No.4	Dataset4	Freq.4
	Documents & Archival records	**50**		**Field Notes**	**23**		**Interviews**	**8**		**Literature**	**16**
1	Analysis comp	1	1	B. Process	2	1	Business opportunity	1	1	configuration	1
2	BC	2	2	BM	3	2	Concept	1	2	market feedback	1
3	BID	1	3	BP	1	3	idea	1	3	Formal legal constitution	1
4	BM	16	4	Conception	3	4	organisation	1	4	Develop Prototypes	1
5	BM,BP,BC	2	5	market research	1	5	software development	2	5	Precipitation	1
6	BP	5	6	mision	1	6	start-up process	1	6	Initial vision	1
7	collaboration	1	7	Planning	5	7	steps	1	7	Finding resources	1
8	EP	1	8	start-up	1				8	Potential customers	1
9	Experience	1	9	Strategy	2				9	First sale	1
10	idea	8	10	SWOT	1				10	business idea	1
11	image	1	11	Trade	1				11	Produce, develop technology	1
12	Products and services	4	12	Valua added	1				12	Strategy Plannig	1
13	Strategy	5	13	Vision	1				13	Antecendents and professional knowledge	1
14	use case	1							14	Incubator	1
15	WBS	1							15	writte the business plan	1
									16	Identify opportunities	1

Cycle 1 - The e-trade project — Total categories = 50

Table v: Themes emerged during the first cycle of the e-trade project

Cycle 2:

The data collection for the second cycle was planed looking at the categories that have emerged from the first cycle of AR (see table v). Those categories were used to search for patterns among the new raw data obtained during this cycle and also the data was examined to create new themes and categories and to build relationships among data. During the second cycle, the collection of data has concentrated with three main topics (or themes) resulted as the main outcomes of the analysis of the first cycle and the information from the main stakeholders of SME-MX; Business Model (BM), Planning and Software development. However, the compilation of recordings, documents and notes collected during all phases of this cycle, produce several new categories, such as Project Manager (PM), Analysis of competitors, Business Plan and Web 2.0. Also additional time was dedicated to examine the challenges occurring during the planning phase of the start-up Framework.

Using once again NVivo software to analyse the frequency of similar topics along the three different datasets, 46 themes were used during the analysis of this cycle including new categories such as Revenue model, Facebook game, knowledge database and System requirements, among the most important in this cycle.

The table below presents 46 themes that have emerged from the three datasets during the second cycle of the e-trade project which was used as the foundation of the QDA of the third cycle..

Cycle 2 - The e-trade project						Total categories = 46	
Node No.	Dataset	No.	Dataset2	No.3	Dataset4		
Documents & Archival records		**Field Notes**		**Interviews**			
1	Analysis comp	1	Analysis comp	1	BM		
2	BC	2	B. Process	2	BP		
3	BM	3	BP	3	Confusion		
4	BP	4	branding	4	Coordinator		
5	BP structure	5	Conception	5	Mission		
6	e-currency	6	Consultancy	6	PM		
7	EP	7	differentiators	7	Revenue Model		
8	executive summary	8	Implementation	8	start-up		
9	External Consultant	9	market research	9	Strategy		
10	facebook game	10	Marketing	10	Vision		
11	Funding	11	Planning				
12	idea	12	Promotion				
13	Legal	13	web 2.0				
14	PM						
15	Products and services						
16	Products and services (El portal)						
17	requirements						
18	Revenue Model						
19	software development						
20	Strategy						
21	system functionality						
22	use case						
23	versioning						

Table vi: Themes analysed during the third cycle of AR

Cycle 3:

The process of data analysis followed in this cycle was similar to the process followed in previous cycle, fist the data collection was planned looking at the themes emerged from cycle 1 and 2, and then following a data-driven approach within Thematic Analysis the researcher have used these categories to search for patterns and relationships among the new data.

Alike to cycle 2, the collection of data of the third cycle considered three datasets; Interviews, Field Notes and Documents review, nevertheless another category emerged during the revision of additional literature relevant to this study. Additionally the collection of data has focused on the information related to Business Model and software development, and also information that could help to clarify the differences between BM, BP and BC.

Following a similar process for data reduction and data condensation used in previous cycles, the data analysis of the third cycle was planned following a data-driven approach within Thematic Analysis in order to build relationships among existing categories and to create new codes. The resulting analysis of this cycle resulted in a report containing the third set of themes to be analysed. Table vii presents 70 themes that have emerged from the datasets during the third cycle of the e-trade project and thus used for the post-data collection analysis of this cycle.

Cycle 3 - The e-trade project — Total categories = 70

#	Dataset — Documents & Archival records	Node No.2	Dataset2 — Field Notes	Node No.3	Dataset3 — Interviews	Node No.4	Dataset4 — Literature
1	Basic BID	1	Aligment	1	Aligment	1	identify sources of income
2	BID	2	B. Process	2	background		
3	BM	3	BM	3	bartering		
4	BP	4	BP	4	BC		
5	branding	5	BP components	5	BM		
6	conceptualisation	6	Conception	6	BP		
7	Creation	7	Coordination	7	branding		
8	EP	8	facebook game	8	Business opportunity		
9	External Consultant	9	Implementation	9	Collaboration		
10	facebook game	10	methodology	10	Competitors		
11	Knwoledge database	11	Planning	11	Confusion		
12	Launching	12	PM	12	consultancy		
13	Legal	13	remuneration	13	delloite		
14	light version	14	Roles	14	e-currency		
15	organisation chart	15	software development	15	Entrepreneur		
16	Plan	16	start-up	16	facebook game		
17	remuneration	17	structure	17	formallity to work		
18	requirements	18	SWOT	18	idea		
19	Revenue model	19	use case	19	Image		
20	Revenue Plan	20	WBS	20	inconsistencies		
21	software development	21	web 2.0	21	knowhow		
22	strategy			2	leader		
23	strategy planning			3	logo		
24	system functionality			4	Market target		
25	tool for BID			5	PM		
26	use case			6	Priority		
				7	programming		
				8	proposals		
				9	PWC		
				10	PWC-consultant		
				11	requirements		
				12	Revenue model		
				13	Roles definition		
				14	sharepoint		
				15	SME		
				16	software development		
				17	strategy		
				18	structure		
				19	SWOT		
				20	time		
				21	trading		
				22	use case		

Table vii: Themes used to capture data during this cycle

Cycle 4:

The final cycle of the AR has followed a similar approach akin to previous cycles in order to analyse the data. First the new raw data was coded using the categories of previous cycles, followed by an analysis of the data to distinguish new possible categories. As a result 58 categories were used during this cycle, emphasising the most worn categories during this cycle, such as; Strategy, BM, Planning, SME and BID, and new categories such as Roles definition, Confusion and Relationships. Table viii shows the categories resulted form the last cycle of CAR.

Cycle 4 - The e-trade project						Total number of nodes = 58	
Node No.	Node name	Node No.	Node name	Node No.	Node name	Node No.	Node name
1	B. Process	16	Changes and functionality	31	market research	46	SME
2	bartering	17	Conception	32	master document	47	software development
3	Basic BID	18	Confusion	33	Mental map	48	start-up
4	BC	19	documents	34	methodologies	49	Strategy
5	BID	20	dot-com	35	operations	50	strategy planning
6	BM	21	Entrepreneur	36	organisation	51	Structure
7	BM - Gaps	22	feedback	37	Planning	52	SWOT
8	BM,BP	23	Focus group	38	PM	53	system functionality
9	BM,BP,BC	24	histories	39	Portal	54	Urge to start
10	BM,BP,BC,EP relationships	25	idea	40	progress	55	use case
11	BP	26	Implementation	41	Recap	56	Valua added
12	branding	27	key successful factors	42	reports	57	versioning
13	Business Documents	28	Knowledge database	43	requirements	58	WBS
14	business operations	29	Knwoledge database	44	Roles		
15	Business process	30	light version	45	Roles definition		

Table viii: Categories resulted from the last cycle of CAR

Theme development

Progressing with the data analysis, one of the last steps in this process is the theme development and their direct link with Thematic Analysis. As explained in chapter 3, Thematic Analysis is a process for encoding qualitative information in which a 'theme' represents a pattern found in the information that at least describes and organises possible observations. Themes or Codes are *"links between locations in the data and sets of concepts or ideas, and are in that sense heuristic devices, which enable the researcher to go beyond the data"* (Coffey et al. 1996).

Miles and Huberman (1994) expose two methods of creating themes. The first one is used by inductive researchers who prefer to code until the data has been collected, which is similar to the 'grounded' approach originally described by Glaser et al. (1967). The second method, consist to create a provisional 'start list' of codes and themes prior to fieldwork. This list comes from the conceptual framework, list of research questions, hypotheses, problem areas and/or key variables that the researcher brings to the study (Miles and Huberman 1994).

Hence, in this study a combination of both methods is used in order to gain insights from the theory and from the participants of the research, therefore the initial set of themes were generated inductively from the information available in the literature related to the start-up process, thus a *prior-research approach* was followed. Moreover, during the subsequent cycles of AR more themes and categories emerged from the participants, thus a *data-driven-approach* was followed as well. Finally all the categories resulted from the CAR were used to analyse this data, create themes and draw the conclusion that helped the researcher to produce a Framework for the start-up process. The process of theme development is summarised as follows.

Theme development (building the Framework and BID)

At the end of each cycle, as well at the end of the CAR, the researcher performed a post-data collection analysis following a data-driven-approach within Thematic Analysis with the intention of analyse the information and build categories that were used for the elaboration of the final Framework. The Thematic Analysis process has been explained in chapter 3, section 3.8.4, and this section summarise the final results of this analysis.

The final list of codes embrace 229 categories resulted from the data on each cycle. Many of these categories were used along different cycles; therefore these 229 categories were merged between them and resulted in 136 broad categories. This final list of codes and categories includes both; the themes emerged from the data and from the literature. Table ix presents the themes/categories emerged in each cycle of the CAR during the e-trade project; also table x presents a report from NVivo with the initial codes emerged from each dataset during this study and the categories from the literature.

List of Nodes and categories - The e-trade Project

Node	Category Name	Freq.	Node Numbe	Category Name2	Freq.	Node Number2	Category Name3	Freq.	Node Number3	Category Name4	freq.
	Documents & Archival records	**228**		**Field Notes**	**166**		**Interviews**	**157**		**Literature**	**16**
1	Analysis comp	2	1	Aligment	1	1	Aligment	1	1	configuration	1
2	Basic BID	4	2	Analysis comp	2	2	background	1	2	market feedback	1
3	BC	4	3	B. Process	24	3	bartering	6	3	Formal legal constitution	1
4	Entrepreneur	12	4	BC	1	4	BC	3	4	Develop Prototypes	1
5	BM	30	5	BID	1	5	BID	3	5	Precipitation	1
6	BM,BP	3	6	BM	10	6	BM	20	6	Initial vision	1
7	BM,BP,BC	3	7	BM - Gaps	1	7	BP	5	7	Finding resources	1
8	BM,BP,BC,EP relationships	1	8	BP	4	8	branding	9	8	Potential customers	1
9	BP	23	9	BP components	1	9	Business opportunity	2	9	First sale	1
10	BP structure	1	10	branding	1	10	collaboration	1	10	business idea	1
11	branding	2	11	Business Documents	1	11	Competitors	1	11	Produce, develop technology	1
12	Business process	1	12	business operations	1	12	Concept	1	12	Strategy Plannig	1
13	collaboration	1	13	Changes and functionality	1	13	Confusion	2	13	Antecendents and professional knowledge	1
14	Conception	1	14	Conception	16	14	Consultancy	1	14	Incubator	1
15	conceptualisation	1	15	Confusion	1	15	Coordinator	1	15	writte the business plan	1
16	Creation	1	16	Consultancy	1	16	delloite	1	16	Identify opportunities	1
17	dot-com	1	17	Coordination	1	17	documents	2			
18	e-currency	2	18	differentiators	1	18	e-currency	1			
19	EP	3	19	documents	1	19	Entrepreneur	2			
20	executive summary	1	20	facebook game	1	20	facebook game	7			
21	Experience	1	21	Focus group	1	21	Failure	1			
22	External Consultant	3	22	histories	1	22	formality to work	1			
23	facebook game	3	23	Implementation	18	23	idea	4			
24	feedback	2	24	key successful factors	1	24	image	1			
25	Funding	2	25	Knowledge database	1	25	inconsistencies	4			
26	idea	10	26	market research	3	26	knowhow	1			
27	image	1	27	Marketing	1	27	leader	1			
28	Implementation	1	28	methodologies	1	28	logo	1			
29	key successful factors	1	29	methodology	1	29	Market target	2			
30	Knwoledge database	3	30	mision	1	30	Mission	1			
31	Launching	1	31	Planning	29	31	organisation	1			
32	Legal	3	32	PM	2	32	PM	9			
33	light version	2	33	progress	1	33	priority	2			
34	market research	1	34	Promotion	2	34	programming	1			
35	master document	2	35	remuneration	1	35	proposals	1			
36	Mental map	4	36	reports	1	36	PWC	1			
37	operations	1	37	requirements	1	37	PWC-consultant	1			
38	organisation	1	38	Roles	2	38	Recap	4			
39	organisation chart	1	39	software development	3	39	relationships	2			
40	Plan	1	40	start-up	2	40	requirements	3			
41	Planning	1	41	Strategy	5	41	Revenue Model	3			
42	PM	2	42	strategy planning	1	42	Roles definition	3			
43	Portal	1	43	Structure	3	43	services	1			
44	Products and services	6	44	SWOT	2	44	sharepoint	1			
45	Products and services (El portal)	1	45	Trade	1	45	SME	1			
46	remuneration	1	46	Urge to start	1	46	software development	6			
47	requirements	6	47	use case	2	47	starting	1			
48	Revenue Model	2	48	Valua added	2	48	start-up	5			
49	Revenue Plan	1	49	Vision	1	49	start-up process	1			
50	SME	1	50	WBS	1	50	steps	5			
51	software development	23	51	web 2.0	3	51	Strategy	4			
52	start-up	6				52	Structure	2			
53	Strategy	13				53	SWOT	1			
54	strategy planning	3				54	time	1			
55	SWOT	1				55	trading	5			
56	system functionality	4				56	use case	1			
57	tool for BID	1				57	Vision	1			
58	use case	10				58	web 2.0	3			
59	versioning	2									
60	WBS	2									
										Grand Total /Frequency	**567**

Table ix: Themes per dataset emerged in the e-trade project

The importance of creating categories triggers the construction of a conceptual scheme that suits the data and is the direct relationship with Thematic Analysis. This scheme helps the researcher to ask questions, to compare across data, to change or drop categories and to make a hierarchical order of them, which is part of the theme development process.

The data obtained from the data analysis of this cycle was used to create more categories and themes which were used for merging information during the data collection process in the last cycle of the project, furthermore the outcomes form these data analysis was used to develop the final version of the framework which is presented in chapter 7 section 7.2.

Themes per Node (cycle) - The e-trade Project

cycle 1	Node No.	cycle 2	Node No.2	cycle 3	Node No.3	cycle 4	Node No.4	Literature	Node No.1
Analysis comp	1	Analysis comp	1	Aligment	1	B. Process	1	configuration	1
B. Process	2	B. Process	2	B. Process	2	bartering	2	market feedback	2
BC	3	BC	3	background	3	Basic BID	3	Formal legal constitution	3
BM	4	BM	4	bartering	4	BC	4	Develop Prototypes	4
BM,BP,BC	5	BP	5	Basic BID	5	BID	5	Precipitation	5
BP	6	BP structure	6	BC	6	BM	6	Initial vision	6
Business opportunity	7	branding	7	BID	7	BM - Gaps	7	Finding resources	7
Collaboration	8	Conception	8	BM	8	BM,BP	8	Potential customers	8
Concept	9	Confusion	9	BP	9	BM,BP,BC	9	First sale	9
conception	10	Consultancy	10	BP components	10	BM,BP,BC,EP relationships	10	business idea	10
EP	11	Coordinator	11	branding	11	BP	11	Produce, develop technology	11
Experience	12	differentiators	12	Business opportunity	12	branding	12	Strategy Plannig	12
idea	13	e-currency	13	collaboration	13	Business Documents	13	Antecendents and professional knowledge	13
Image	14	EP	14	Competitors	14	business operations	14	Incubator	14
market research	15	executive summary	15	Conception	15	Business process	15	writte the business plan	15
mision	16	External Consultant	16	conceptualisation	16	Changes and functionality	16	Identify opportunities	16
organisation	17	facebook game	17	Confusion	17	Conception	17		
Planning	18	Funding	18	Consultancy	18	Confusion	18		
Products and services	19	idea	19	Coordination	19	documents	19		
software development	20	Implementation	20	Creation	20	dot-com	20		
start-up	21	Legal	21	delloite	21	Entrepreneur	21		
start-up process	22	market research	22	e-currency	22	feedback	22		
steps	23	Marketing	23	Entrepreneur	23	Focus group	23		
strategy	24	Mission	24	EP	24	histories	24		
SWOT	25	Planning	25	External Consultant	25	idea	25		
Trade	26	PM	26	facebook game	26	Implementation	26		
use case	27	Products and services	27	formallity to work	27	key successful factors	27		
Valua added	28	Products and services (El portal)	28	idea	28	Knowledge database	28		
Vision	29	Promotion	29	image	29	Knwoledge database	29		
WBS	30	requirements	30	Implementation	30	light version	30		
configuration	31	Revenue Model	31	inconsistencies	31	market research	31		
market feedback	32	software development	32	knowhow	32	master document	32		
Formal legal constitution	33	start-up	33	Knwoledge database	33	Mental map	33		
Develop Prototypes	34	Strategy	34	Launching	34	methodologies	34		
Precipitation	35	system functionality	35	leader	35	operations	35		
Initial vision	36	use case	36	Legal	36	organisation	36		
Finding resources	37	versioning	37	light version	37	Planning	37		
Potential customers	38	Vision	38	logo	38	PM	38		
First sale	39	web 2.0	39	Market target	39	Portal	39		
business idea	40			methodology	40	progress	40		
Produce, develop technology	41			organisation chart	41	Recap	41		
Strategy Plannig	42			Plan	42	reports	42		
Antecendents and professional knowledge	43			Planning	43	requirements	43		
Incubator	44			PM	44	Roles	44		
writte the business plan	45			priority	45	Roles definition	45		
Identify opportunities	46			programming	46	SME	46		
				proposals	47	software development	47		
				PWC	48	start-up	48		
				PWC-consultant	49	Strategy	49		
				remuneration	50	strategy planning	50		
				requirements	51	Structure	51		
				Revenue Model	52	SWOT	52		
				Revenue Plan	53	system functionality	53		
				Roles	54	Urge to start	54		
				Roles definition	55	use case	55		
				sharepoint	56	Valua added	56		
				SME	57	versioning	57		
				software development	58	WBS	58		
				start-up	59				
				Strategy	60				
				strategy planning	61				
				Structure	62				
				SWOT	63				
				system functionality	64				
				time	65				
				tool for BID	66				
				trading	67				
				use case	68				
				WBS	69				
				web 2.0	70				
Total number of occurences	97	Total number of occurences	86	Total number of occurenc	196	Total number of occurences	165	Total number of occurences	16

Table x: Themes emerged in each cycle of the e-trade project

Theme development and data condensation

Miles and Huberman (1994) claim that codes will change and develop, and new codes will emerge as the analysis progress, thus with too many segments getting the same code, it was necessary to breaking down codes into sub-codes. During this process the researcher encountered that many of the categories (themes) were linked between them and thus be grouped in the same code (category), for example the relationships between the categories 'Knowledge database', 'building blocks', 'relationships' and 'BID' were unified into a broader theme 'Planning', which shares similar definitions and information (data) obtained.

Consequently from the 136 broad categories detected; the transcripts, summaries and the matrices were studied again and further links were found between the 136 categories, thus these 136 categories were consolidated and merged into 21 broad themes. These categories are presented in table xi.

Count of Theme	Column Labels					
Row Labels	cycle 1	cycle 2	cycle 3	cycle 4	last cycle	Grand Total
BM & SP	1		14	9	2	26
Concept	5	3	5	8		21
Consultancy	1	2	5			8
Entrepreneur	4	2	6	2	1	15
Idea	11	4	8	3		26
Implementation	2	2	10	20		34
IT development	6	9	22	30		67
mkt research	4	8	5	4		21
Planning	36	31	49	49	8	173
SME			1	1		2
start-up process	3	1	1	6	9	20
Strategy	1	1	10	1		13
Strategy Plannig	17	8	12	13		50
Testing				1		1
Web 2.0		3	14	3		20
Business opportunity	2		6	1	1	10
Control & tracking	2	1	1	6	2	12
Management	1	4	21	6		32
Professional advice		1	3			4
Legal constitution		3	1			4
Operations	1	4	3	6		14
Frequency Grand Total	**97**	**87**	**197**	**169**	**23**	**573**

Table xi: 21 Themes resulted from data condensation

At this point, the transcripts from the three datasets were read thoroughly one more time, paying particular attention to the selected themes. Subsequently enlightening quotations were highlighted and coded using the 21 themes that had been identified. A number of these quotations were chosen to be used in subsequent writings. The emergent themes were contemplated again and these 21 categories were, again, found to be connected with one another and were further condensed, culminating in seven decisive themes. These were: Business Model, Concept, *Dot-com*, Implementation, Planning, SME and Strategy.

As a result of this analysis, 7 broad categories were formed and each theme produce a matrix showing the relationships among the themes, categories and nodes, these themes are presented in the figure below which shows the 7 matrices used in this study and the links between them.
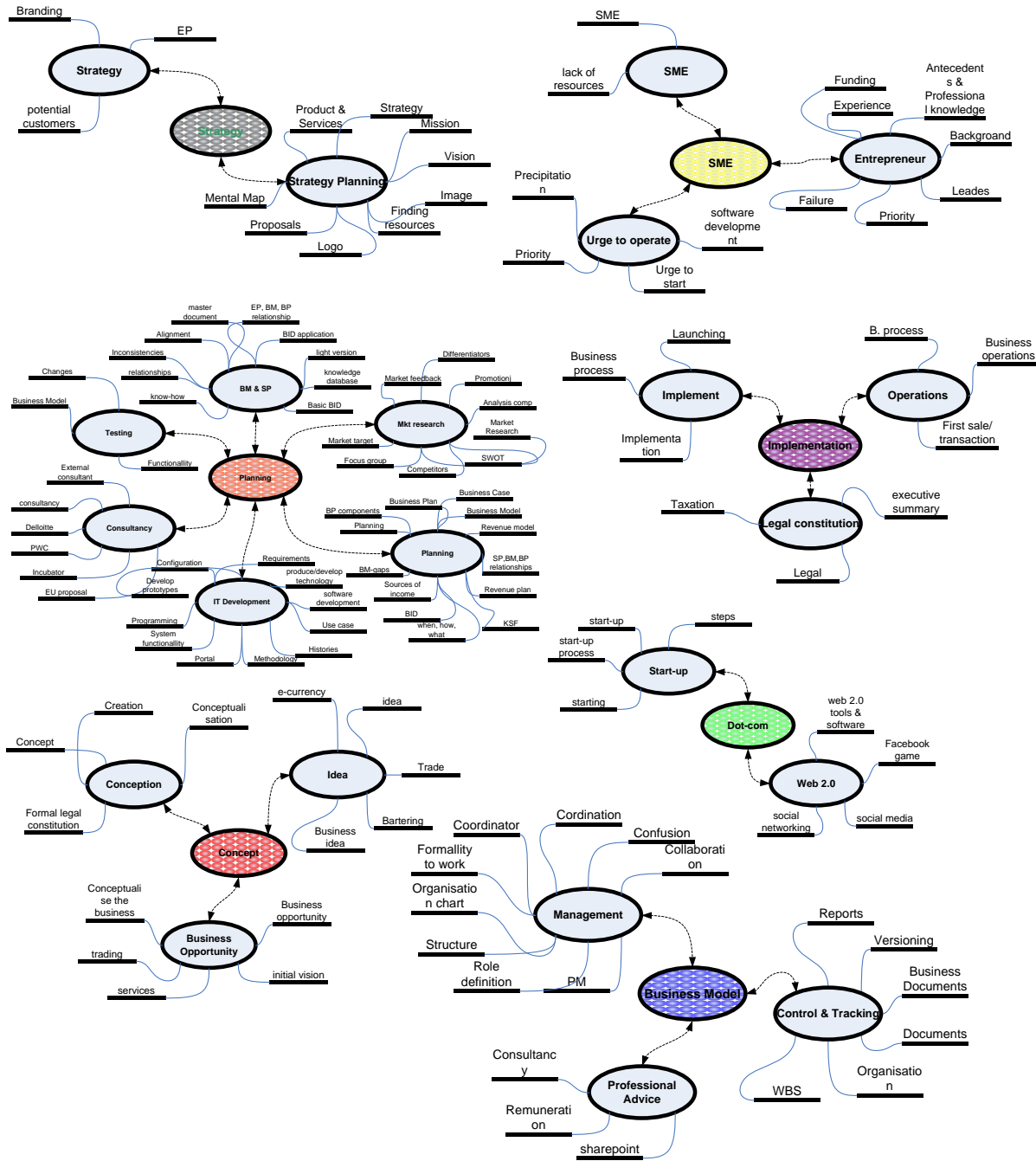
Figure iii: the 7 matrices and 21 codes/themes emerged from this research

The last stage in this process was the analysis of the data based in the seven matrixes found and to write a report with the findings from these data in order to assist the creation of the start-up Framework for a *dot-com* company within the SME context.

Furthermore, the seven themes resulted from their respective matrix were used in the development of the Framework studying the start-up process proposed in this research as explained below.

The final examination of the QDA consisted in the identification of related raw data for each matrix and the relationship of the matrices with the final start-up Framework. This process can be summarised as follows:

The first three themes (concept, Planning and Implementation) have a straight relationship with the stages of the start-up Framework, therefore the information related with these categories were merged and used to add valuable insights in the development of each stage of the Framework. The data analysed relating to the theme "Concept" involves information related to the idea, the business opportunity, and the conception of the business, similarly the theme "Planning" investigates the categories related with the BM, SP, Market research, IT development, consultancy, and testing. Moreover these theme has a strong relationship (as shown in the literature) with the Planning theme, thus these two themes were used to form the broader 'Planning Phase' of the Framework. Finally the theme "Implementation" investigates how companies implement, operate and are legally constituted.

The Strategy and Business Model Themes have a direct relationship with the business logic from Osterwalder (2007), and these categories were useful to merge the BL levels or tiers with the stages of the Framework. The "Strategy" theme uncovered the Strategy development and Strategy Planning processes; and the Business Model covers the aspects related to general management, control and tracking of the documents and themes related with professional advice.

Finally the information related with the themes "SME" and "*dot-com*" were useful to adapt the framework according to the characteristics of these sectors. SME investigates the characteristics of entrepreneurs together with the SME limitations, and the *dot-com* theme addresses the information related to the start-up process in this sector and the uses of web 2.0 technologies. Consequently and as a result of the analysis of the above information, the final Framework resulted from this study is presented in the figure 6.2 in chapter 6.

Data Management of the Dataset 'Interviews' - Classification, Description and Archives

This section presents the summary of the process followed for the data management of the dataset 'Interviews'. The table below summarises the data and their relationships with the categories and nodes resulted from the data Analysis. Similar processes were followed for the datasets 'Field Notes' and 'Document Reviews'.

Cycle	No.	Audio File name	Date	Duration (Mins)	Word file	Partici pant(s)	Mode	Description	Theme 1	Theme 2	Theme 3	Theme 4
Cycle 1	1	Interview No 1	01-Jun-09	00:59:49	interview transcript eTrade 01	Dr Ham	Interview	Alan described the business scenario, explaining how the idea of bartering starts, what is the project about, who is involved, etc	Idea	Concept	Business opportunity	
cycle 2	2	2009-10-13 15,43	13-Sep-09	00:33:16	interview transcript eTrade 02	Brunel Team	discussion	Discussion between Mutaz, Alan an Az.: difference between vision and mission. How business-man sees or interpreted the strategy. Mutaz presented his model to us, and we talk about it. Explaining each of the "4V". Defining how the services will be and where can be fitted into the BM	Vision	Mission	BM	
cycle 2	3	2009-10-29 16,15	29-Sep-09	00:00:00	interview transcript eTrade 03	Brunel Team	discussion	Discussion between Mutaz, alan an Az.: we talk first that we can have a paper (irrelevant).				
cycle 2	4	2009-10-29 16,21	29-Sep-09	00:15:36	interview transcript eTrade 04	Brunel Team	discussion	Discussion between Mutaz, Alan an Az.: analysing the BM, working directions, start to build and fill the model with the information we have. Talking about corporate image, "core values". Some discussion about the business plan (confusing with BM). Just ideas on how to build the BM, but with the limitations of no strategy, and also no revenue models defined.	Start-up	Strategy	BM	BP
cycle 2	5	2009-11-03 19,47	03-Nov-09	00:11:57	interview transcript eTrade 05	Andy	Interview	Telephone conversation between Alan and Andres, previous to their visit to London. Talking about the model, meet the team in London, etc, also talking about the difficulties of it, but the good feeling Andres have towards the project. Planning the travel to UK. Tambien acerca de la necedidad de un coordinar de este projecto pues alan n o tiene tiempo. Addresing the appointment with phil.	PM	Coordin ator	BM	

cycle 3	6	Interview No 2 Part A	01-Dec-09	00:59:19	interview transcript eTrade 06	Tony	Interview	Basically Antonio described the business, discussion about how the business model can help eTrade, Mutaz talk about the BM and how to overlap the strategy and the BM, What Antonio wants from us, he said a good pint here, that eTrade has started building the engine without knowing which kind of vehicle is...also he mentioned about the need of a business case and business plan (talking about the differences between them, agreeing a common definition)	Idea	Strategy	Business opportu nity	BP
cycle 3	7	Interview No 2 Part B	01-Dec-09	00:57:39	interview transcript eTrade 06	Tony	Interview	Cont... from previous.... still describing how the eTrade project will work (explaining the bartering ways) creating social networks within the portal, and so on. We start to ask where the money is. Andres is saying that it's not defined yet, however he's interested in number of transactions or users. And looking for a big player in maybe two years (kind of virgin records). Talking also about the target market and target countries to start the business.	Idea	web 2.0	Market target	
cycle 3	8	Interview 1dec09 Part C	02-Dec-09	01:00:00	interview transcript eTrade 07	Andy	Interview	Cont... Andres is talking a little bit about competitors, talking about that almost all the competitors charge a commission for the services of trading or bartering. Zaf, Suggest to make a workshop to raise the issues and built the strategy. Rondeando la idea varias veces sugeriendo alternativas examples etc. Antonio agreed that there are many parts of the BM still missing. And insist in the creation of the business case. But also agreed to continue working with the BM.	Competitors		BM	inconsis tencies
cycle 3	9	Interview 1dec09 Part A	02-Dec-09	02:05:21	interview transcript eTrade 07	Ali	workshop	Mutaz presented his Business model. Explaining the dimensions and values and showing the utility of the model. Antonio explained how the idea pops up, again. Mutaz reflect on the inconsistency of the project, like the target market vs. Regions or segments, etc. Trying to raise the issues but knowing that will be some questions unanswered right now. Phill came to this meeting and was briefly introduced to the project, asked about his business also Phil talked a little bit on his business and opinions about the project. Of course the first question he asked was where the revenue on this	Idea		BM	inconsis tencies

							business is. We finish here talking about the value proposition.			
cycle 3	10	Interview 1dec09 Part B	02-Dec-09	00:59:15	interview transcript eTrade 07	Ali	workshop	Cont... Mutaz continuing explaining and digging into the BM, Phill talk little bit about etrade project and himself as SME. More discussion about the model explaining what is the BM perse. also discussion about BM, BC and BP	BM	BP
cycle 3	11	Interview 2dec09 Part A	03-Dec-09	02:03:54	interview transcript eTrade 08	SME-MX team	workshop	We analyse that previous day we were talking about everything but nothing in deep. Antonio talks about that a company Mexican tried to do a c2C trading model in internet and fail. So talk about to learn from others experiences. Agreed again that the business has to be created from top to bottom - Strategy to process) talking about the data needed to fill the BM and this data has to be coherent and well defined. (analogy of the transport (business) with tyres, but also horse head and dogs tail) Antonio was saying that we don't need Zaf to build the BM in this meeting) as he will be just a distraction. Continue working in the BM, finding the gaps on the BM but superficially. Andres talks about his company he makes previously. That company took around 1 year to have ready gthe application, but main problem or factor for the failure was managerial and not technological (the system was working ok) and it wasn't a matter of money also.	Structure		
cycle 3	12	Interview 3dec09 Part A	04-Dec-09	00:58:45	interview transcript eTrade 09	Andy, Tony	Interview	Chat with Andres & Tonio about previous days, the BM, the problem we have now with the BM and Strategy. Andres talks about the first day and how we worked, we did well, and "complain" about Phill, (looser) The importance to finish the model to find out what are all the problems.. Tonio understood that we cannot build a BM without strong and sufficient information. Cuando se analiso el modelo surgioeron muchas dudas, Andres opinions about Phil. Hable acerca de las herramientas web 2.0 y como estas les pueden ayudar, en especifico para este negocio.	web 2.0	BM	Priority

cycle 3	13	2009-12-02 22,43	04-Dec-09	00:10:00	interview transcript eTrade 09	Andy, Tony, Ali	workshop	Last part of the last meeting in UK, after Mutaz explain the BM, we talk about some alignments and incongruence. Agreed for meeting in Mex. Then a talk not really relevant.	Aligment	BM	inconsistencies
cycle 3	14	Interview 3dec09 Part B	04-Dec-09	01:06:14	interview transcript eTrade 09	Andy, Tony, Zaf	workshop	Tonio, Andrés Azael, Zaf and then Mutaz: we continue in the "café" Talking still about what we need for the BM, the deficits we have, the needs we have. Talking with zaf and asking to help with the business case. Zaf explaining what are the needs for development a business case, what the requirements are and what kind of information he needs. However Antonio confirms that there is a lot of information not defined yet. In the office again, Mutaz has joined and we reflect about all this days of workshops.	BM		inconsistencies
cycle 3	15	2010-03-12 19,56	10-Dec-09	00:08:34	interview transcript eTrade 10	Dr Ham	discussion	Discussion between Alan and me.: about the meetings we have with Andres on his travel to UK. What were the results of the meetings, what are the outcomes, confusions, etc.	Confusion		
cycle 3	16	2010-01-14 20,11	14-Jan-10	00:34:53	interview transcript eTrade 11	Dr Ham	discussion	Discussion between, Alan and Az.: Alan talking about the difficulties to work with SME, the problem Andres is facing towards attitude. If we are going to put zaf as a PM or not? Andres is not focused and concentrated. The news that Antonio is not working there anymore. Problems while working between the IT side and the Business side, there is no alignment, and understanding. The idea of recycling appears.	SME	PM	
cycle 3	17	2010 Meeting Feb UK	01-Feb-10	01:30:04	interview transcript eTrade 12	Ali, Dr Ham	discussion	Discussion between Mutaz, Alan an Az.: the real need about strategy to build the BM and align the processes. Our views and believes about the entrepreneurs perceptions about academy. Reproving the vision provided by Andres. How the target market was selected. What we need for the value proposition... what we need for the BM	Entrepreneur	Strategy	BM	Market target
cycle 3	18	2010 Mar 10	01-Mar-10	00:27:09	interview transcript eTrade 13	Andy	meeting	Telephone conversation between Alan and Andres. First about the game in facebook, then a talk about the repercussions of having a software without strategy, ya que los cambios al software son caros, y el servicio del software se tiene que hacer ad-hoc to the strategy. Alan explains his ideas about the possibilities of the revenues models or business models. He presents a table in power point. Also there is a discussion regarding the points of strategy that Andres is considering and Alan is taking as granted. "Interest chat". At the end it is	Facebook game	Software development	Strategy	

								mentioned that PWC will participate, and Alan agreed to not do anything till the meeting has passed.				
cycle 3	19	2010-03-11 T22.04 D01.03.00	11-Mar-10	01:03:00		Andy	discussion	talking about Zaf as a PM, he does not convince andy to take the role of PM. Comparing the proposals of zaf and PWC	PM	consulta ncy	knowho w	
cycle 3	20	2010-03-11 T22.23 D03.04	11-Mar-10	00:03:04		Andy	meeting	andy and al, aboit branding and design, changing services or products for their services, delloite (Javo apperas here and they provide the contact of sienna	brandin g	image	delloite	
cycle 3	21	2010-03-12 17,34	12-Mar-10	00:08:06	interview transcript eTrade 14	Brunel Team	discussion	Discussion between Mutaz, alan an Az.: continuation of the revision of the business model.	BM			
cycle 3	22	2010-03-12 18,25	12-Mar-10	00:33:53	interview transcript eTrade 14	Brunel Team	discussion	Discussion between Mutaz, alan an Az.: continuation of the revision of the business model.	BM			
cycle 3	23	2010-03-12 19,00	12-Mar-10	00:20:43	interview transcript eTrade 14	Brunel Team	discussion	Discussion between Mutaz, alan an Az.: continuation of the revision of the business model.	BM			
cycle 3	24	2010-03-1-16,58pm	12-Mar-10	00:35:15	interview transcript eTrade 14	Javo	meeting	Working in the development of the business model, we start to build a draft, checking what is the information that we need in each of the parts of the business model, from this we produce a initial document, from this one Alan will work on it and fill as much as he can with the information provided.	BM			
cycle 3	25	2010-03-15 T17.34 D37.38	15-Mar-10	00:37:38		Andy	discussion	Andres and Al about the proposal of PM to Zaf	PM			
cycle 3	26	2010-03-16 T23.35 D21.39	16-Mar-10	00:21:39		Andy	meeting	IPADE caso de estudio , talking abouit sienna (sienna 100% responsible to the software development and collaborate with brunel	leader	Softwar e develop ment	program ming	collabor ation
cycle 3	27	2010-03-24 T00.23 D01.44.00	24-Mar-10	01:44:00		Andy, Dr Ham	meeting	Priority of the project within SME-MX (de aqui no como perop tiene prioridad 1)	time	priority	brandin g	PM
cycle 3	28	2010-03-30 T17.37 D08.52	30-Mar-10	00:08:52		Andy, Dr Ham	meeting	talk discussing the quotation from minimoko	minimo ko	brandin g	logo	PWC-consulta nt

cycle 3	29	2010-03-30 T18.26 D48.48	30-Mar-10	00:48:48		Andy, Dr Ham	meeting	still talking about the quotation from minimoko	e-currency	services		
cycle 3	30	20100331 215429	31-Mar-10	00:12:53	interview transcript eTrade 16	Andy	discussion	Alan and Zaf conversation about the set up of a PMO, discussion about PMO vs Plan vs Project management.	PM			
cycle 3	31	2010-03-31 T15.32 D01.09.00	31-Mar-10	01:09:00		Andy	discussion	Discussion de andres y alan acerca de la motivacion de alan para seguir en el proyecto y de la carag de trabajo que le dio andres con cosas no del todo acordes al rol de alan	Roles definition			
cycle 3	32	2010-03-31 T15.15 D40.47	31-Mar-10	00:40:47		Harry	Interview	Harri (Minimoko) conversation with Alan about deails of his quote and others	branding			
cycle 3	33	31-03-2010 14.35 to 2154 see notes	31-Mar-10	00:59:35		Andy, Harry, Dr Ham	meeting	harry Alan Zaf, first meeting with harry about web 2.0 y facebook game/ discussion about the role of Zaf	Facebook game	web 2.0	PM	Branding
cycle 3	34	20100331 143554	31-Mar-10	00:28:57	interview transcript eTrade 15	Harry	meeting	Meeting with Minimoko (a brand and image company) Conversation of what etrade needs and what this company can deliver.	Branding			
cycle 3	35	20100331 150510	31-Mar-10	00:02:14	interview transcript eTrade 15	Harry	meeting	cont... Conversation between Alan and Harry about requirements of etrade and impact of the branding mesage	Branding			
cycle 3	36	20100331 150810	31-Mar-10	00:06:37	interview transcript eTrade 15	Harry	meeting	cont... Conversation between Alan and Harry about requirements of etrade and impact of the branding mesage	Branding			
cycle 3	37	2010-04-07 T18.30 D08.24	07-Apr-10	00:08:24	interview transcript eTrade 16	Andy	discussion	talking about the BM and the delays with it, talking about SWOT, also andy approved to work with minimoko	BM	SWOT		
cycle 3	38	2010-04-12 T19.15 D56.30	12-Apr-10	00:56:30	interview transcript eTrade 17	Andy	Interview	Andres y Alan conference. Se platica de javier Gomez y de Minimoko	Facebook game		PM	
cycle 3	39	2010-04-13 T20.25 D05.43	13-Apr-10	00:05:43	interview transcript eTrade 18	Andy	Interview	Alan Andres feedback of the incorporation of Javier from Deloy			PM	
cycle 3	40	2010-04-14 11,50	14-Apr-10	00:00:00	interview transcript eTrade 17	Harry	meeting	Alan, Harry and Azael: Talk 1 with minimoko about the development of the facebook game	Facebook game			

cycle 3	41	14-04-2010 11.50 meeting alan, harry, mutaz	14-Apr-10	00:33:45	interview transcript eTrade 18	Harry	meeting	meeting alan harry and mutaz	requirements		
cycle 3	42	2010-04-16 T18.32 D12.58	16-Apr-10	00:12:58	interview transcript eTrade 19	Andy, Javo	discussion	Intercambio B2B, zonnet, javier, minimoko (logo y maqrca estan incluidos en el BM, esntonces el trabajo de minimoko se relaciona con el BM	BM	branding	facebook game
cycle 3	43	2010-04-16 T12.23 D19.25	16-Apr-10	00:19:25	interview transcript eTrade 19	Harry, Dr Ham	discussion	discussion about the quotation from minimoko			
cycle 3	44	2010-04-20 T19.47 D11.17	20-Apr-10	00:11:17	interview transcript eTrade 20	Mau, Javo	Interview	Introduccion de Mauricio de Sienna (sudenly) y platica de puntos importantes a tratar		Software development	
cycle 3	45	2010-04-21 T19.57 D38.13	21-Apr-10	00:38:13	interview transcript eTrade 21	Andy, Javo, Dr Ham	meeting	talking about Sienna, they will make a proposal including the PM and software development, also discussing and discarting zonnet. Apparently sienna does not have a proper proposal, or fussy proposal. Some confusion is presented in this meeting among the participants, mainly dr ham and andy. Division of the porject into subporjects (software development/ facebook game/ etc	proposals	Software development	sharepoint
cycle 3	46	2010-04-23 T17.16 D01.00.00	23-Apr-10	00:01:54	interview transcript eTrade 22	Andy, Dr Ham	discussion	falta de compromiso de javo y Mau, no structure, no roganisation	Structure	organisation	formallity to work
cycle 3	47	2010-04-27 T22.06 D43.00	27-Apr-10	00:43:00	interview transcript eTrade 23	Javo	Interview	realmente, es andy y al viaje de andy to UK and europe			
cycle 3	48	2010-04-28 T18.07 D18.55	28-Apr-10	00:18:55	interview transcript eTrade 24	Mau	Interview	Contininuation of the above	requirements	Software development	
cycle 3	49	2010-04-28 T17.48 D07.19	28-Apr-10	00:07:19	interview transcript eTrade 24	Mau	meeting	Mauricio Y alan, conociendose...	requirements	Software development	
cycle 3	50	2010-05-07 T19.33 D31.22	05-May-10	00:16:21	interview transcript eTrade 25	Andy	meeting	Andres y alan.explicacion de como funciona el bartering en el que esta participando y otros	bartering	trading	
cycle 3	51	2010-05-07 T22.35 D23.06	05-May-10	00:23:06	interview transcript eTrade 25	Andy	meeting	Contininuation of the above... Cuanta lana tiene el portal como funcionan los varos and others	bartering	trading	

cycle 3	52	07-05-2010 18.40 skype andres alan	07-May-10	00:12:13	interview transcript eTrade 26	Andy	discussion	Skype conversation about T1.0 y T2.0	bartering	trading		
cycle 3	53	2010-05-07 T22.12 D43.22	07-May-10	00:43:22	interview transcript eTrade 26	Andy	Interview	Andres Alan pregnts y dudas acerca de la version 2 de trading	bartering	trading		
cycle 3	54	09-05-2010 17.19 meeting andres	09-May-10	00:13:31	N/A	Andy, Javo	discussion	Skype conversation about T1.0 y T2.0 y t3.0 (reasons for the e-trade project) backgroand	backgroand			
cycle 3	55	14-05-2010 17.14 meeting alan harry monir	14-May-10	00:29:02	interview transcript eTrade 27	Monir, Harry	Interview	Role of Harry and Monir. Definitons of roles of the Brunel team	Roles definition			
cycle 3	56	14-05-2010 18.09 meeting andres harry bere alan monir	14-May-10	00:34:46	interview transcript eTrade 27	Monir, Harry	meeting	talking about the facebook game	Facebook game			
cycle 3	57	05-08-2010 16.34 meeting alan, monir	05-Aug-10	00:45:53	interview transcript eTrade 28	Dr Ham	discussion	Conversation between Alan and Monir About use cases	Facebook game	use case		
cycle 4	58	17-09-2010 14.41 skype alan, tonio	17-Sep-10	00:55:14	interview transcript eTrade 29	Tony	discussion	Platica entre tonio y Alan y yo hacerca de aspectos del BM	BM			
cycle 4	59	17-09-2010 15.37 skype cont. alan, tonio	17-Sep-10	00:12:20	interview transcript eTrade 29	Tony	discussion	Cont. Of above	BM			
cycle 4	60	17-09-2010 16.25 skype cont. alan, tonio	17-Sep-10	01:20:52	interview transcript eTrade 29	Tony	discussion	Cont. Of above	BM			
cycle 4	61	14-01-2011 tonio, al, retomando BM	14-Jan-11	01:03:09	interview transcript eTrade 30	Tony	Interview	Retomando el projecto, conversation between Al, Az y Tony	Recap			

cycle 4	62	17-03-2011 T18.03 D1.35.15	17-Mar-11	01:35:23	interview transcript eTrade 31	Tony	meeting	not in the corresponding folder check it				
cycle 4	63	22-03-2011 15.39	22-Mar-11	00:23:31	interview transcript eTrade 32	Tony	meeting	not in the corresponding folder check it				
cycle 4	64	25-03-2011 T16.16 D1.16.19	25-Mar-11	01:17:02	interview transcript eTrade 33	Tony	discussion	not in the corresponding folder check it				
cycle 4	65	30-03-2011 T15.45 D58.25	30-Mar-11	00:58:27	interview transcript eTrade 34	Tony	discussion	not in the corresponding folder check it				
cycle 4	66	30-03-2011 T16.53 D42.27	30-Mar-11	00:42:27	interview transcript eTrade 34	Tony	Interview	not in the corresponding folder check it				
cycle 4	67	2011-04-01 T15.58 D1.57.43	01-Apr-11	02:07:31	interview transcript eTrade 36	Tony	Interview	not in the corresponding folder check it				
cycle 4	68	2011-04-30 T13.40 D01.26.30	04-Apr-11	01:18:25	interview transcript eTrade 37	Tony	meeting	not in the corresponding folder check it				
cycle 4	69	08-04-2011 T21.00 D37.13	08-Apr-11	00:39:33	interview transcript eTrade 38	Tony	meeting	not in the corresponding folder check it				
cycle 4	70	2011-04-18 T21.53 D34.32	18-Apr-11	00:34:32	interview transcript eTrade 39	Andy	Interview	Andres explain the emotions of the trading	bartering	trading		
cycle 4	71	2011-04-19 T14.36 D01.45.02	19-Apr-11	02:03:24	interview transcript eTrade 40	Tony	Interview	Tonio, Azael, Alan: discussiion about use cases, sienna, the roles and so forth	Roles definition	Software development	use case	
cycle 4	72	2011-05-02 T15.58 D03.02.31	02-May-11	03:02:31	interview transcript eTrade 41	Andy	meeting					
cycle 4	73	2011-05-06 T20.00 D45.57	06-May-11	00:45:57	interview transcript eTrade 42	Andy	Interview	end of the cycle. The data analysis is in field notes (3b)				
last cycle	74	2011-07-30 T14.56 D46.22	30-Jul-11	00:46:22	interview transcript eTrade 43	Tony	Interview	last interview to Tony	Start-up	steps	BID	documents

		Tonio										
last cycle	75	Interview 1dec09 Part B	04-Aug-11	00:59:15	interview transcript eTrade 44	Phill	Interview	during the workshops 2 dec	Start-up	steps	BP	Failure
last cycle	76	2011-08-04 T17.35 D53.11 minimoko	04-Aug-11	01:53:11	interview transcript eTrade 45	Harry	Interview	interview with ahrry for the lst cycle	Start-up	steps	BID	BP
last cycle	77	2011.08.05 T21.56 D30.20 cycle1	05-Aug-11	00:30:20	interview transcript eTrade 46	Dr Ham	Interview	last interview dr ham	Recap			relation ships
last cycle	78	2011.08.05 T22.28 D31.51 cycle2	05-Aug-11	00:31:51	interview transcript eTrade 46	Dr Ham	Interview	last interview dr ham	Recap			
last cycle	79	2011.08.05 T23.14 D08.48 cycle2	05-Aug-11	00:08:48	interview transcript eTrade 46	Dr Ham	Interview	last interview dr ham	Recap			starting
last cycle	80	2011.08.05 T23.23 D47.55 cycle3	05-Aug-11	00:47:55	interview transcript eTrade 46	Dr Ham	Interview	last interview dr ham	Recap	relationships		
last cycle	81	2011-08-30 T16.46 D1.02.50 Andy	30-Aug-11	01:02:50	interview transcript eTrade 47	Andy	Interview	last interview to Andy	Start-up	steps	BID	docume nts
				58:43:13								

Table xii: data management of the dataset "interviews"

D. Ethical approval and confidentiality agreement

School of Information Systems, Computing and Mathematics
David Gilbert, Head of School, Professor of Computing
Jasna Kuljis, Head of Information Systems and Computing, Professor of Computing
Tony Rawlins, Head of Mathematical Science, Professor of Mathematics

Brunel
UNIVERSITY
WEST LONDON

Brunel University, Uxbridge,
Middlesex UB8 3PH, UK
Telephone: +44(0) 1895 274000
Fax: +44(0) 1895 251686
Email:
Laurence.Brooks@brunel.ac.uk
Lampros.Stergioulas@brunel.ac.uk
Allan.Tucker@brunel.ac.uk

Date: 22nd October 2009
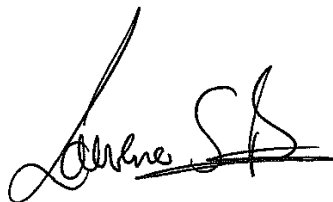
STATEMENT OF ETHICS APPROVAL

Proposer: Azael Serrano-Rico

Title: Proposing an e-business model for SMEs

The school's research ethics committee has considered the proposal recently submitted by you. Acting under delegated authority, the committee is satisfied that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that you will adhere to the terms agreed with participants and to inform the committee of any change of plans in relations to the information provided in the application form.

Yours sincerely,

Dr. Laurence Brooks, Chair of the Research Ethics Committee
SISCM

CONFIDENTIALITY AGREEMENT

THIS AGREEMENT dated the 8th day of June 2009 is entered into between

Keydome Co. Inc, 14409 B, Investment Ave., Laredo Texas, 78045 ("Keydome")

and

Brunel University of Kingston lane, Uxbridge, Middlesex UB8 3PH ("Brunel")

for the purpose of establishing the conditions under which confidential information will be disclosed by one party to the other in the course of a collaboration to the electronic portal project namely "portal de intercambio"

In consideration of the mutual promises hereinafter contained, Keydome and Brunel agree as follows:

1.   Proprietary Information

1.1   Proprietary Information shall mean any technical, commercial or financial information disclosed verbally, in electronic form or in writing by one party to the other related to the Purpose and any samples, materials, models or prototypes to which either party may be given access by the other which may or may not be the subject of a patent application or other intellectual property right.

1.2   The Proprietary nature of any verbal or non-written Information shall be made known to the recipient by the discloser at the time of disclosure.

2.   Obligation to Protect Proprietary Information

Keydome and Brunel each agree to hold all Proprietary Information received from the other party in confidence and:

(i)   shall not disclose any such Proprietary Information to third parties except with the prior written permission of the other party and then only on condition that any such third parties undertake in writing to keep secret such Proprietary Information;

(ii)   shall not copy or use such Proprietary Information for their own purposes;

(iii)   shall not without the prior written consent of the other party subject any such Proprietary Information to any materials analysis or reverse engineering; and

(iv)   shall disclose such Proprietary Information only to those of their employees who need to know the Proprietary Information and who have been made aware of the confidentiality requirements of this Agreement.

3.   Limitations

The foregoing obligations of confidentiality shall not apply to such part of any such Proprietary Information which:

(i)   the receiving party can demonstrate was in its possession prior to its first receipt from the other;

Page 1 of 3

(ii)   is at the date hereof a matter of public knowledge or literature;

(iii)   at any time hereafter becomes a matter of public knowledge or literature by means other than the wrongful act, omission or fault of the receiving party, its employees, former employees, or agents;

(iv)   is obtained from a third person who had a right to disclose it; or

(v)   the receiving party can show was independently developed by such receiving party.

(vi)   is disclosed pursuant to the requirement of any law or regulation (provided, in the case of a disclosure under the Freedom of Information Act 2000, none of the exceptions to that Act applies to the information disclosed) or the order of any Court of competent jurisdiction, and the Disclosing Party required to make that disclosure has informed the other, within a reasonable time after being required to make the disclosure, of the requirement to disclose and the information required to be disclosed

4.   Term

4.1   This Agreement shall commence on the date specified above and shall continue in full force and effect for a period of 12 months

4.2   The obligations of confidentiality herein shall survive termination of this Agreement for a period ending five (5) years after such date.

5.   Return of Information

Upon written request by the disclosing party, all Proprietary Information which was disclosed in tangible form and all copies thereof shall be returned to the disclosing party except to the extent that such information has been destroyed prior to the request.

6   No Licence

The disclosure of Proprietary Information does not grant or imply any licence or any other right under any intellectual property right owned by either party or any third parties.

7.   Assignment

Neither party shall assign or in any manner transfer its interest or any part thereof in this Agreement without the prior written agreement of the other.

8.   Law

This Agreement shall be governed by and construed in accordance with the laws of England and Wales.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate to be effective as specified above.

Agreed on behalf of Keydome

Signed............................

Name: Andres Nieto Diaz

Title: Manager Director

Date: 8/06/09

Agreed on behalf of Brunel University

Signed............................

Name: Dr Alan Serrano

Title: Senior Lecturer

Date: 8/06/09

PHILIP CULL
MANAGER, CONTRACTS
19/6/09

Page 3 of 3

E. Chronological narration of events: Cycle 3 & 4

This appendix is part of the chapter 5 cycle 3 section 5.2.3 and cycle 4 section 5.3.3.

This appendix is divided in two sections; first the intervention of the cycle 3 is described, followed by the intervention phase of the last cycle of CAR (cycle 4).

Section 1: Chronological narration of events cycle 3:

In this section the researcher portrayed a series of events that happen after the workshops in England from early December 2009, until the end of the cycle in August 2010. The main outcomes from the intervention of the third cycle are presented in chronological order as follows:

The researcher believes that the events described below have contributed to this research; particularly certain activities performed during this phase have provided the researcher with valuable data to study the start-up process. Hence, the main outcomes from the intervention of the third cycle are presented in chronological order as follows.

December 2009:

o *PM2* enters to the project at the end of November 2009; with this, it become evident that *PM2* brought some order to the chaos of information produced in the project and helped to alleviate problems of communication.

o Following the workshop in England and just after one month on the post (end of December 2009) the PM (*PM2*) leaves the project, apparently for the same reasons of the previous PM (*PM1*). The fact that the PM exits the project leaves the project quite messy in terms of the development of the BM and the project in general. The exit of *PM2* was a shock for the team (Brunel team) as they though he (*PM2*) was the right person for leading the project; furthermore the Brunel team was not aware of *PM2*'s exit until late January while *PM2* was not participating in the project from the end of December; a situation that exemplifies the lack of communication emerging again.

February 2010:

o In February the owner started to look for quotations from different vendors (Software developers). However, the Brunel team was in opposition to this action, and make clear to *the owner* that it is very difficult to explain to a vendor the objectives of e-trade and the requirements of the project, if SME-MX has not defined properly the strategy and the BM.

o Also in February, the owner received a proposal and quotation from *Consulting-X,* for the BM development and Project management.

January 2010:

o At the beginning (December 2009) *PMConsultant1* was appointed to assist in the elaboration of the Business Case only, although after the exit of *PM2*, *PMConsultant1* took temporally the role of PM in January; this position was later shared with *PM3* (in April 2010). However the role of *PMConsultant1* was not clear to the team, firstly because *The owner* did not consult, even inform of the conversations he had with *PMConsultant1*, and secondly because his role was never delineated thus the team did not know his responsibilities and duties, however the participation of *PMConsultant1* in the project was very short and the main contribution was a Work Breakdown Structure document (WBS), which basically maps milestones in the project, and it was useful to delimitate tasks.

o During the meetings held in January with SME-MX*, The owner seems to* believe that the project have all the information needed. He thought that pulling all the information from previously work done, (e.g. *PM1's* BP and Researcher's BM) will facilitate the elaboration of the BM. *The owner* asks for a compilation of all the information and pulls out old documents from every other player and passes to *PMConsultant1*.

o Despite the exit of the PM (*PM2*) in late December, the team continued populating the BM with business data from e-trade. The Brunel team (*Academic1*, *Academic2* and the researcher) held a meeting on the 15 January to plan the deliverables for the project in regards to the V^4 BM. In this meeting the team agreed specific task related to the capture of data into the BM thus a plan was sent to *The owner* and *PMConsultant1* for approbation and clarification. The plan was sent by email on the 18 of January containing the following information.

    I.   The Brunel team will compile all the information we have in different documents we have produced in Spanish and English and put this into the format of the V^4 Business model proposed by *Academic2*.

    II.   The Team have identified that there are many elements of the business model that can not directly be derived from the information we have at the moment. Thus we estimate that at the moment we have only 25% (maximum) of the information needed to fill the V^4 model. Therefore, for the remaining 75% we will do the following:

a. For those elements that we have information but it is not analysed yet from a strategic perspective, we will provide you with the options we have now for the strategic team to analyse it.

b. For those elements we do not have any information at all, Brunel team will provide to the strategic team (*PMConsultant1* and *The owner*) with a list of the information that needs to be obtained and subsequently, passed to us to complete the V^4 model.

To This end *Academic2* explicitly asked to mention the need to have a "market research" done, in order to support the business model and strategy. Both teams have agreed that this information is essential to develop a robust business model, and thus BC and BP. The Brunel team will endeavour to do as much as possible without that information. However SME-MX must consider these comments.

February 2010:

o On Friday 5th February, after 52 Hrs (around 7 days) in a full time basis, the Brunel team deliver a first draft of the V^4 BM with e-trade data.

o Also during this period and despite having still unclear the core of the business, and therefore unclear who and where are the competition, *The owner* insist in making a benchmarking analysis of the competitors, such as e-bay.com and acambio.com, among similar websites. Hence an analysis was made as requested and the results can be seen in the report delivered to SME-MX. However this information did not contribute to the project at this stage, mainly for the reason of the organisations analysed were not the real competitors of the e-trade initiative, as later will be discussed.

April 2010:

o *PM3* was invited to participate in the project and enters on 12 April 2010; however his role was unclear for the rest of the team, at the beginning of his participation *PM3* was sharing duties of PM with *PMConsultant1*. Therefore *in April 2009 PMConsultant1* and *PM3* were working together in the management of the project, apparently *PM3* was the project Leader and *PMConsultant1* the PM or coordinator; however their roles never were well delineated until *PMConsultant1* exists the project and *PM3* is properly named as PM of the project.

o At this time *PMConsultant1* and *PM3* were working both as PM and were in contact passing information between them, except the information was not transmitted to the rest of the team, which creates confusion about their roles and their participation on the project. During this phase the project lacked again of control and coordination within the parts, moreover the

roles were not well defined, thus the rest of the team did not know the real functions of *PMConsultant1* and *PM3*.

o During this period some other problems of communication emerged. The Brunel team got confused whit an email received on the 12 April 2010 in which *PM3* comments his duties within the project: *"Hello Academic1… basically what PMConsultant1 and myself agreed, was to develop a Business plan in the next 3 weeks. The concept of the BP will be around the presentation I sent. 1st step is to agree the storyboard of the BP and then use the existing material to complete the BP"*. The Brunel team was confused once again because they have been working in the development of the BM, and now *The owner* wants again a BP, moreover *PMConsultant1* have told us at the beginning, that he was called to the project to develop a Business Case. Once again the names of these three documents have appeared, moreover, *The owner* has asked for a SWOT analysis too. Thus the lack of control in the project was evident and apparently the team was working in different directions. This was recorded in an email sent to *PM3* on 12 April 2010. Some fragments of these emails are presented as follows:

Academic1 to *PM3*, CC: the researcher, *PMConsultant1*: *"Dear PM3, I still believe we need to meet to have a common understanding of the tasks. For example, how will we agree on the storyboard of the BP? Who is involved in this task? Which are my priorities for the project at the moment? The owner has asked me (Academic1) to do a SWOT Analysis and the team also have to finalise filling out the template for the business model (which May not necessary be the business plan), so I have many things in my plate and I am not sure which is the priority."*

o Minimoko, a Branding and Image consultancy is called to present a plan and quotation for the e-trade project, Thus *Branding-leader*, the co-owner and founder of Minimoko, appears for the first time in April 2010.

o In April the researcher in conjunction with *Academic1* propose the creation of an online game. The team have previously discussed how the web 2.0 technologies can be use in the e-trade project, although the team have not discussed how to use these technologies in the early stage of the e-trade project. However after a discussion on how web 2.0 technologies can help the project, an online game was proposed. This game was originally though to run over the Facebook platform and will be based in a combination of existing games like "FarmVille" and "Mafia Wars".

o *Academic1* was originally in charge of the game, in which the web 2.0 plays an important role. The web 2.0 technologies available would be used to gather some important information about the target market, therefore the creation of a Facebook game has the initial intentions

to cover many aspects of the business, such as; testing the game and the e-trade 'concept', market research and, training the users to trade and engaging the people with the e-trade idea. The proposal of this game response to mainly four objectives that the researcher believed the game be able to accomplish;

I.   An initial market research targeting the type of users willing to trade products over the net. (The team was expecting to obtain quality information related to the type of users willing to trade online).

II. Training the users, the game was planned to use the same functionality of the real e-trade portal, and it has the intention to train the users towards the real platform (the e-trade portal). Furthermore, the Facebook game was thought to use the same functionality and programming code's, therefore will not be an unnecessary expenditure.

III. Direct traffic to the real e-trade portal. After users have played and familiarise with the game, the game will direct them to the real e-trade portal, thus it can be used as a promotion and advertising of the e-trade project. Additionally a forth aim emerge from the game which was aimed to

IV. Test the feasibility of the portal with real users. The game requires gathering as much users as possible, thus the game was thought to be within the Facebook environment which is well known to have a massive amount of users, although the game needed to be planned in at least two languages.

o   At the beginning the owner was excited with the idea of the game; hence another company was invited to participate in the project specifically for the Facebook game. Zonnect, a web developer company was contacted for a quotation of the Facebook game at the end of April 2010. Zonnect was represented by "*Developer3*".

o   Also At the end of April 2010, Sienna, another software development company, enters as a participant of the project. Since beginning of April, *The owner* and *PM3* were pushing the actions of the team towards the software development. Regardless of the Brunel team have opposed many times to this approach. As a result *Developer1* representing Sienna start to lead the software development and in May 2010, SME-MX received the first quotation from Sienna related to the software development of the e-trade project.

o   In April we have the proposal of the branding from Minimoko, which the concept of their consultancy was quite interesting, proposing not only a branding service, but a comprehensive image and branding throughout the communal and closed work between the SME-MX and Minimoko.

May 2010:

- Initially the development of the software was lead by *Developer1*, representing Sienna and *ITConsultant (Academic1),* representing SME-MX.

- *Developer1* was keen (at the beginning) in use the Use Case diagrams as technique to pass software requirements however at the moment of deliver the first quotations, apparently *Developer1* has not consider in full the use cases, a situation that alarmed *Academic1*. During this development the projects seems to have a separation between the software development and the creation of the BM again.

- At the end of May *The owner* communicates in an email that *"PM3"* will take formally the role of PM.

- The Facebook game development continues. At the beginning *The owner* was very enthusiastic about the idea of the game and some advances were made in terms of the game BM development and capture system requirements in form of use cases. Nonetheless, the Facebook game was put on the bench at the end of the month, since *PM3* thought that the idea was not part of the scope of the project, at least not at this moment in time.

June 2010:

- In early June the problems of communication increased, this is heightened with some action of *the owner*. At the beginning of June the owner sent a series of emails asking for different things with no particular order or objective, e.g. SWOT analysis, BP, BC, and market research, and sometimes the owner was asking for activities that were already done. Therefore it was evident that coordination was required from *PM3*'s side.

- On the 10 June 2009, the simulation game (Facebook game) was cancelled under the direction of *PM3*. The reason of cancelling the online game, that *PM3* expressed were recorded as follows: *"it is not the time to direct our efforts in the game, although it is a good idea, I think we need to concentrate in the development of the software first. The game can be retake at a later stage of the project"* Apparently *PM3* does not see the value of the game

- On the 22nd of June 2010, and after the first quotation from Sienna was accepted, *Academic1* sent the Use Cases available at the time to *Developer1*, even though, the most important use cases were still not validated by the strategy team (*The owner* and *PM3*), which Academic1 has remarked. However the urge for develop the software has a priority in the project, thus it was important for SME-MX to start with this activity, although the main functionality of the portal was still not developed in full, nor validated. This action was noticeable in an email sent to *Academic1* (cc: the researcher) on 22 June; *"PM3: I suggest to send the use cases to*

Developer1, thus he can see the methodology used and the progress, even though there ARE NOT validated, so Developer1 can measure the needs of the work to be done and identify how your team can support the PM in the development of the portal".

July 2010:

o In July 2010, Sienna send to the team the first deliverable of the software, however this deliverable was only presented as screen shoots, also according to *Academic1*; "*this was not considering the functionality capture in the use cases passed to Sienna, and it seems to me only a prototype and not a description of the system*". Following this action, *Academic1* shows his disagreement with the working methods of Sienna, these discrepancies are noted in and email dated on 8 July 2010: *Academic1* wrote to *PM3* and *PMConsultant1* after receiving and reviewing the quotation: "*The quote seems ok to me, however I have several comments / questions: 1) the functionality does not match 100% to the requirements we have done (use cases). This worries me a bit, because the work of my team would not been 100% used... 2) the quotation do not explicit say how much will cost to move form the prototype to the real system... 3) depending to the answer to the point (2), I think the quotations is a bit expensive. For example the screen 'log-in' is rated at 9 hours... I would expect a company like Sienna to have reusable coding, because 'log-in' is a common screen. Moreover 9 hours for this, considering we are in the prototyping stage, seems to be a bit expensive to me (Academi1). And I have similar comments with the other points of the quotation..."*

o After Sienna delivered the first 'prototype' of the software (webpage), *Academic1* performed a revision of the functionality of the prototype, the outcomes of this revision made clear that Sienna have delivered a completely different functionality, and apparently the vendor has not considered the use cases created by Academic1 and the Brunel team. A situation that makes *Academic1* uncomfortable.

o After the Brunel team communicate the problems encountered in Sienna's prototype and have a discussion with SME-MX, the Brunel team decided to cease this activity (gather system requirements in form of use cases) at the end of July 2010. The reasons for cease this activity are further described in the evaluation phase of this cycle.

o Strategic alignment was a crucial part of this project, therefore the Brunel team have the task to gather the information and pass it to the relevant person in charge (*Developer1*). With the intention of clarifying the doubts arisen from previous conversations, the researcher sent to *Developer1* and *The owner* a document called "strategic alignment" in July 16th, with the aim of align strategic decisions and soft communication problems between the teams and to

clarify essential information needed for the project. The document (Strategic Alignment) covers 8 points added by the researcher and two more added by *Developer1* and is presented in the table below.

Information to clarify – Strategic Alignment

1. Model, Case or Plan? Each of these terms mean something different and we have used them interchangeably. So there is confusion regarding what is a model and what things should be included. I think it must be clearly define what content have the model and what is use of the model. I think we should clearly define what content is being used for the model and see if we need additional documents such as the case or plan.

2. Roles. There are no defined roles and responsibilities so far. To me it is important to know where my responsibilities begin and end and thus others responsibilities in order to delegate and ask for the information to the right person.

3. Business strategy: Although at this point no one knows exactly what will be the avenues to attract money is important to know the strategic vision to align it with the functionality. This point is still not clear to me and perhaps we will need to discuss it to align criteria.

4. Portal: starting-point. To start the portal requires users to have @quids to buy products and thus start the economy. So far we do not know how this will work because all users will initially start with products rather than @quids. One possible solution is to have strategic partners who purchase products to users in order to activate the economy. To this aim we have (Brunel team) proposed to purchase mobile phones (to the users) which have a commercial value outside the portal and can be use for the engine of the bartering economy that e-trade is proposing. Academic1 is willing to develop this idea in detail and participate as a strategic partner (and treated this initiative as a separate project) but this is another discussion between Academic1 and the Board. However in the meantime, we need to find a way to boost the economy within the portal.

5. Social Networks. This is a point to discuss within the functionality? It has been much discussed that social networks will be use for marketing purposes, however has not been explored how this will be done and if it will costs or not. At points I think that you want to make the portal, a social network site. From my point of view, the goal of the portal should not be acting as a social network but instead use the social networks available at present and used them as resources. So far I do not think that we are taking every advantage of this resource and the entire web 2.0 technologies. Passing a "messages" on Facebook or twitter, from my point of view, is not reflected in cash (everybody is doing it nowadays and personally I don't think this is working). Summarising, it would be good to know how social networking will be used in the portal and then incorporate these tool in the functionality of the Portal.

6. Strategic partners and stakeholders. We have discussed the incursion of strategic partners however this has not been defined, it is important to identify who are those potential partners and the stakeholders this is necessary to have an overview of the e-trade network.

7. Legal aspects. SME-MX needs to investigate the legal aspects regarding the development of an organisation which will work similar to a bank. Therefore you need to investigate whether there are legal issues that prevent us from creating the electronic currency. If this is the case the whole project is based on a false premise. Therefore this point should be having an immediate response.

8. Gathering software requirements. Due to the cease of the use of use case diagrams. SME-MX and Sienna need to define the methodology to be use for this purpose and also continuing with the definition and capture of requirements, both functional and non-functional. This also links to the definition of roles and responsibilities.

1. Advertising / Selling Information: this will not be considered as part of the portal strategy. The strategy is to sell the site after it is generated the critical mass of users.

2. Income. The owner will be the investor and will absorb the costs of operating the portal for the first 12 or 18 months. The owner planned to use SME-MX existing infrastructure to reduce fixed costs, such as hire a manager, and the rest of the services needed will be obtained through bartering with other SMEs (SME-MX2)

Table xiii: Strategic Alignment

o   Regardless of some questions of this report were answered, still the majority of the information was, or not answered or blurry answered. Also *The owner*'s shows very low interest to answer the questions of this document and at the time; he (*The owner*) was more

worried to find the name of the Portal, the name of the e-currency and the logo. Despite the need to some strategic answers urgently, *The owner* has been focused in minor activities, an action that the researcher did not comprehend.

August 2010:

- o On the 3rd August, the PMs Parade for this cycle finished with *PM3* leaving the project. *PM3* leaves the project on this day, however the Brunel team was notified a day later, and still the reason of his departure is unknown, however is believed to be for the same reason as previous PMs; unclear financial reward program and lack of commitment. After *PM3*'s departure, *Developer1* takes over the position, still his role in the project as PM was very fuzzy and short. Coincidentally *PM3*'s departure happens at the end of the third cycle.

Section 2: Chronological narration of events cycle 4:

This section aims to describe the specific series of events happened during the last cycle of AR in the e-trade project, and the researcher considers important to stated. Also, this section is aimed to help the reader to understand the activities performed during this cycle. The cycle started in August 2010 and finished in May 2011, when the researcher and the client agreed to conclude the researcher's intervention.

August 2010: Strategy definition and elements (August 2010): At the end of the third cycle, the team became aware of the urgent need to define the Strategy in order to progress in the project, thus the first step to be performed in this cycle was the definition and identification of the elements that forms the company's Strategy. After a common agreement on the definition and the elements that need to be part of the Strategy, the next step was the development of the Strategy; this activity was performed during September and October 2010

PM (*PM2)* returned to the project (end of August 2010): After three months working without a PM, and almost a year after, *PM2* is appointed as PM and comes back to the e-trade project in early November 2010.

November 2010: Relation with the BM is studied (November 2010): At the end of the development of the first version of the Strategy planning, a revision of the start-up framework was complete in order to map the recent document (SP) into the framework.

Academic1 exits the project (November 2010): Although, *Academic1* formally left the project, he (*Academic1*) continued indirectly in the project, taking the role of IT consultant of *PM2.*

December 2010: In December 2010 *PM2* and the researcher plan a revision of the current and previous documents used along the project, as a result, it was concluded that a way to order all this information was needed. (Apparently seem to have a lot of information already in place, but in reality we have many different documents with different information each)

January 2011: In January 2011 the researcher presented the first version of the Business Information Database (BID): After the revision of the documents used in the project, the researcher propose the elaboration of a comprehensive database containing all the information (elements) used in each of the documents, highlighting the common elements among the different documents.

In this period two more participants are included to the team: *PA* joined SME-MX team as a personal assistant of *The owner* and *PM2* with the aim to help in the project as part of her activities. Also *Academic4* joined the Brunel Team with the task of developing a prototype's software especially for the capture, sort and segmentation of business data. *Academic4* have developed a prototype program of this database using Microsoft Access and this basic program was used for the first version of the BID (Business Information Database).

March 2011: In March *Developer1* is replaced by *Developer2* in Sienna (the software developer). However the reason to assign another person to the project remains unknown. Hence for the rest of the project, SME-MX will be working with *Developer2* in the software development side of the project.

Also in march the prototype program was presented to SME-MX with the aim to describe the functionality of the BID and the program but also searching for missing parts.

April 2011: After a first revision of the BID and realised that the database contain and need a large amount of information, and the SME-MX team was still not ready to find all this answers. Consequently, *PM2* explicitly asked for a basic database containing the main elements needed for the progress of the project. Hence a basic BID was produced and a prototype of this basic database was delivered on April 2010 and was used until the end of the cycle.

May 2011: In May 2011 the final reports were produced and delivered, together with further recommendations for SME-MX to finalise the development of the e-trade initiate.

After the final reports were delivered, the teams agreed to formally bring to a close the CAR project. However, still the researcher collected final information, in form of interviews and documents, after the project was concluded.

F. The building blocks of the BID: Definitions and relationships

The main activities whilst creating the BID were in Spanish as SME-MX contributed with the development of this database. Hence the elements described in this appendix are in Spanish. However definitions of these building blocks have been completed along this dissertation and the table below presents the building blocks of the BID.

L1	L2	L3	Nombre	Descripción	BP	BM	BC	EP
1			Planeación Estratégica					
1	1		Descripción General	Define el objetivo principal del negocio y como funciona de manera general	1		3	
1	2		Visión	Definir el estado futuro deseado de la empresa en términos de los objetivos fundamentales y/o dirección estratégica (largo plazo 5-10 años)			3	4
1	3		Misión	Define el propósito fundamental de la organización, por que existe y que se va a hacer para alcanzar la Visión	1		3	4
1	4		Valores Principales	Los valores que están compartidos dentro de la organización				4
1	5		Mapas estratégicos	Una representación grafica de la estratégica como lo son Balance Scored Cards				4
1	6		Estrategia Corporativa	Una combinación de las metas y las políticas				4
1	7		Metas	El objetivo principal del negocio que ayudara a completar la Misión. Normalmente es una, pero pueden ser hasta 3	1		3	4
1	8		Objetivos	Los pasos básicos que se necesitan hacer para alcanzar cada una de las metas. No mas de 6.	1		3	4
1	9		Planes de Acción	Las acciones especificas que se utilizan para alcanzar cada objetivo				4
1	10		Políticas	Principio o regla que guía las decisiones para alcanzar las metas				4
1	11		Encaje estratégico (BC)				3	4
1	11	1	Visión general de la organización	Descripción de los principales metas de la organización: (11.1, 3.2.2, 1.2, 1.9)			3	4
1	11	2	Contribución a los objetivos principales	Describir como el proyecto va a contribuir a los objetivos principales de la organización			3	4
1	11	3	Acuerdos existentes	Describir los acuerdos existentes con proveedores, clientes y accionistas			3	4
1	11	4	Alcance	Resumir el alcance potencial del proyecto. (mínimo, deseado y opcional)			3	4
1	11	5	limitaciones	Resumir las principales limitaciones del proyecto			3	4
1	11	6	Dependencias	Describir los factores internos y externos de los que depende el éxito del proyecto			3	4
1	11	7	Beneficios estratégicos	Describir los benéficos de alto nivel estratégico			3	4
1	11	8	Riesgos estratégicos	Describir los riesgos principales del proyecto			3	4
1	11	9	Factores críticos de éxito	Describir los factores críticos para el éxito del proyecto			3	4
2			Proposición de Valor			2		
2	1		Servicios y/o productos	Los servicios que se ofrecen al usuario que le añaden valor, así como la información relacionada al segmento target	1	2		

2	1	1	Funcionales	Describen la funcionalidad de los servicios ofrecidos. Estos pueden estar en forma de Casos de Uso). Estos normalmente se relacionan con los servicios que el software ofrecerá a sus usuarios (p.e. Buscar un producto, registrarse al portal, etc.)		2	
2	1	2	No-funcionales	Describen los servicios que no están relacionados con la funcionalidad pero que influyen el diseño del software. Por ejemplo, la usabilidad, la imagen, etc.		2	
2	1	3	Requerimientos Técnicos (y especificaciones técnicas)	Los requerimientos que el usuario necesita para accesar a los servicios (p.e. Software, hardware, conexión internet, etc. Hablando de productos se incluyen bosquejos, fotos, etc.	1	2	
2	1	4	Requerimientos No-Técnicos	Los requerimientos que no sean técnicos el usuario necesita para accesar a los servicios (p.e. Geográfico, Edad, etc.)		2	4
2	1	5	Ventajas o desventajas competitivas	Describe las ventajas o desventajas de los productos o servicios ofrecidos por la empresa	1	2	4
2	1	6	Precios Honorarios y estructura de arrendamiento financiero	Descripción de la estructura de precios de los productos y/o servicios	1	2	
2	2		Valor Añadido al Usuario	Describe todos los valores que se ofrecen al usuario		2	
2	2	1	Calidad	Describir la forma en que el negocio aumenta la calidad para el usuario		2	
2	2	2	Optimización de Costos	Describir la forma en que el negocio ayuda a la optimización de costos para el usuario		2	
2	2	3	Uso	Describe el valor que el negocio trae al usuario en términos de uso. Responde la pregunta que tan útil es para el usuario		2	4
2	2	4	Hedónico	Describe el valor en términos de diversión para el usuario. Que tanto lo disfruta?		2	4
2	2	5	Emocional	Describe las emociones que el negocio provoque o incentive en los usuarios		2	4
2	2	6	Epistémico	Describe cualquier conocimiento que el negocio brinde a sus usuarios		2	4
2	2	7	Tiempo	Describe cualquier reducción de tiempo que los usuarios ganen a-través del negocio		2	4
2	1	8	Efecto Red	El efecto red es el efecto que un usuario de un bien o servicio tenga en el valor de los mismos. Cuando el efecto red esta presente el valor del producto o servicio aumenta (p.e. Teléfono)		2	4
2	1	9	Marca	Cualquier marca establecida que añada valor a los usuarios		2	4
2	3		Segmento Target		1	2	
2	3	1	Mercado	Describe las áreas geográficas de operación	1	2	
2	3	2	Sector	Describe el sector de la industria	1	2	
2	3	3	Segmento	Describe los datos demográficos del segmento en particular (e.g. edad, tendencias, Ingresos, etc.)	1	2	
3			Valor de la Red	Define el valor de la red en relación al negocio		2	
3	1		Actores	Define los actores del negocio, como son proveedores, socios estratégicos, clientes		2	4
3	1	1	Internos	Proveedores, socios estratégicos, etc.		2	4
3	1	2	Clientes primarios	Los usuarios primarios (e.g internautas)		2	4
3	1	3	Clientes secundarios	Otros clientes como podría ser los que se les vende publicidad, datos etc.		2	
3	2		Roles	Descripción del papel principal de cada uno de los actores		2	
3	2	1	Funcionales	Están definidos desde el punto de vista de las Funciones que desempeñan		2	

			Nombre	Descripción				
3	2	2	Estratégicos (asignación de recursos)	Definen la relación de diferentes actores económicos para obtener acceso a recursos externos y enlazarlos con los activos propios. Describe los recursos que aportan al negocio		2	3	4
3	2	3	Estratégicos (eficiencia)	Actores que pueden ayudar a reducir costos de cualquier tipo		2		4
3	2	4	Estratégicos (reducción de riesgo)	Definen a los actores o roles que pueden ayudar a compartir los riesgos del proyecto. (principalmente desde el punto de vista de inversión)		2		4
3	2	5	Estratégicos (eficacia)	Identifica Actores que son clave para el éxito del sistema		2		4
3	2	6	Estratégicos (tiempo de comercialización)	Identifica Actores que ayudan a reducir el tiempo de comercialización		2		4
3	2	7	Estratégicos (Agilidad)	Identifica a los actores que brindad la habilidad para una rápida respuesta a las demandas del mercado		2		4
3	2	8	Estratégicos (Inteligencia)	Identifica los actores que ayudan a identificar nuevas oportunidades (R&D)		2		4
3	3		Relaciones	Grafica que identifica las relaciones entre actores		2		
3	4		Flujo de Objetos	Grafica que identifica El flujo de objetos (experiencia, recursos, dinero, ideas) entre actores		2		
3	5		Canales	Grafica que identifica los canales usados para el intercambio de objetos (juntas, talleres, teléfono, video conferencia, etc.)		2		
3	6		Gobierno	Especifica el control y poder de cada actor dentro de la red de valor		2		
4			Valor de la Arquitectura Operacional			2		
4	1		Recursos Esenciales	Lista los recursos esenciales que cada uno de los actores aporta al negocio		2		4
4	1	1	Tecnológicos	Lista de los recursos tecnológicos		2		
4	1	2	Organizacionales	Lista de los recursos organizacionales (personal, oficinas, etc.)		2		
4	1	3	Financieros	lista de los recursos financieros		2		
4	1	4	Legales	Lista de los recursos Legales		2		
4	1	5	Relacionales	Lista de la red de relaciones que potencialmente ayuden al negocio		2		
4	1	6	Informativos	Lista de los recursos de información que aporten al negocio (p.e. bases de datos, reportes, etc.)		2		
4	2		Configuración de Recursos	Descripción de la administración e integración de los recursos, incluyendo los técnicos		2		
4	3		Competencias	Identificar aquellas competencias o cualidades que te diferencian de los competidores.	1	2		4
4	3	1	Competidores y productos	Lista de los principales competidores y productos (servicios)	1	2		4
4	3	2	Competencia indirecta	Lista de la principal competencia indirecta	1	2		
4	3	3	Análisis de la competencia	Comparación entre la empresa y sus competidores principales	1	2		4
5			Valor Financiero			2		
5	1		Valor Total de Inversión	Costo de implementar y mantener el negocio en el tiempo		2		
5	2		Precios y métodos de facturación	Explicar la estructura de precios así como los métodos de facturación utilizados	1	2		
5	3		Estructura y Fuentes de Ingresos			2		4
5	4		Comparativo de precios	Análisis de los precios de la competencia, Es el precio un factor importante para los clientes?	1	2		
5	5		Servicios al cliente y políticas de crédito	Como van a ser los servicios al cliente (WEB 2.0) y las políticas de crédito	1			

5	6		Estados financieros personales	Estados financieros personales de los dueños o de los principales accionistas. (Pasivos y activos fuera de la empresa)	1			
5	7		Gastos iniciales y capitalización		1			
5	7	1	Estimación de los gastos iniciales		1			
5	7	2	Pronostico de gastos		1			
5	7	3	Prestamos propuestos		1			
5	7	4	Contribución de cada inversionista		1			
6			Plan financiero		1			
6	1		Proyección de perdidas y Ganancias	Análisis de 12 meses	1			
6	1	1	Proyección de ventas	Mes a mes por un año	1			
6	1	2	Costo de los bienes vendidos	Mes a mes por un año	1			
6	1	3	Gastos	Mes a mes por un año	1			
6	1	4	Ganancias	Mes a mes por un año	1			
6	1	6	Proyección de utilidad-Estimación de los gastos e ingresos de la empresa	Mes a mes por un año	1			
6	1	7	Notas de investigación	Explicación del Pronostico de la compañía	1			
6	2		Proyección de ganancias (a 4 Años)	Opcional	1			
6	3		Flujo de efectivo proyectado	Planeación y descripción de cuanto flujo de efectivo es necesario antes del comienzo de operaciones.	1			
6	4		Balance general al día de apertura	Detalles de como calcular un balance general para el día de apertura	1			
6	4	1	Balance general proyectado	(opcional) Descripción del balance general proyectado al final del primer año de operaciones	1			
6	5		Análisis de Punto de equilibrio	Ventas punto de equilibrio es igual a los costos fijos + (1- costos variables)	1			
			Plan de Negocios					
7			Resumen executivo	Se escribe al final, ya que sumariza y explica los fundamentos del negocio propuesto	1			4
7	1		Producto(s) o servicios	Describir los productos y servicios ofrecidos por la empresa	1	2		
7	2		Clientes	Describir brevemente quienes son los clientes	1	2		4
7	3		Dueños	Información acerca de los dueños	1			
7	4		(Para inversionistas) Recursos	Describir cuanto dinero se requiere como inversión y como será usado esa inversión	1			
8			Descripción General de la empresa		1			
8	1		Filosofía de la empresa	Combinacion y resumen de Vision y Mision y Valores	1			4
8	2		Fortalezas de la compañía y capacidades básicas	derivado del analisis FODA	1			
8	2	1	Experiencia	Experiencia relevante de los principales actores y accionistas	1			
8	2	2	Habilidades y fortalezas	Habilidades de los principales accionistas y/o actores	1			
8	3		Forma jurídica de la propiedad	Sociedad anónima, capital variable, etc.	1			
9			Plan de Mercadotecnia		1			

9	1		Estudio de mercado		1			
9	1	1	Objectivos	objectivos que persigue el analayis de mercado	1			
9	1	2	Metodos	Metodos del analisus de mercado a usar	1			
9	2		Datos Economicos	Hechos acerca de la industria	1			
9	2	1	Demanda actual	Descripción de la demanda actual en el mercado target	1			
9	2	2	Tendencias	Tendencias del mercado target	1			
9	2	3	Crecimiento potencial	Crecimiento potencial del negocio	1			
9	2	4	Barreras de entrada	Ejemplo: Entrenamiento y habilidades, altos costos de mercado, costos de envió, etc.	1			
9	2	5	Como superar las barreras de entrada		1			
9	3		Productos y servicios	Descripción de los productos y servicios, desde el punto de vista del consumidor (salen de los apartados 2.1.1 y 2.1.2)	1			
9	3	1	Principales características y beneficios	Describe los beneficios y que es lo que el producto (servicio) va a hacer por o para el cliente (salen de todo el punto 2.2)	1			
9	3	2	Servicios post-venta	Ejemplo: Envíos, garantías, soporte, seguimiento, etc.	1			
9	4		Competencia	Sale de todo el 4.3	1			4
9	5		Nicho	Sale del punto 2.3.3	1			4
9	6		Estrategia de mercado	Una descripcion general de la estrategia a tomar de acuerdo al nicho	1			4
9	7		Promoción		1			
9	7	1	Como?	Como llegar al oído del cliente	1			
9	7	2	Publicidad	Que medios, porque? Que tan seguido? Etc.	1			
9	7	3	Métodos de bajo costo	Se han identificado medios de publicidad de bajo costo? TECNOLOGIAS WEB 2.0	1			4
9	7	4	Imagen	Que imagen se desea proyectar a los clientes	1			
9	7	5	Apoyo grafico de la imagen	Diseño de logo, tarjetas, folletos, etc.	1			
9	8		Locación (plaza)	Es importante esta, para los clientes?	1			
9	8	1	Conveniente para los clientes	(estacionamientos, espacio, etc.	1			
9	8	2	Consistente con la imagen	Si los clientes te visitan, la imagen del lugar es adecuada con la imagen de la empresa	1			
9	9		Canales de distribución	Explicar los canales de distribución, como se van a vender los productos o servicios. (retail, mayorista, venta directa, internet, etc.)	1			
9	10		Pronostico de ventas	El pronostico debe de hacerse a un año con proyección mes por mes y debe considerar las ventas históricas, las estrategias de mercado, y los datos de la industria.	1			
9	10	1	Mejor estimación y el peor de los casos	El pronostico de ventas de incluir el mejor y peor de los casos	1			
10			Plan operacional		1			
10	1		Producción	Como y en donde son creados los productos y/o servicios?	1			
10	1	1	Métodos	Explicar los métodos de; técnicas de producción, control de calidad, servicios al cliente, control de inventarios, desarrollo de productos.	1			
10	2		Ubicación	Que tipo de ubicación se necesita?	1			

10	2	1	Requerimientos físicos	Cantidad de espacio, tipo de edificio, zona, energía y otros servicios públicos	1				
10	3		Accesos	Estacionamiento, transporte, centros de envió(mensajería)	1				
10	4		Construcción	Si se planea construir se tienen que describir los costos y especificaciones	1				
10	5		Costos	Estimación de los costos de ocupación, incluyendo: Renta, mantenimiento, servicios públicos, seguros	1				
10	6		Entorno jurídico	Descripción de: Licencias y requisitos legales, Permisos, Regulaciones, ambientales, legales de salubridad, normas especiales para la industria, permisos de construcción, Marcas registradas, derechos de autor y patentes	1				
10	7		Personal	Descripción de los empleados contratados y por contratar	1				
10	7	1	Numero de empleados		1				
10	7	2	Tipo de mano de obra	Calificada, no calificada, profesional	1				
10	7	3	HR	Como encontrar a los empleados adecuados	1				
10	7	4	Calidad del personal	existente	1				
10	7	5	Estructura salarial	Describe como esta constituida la estructura salarial actual	1				
10	7	6	Entrenamiento	Requisitos y métodos de entrenamiento	1				
10	7	7	Asignación de tareas	Quien hace que. Descripción de horarios y procedimientos por escrito	1				
10	7	8	Descripción de tareas para los empleados	Definición de las descripciones de puestos (para comunicación interna entre los empleados)	1				
10	8		Inventarios	Descripción del tipo de inventario que la empresa maneja o va a manejar	1				
10	8	1	Tipos de inventario	(Materia prima, suministros, productos semiacabados, productos terminados, etc.)	1				
10	8	2	Inversión en inventario	Valor promedio del inventario o cual es la inversión en inventario	1				
10	8	3	Acumulación estacional	Descripción de los excesos de inventarios por temporadas	1				
10	8	4	Tiempo de espera para ordenar		1				
10	8	5	Proveedores	Identificación de los principales proveedores (nombres y direcciones)	1				
10	8	6	Políticas de crédito y de envió	Descripción de las políticas de cada uno de los proveedores	1				
10	8	7	Historia y confianza	Historia y fiabilidad de los principales proveedores	1				
10	9		Políticas de Crédito	Se va a vender a crédito?, Se necesita vender a crédito? Que políticas de crédito se van a usar?	1				
10	9	1	Gestión de las cuentas por pagar	Descripción de las políticas para lidiar con los proveedores	1				
10	9	2	Gestión de las cuentas por cobrar	Descripción de las políticas para lidiar con los clientes	1				
11			Administración y organización	Quien manejara el negocio en el día-a-día, que experiencia tiene esta persona?	1				
11	1		Organigrama	Descripción de la Jerarquía organizacional así como los responsables de funciones clave	1			3	4
11	2		Apoyo profesional y de asesoramiento	Descripción de las personas ligadas al negocio pero no directamente	1				
11	2	1	Consejo de administración		1				
11	2	2	Consejo de asesores		1				
11	2	3	Abogado		1				
11	2	4	Contador		1				

11	2	5	Agente de seguros		1			
11	2	6	Banquero		1			
11	2	7	Consultor(es)		1			
11	2	8	Mentor y asesores claves		1			
			Caso de negocio (Business case)					
12			Generales				3	
12	1		Titulo del proyecto				3	
12	2		Consejo de programa				3	
12	3		Gerente de Gestión de proyecto				3	
13			Para la obtención de capital		1		3	
13	1		Para bancos		1		3	
13	1	1	Cantidad del préstamo a pedir		1		3	
13	1	2	Como serán usados los fondos		1		3	
13	1	3	Como se va a lograr		1		3	
13	1	4	Términos requeridos de pago		1		3	
13	1	5	Garantías ofrecidas		1		3	
13	2		Para inversionistas		1		3	
13	2	1	fondos necesarios a corto plazo		1		3	
13	2	2	Fondos necesarios en dos a cinco años		1		3	
13	2	3	Como serán utilizados los fondos		1		3	
13	2	4	Rendimiento esperado de la inversión		1		3	
13	2	5	Estrategias de salida para los inversionistas	Recompra, venta, IPO	1		3	
13	2	6	Porcentaje de acciones ofrecidas		1		3	
13	2	7	Condiciones que el dueño aceptaría		1		3	
13	2	8	Información financiera que se proporcionara		1		3	
13	2	9	Participación de accionistas en el consejo o gestión		1		3	
14	0	0	Evaluacion de opciones	Enlistar y describir las diferentes opciones para el proyecto			3	
14	1	0	Lista de opciones	Describir las opciones identificadas, cada una con su FODA analisis en relacion con los objetivos principales de la organisacion y los factores criticos de exito. (al menos 2 opciones)			3	
14	1	1	Oportunidades para inovacion y colaboracion con otros actores	Este apartado esta mas relacionado con proyectos internos de la organisacion. Sin embargo aqui se pueden describir las oportunidades del negocio desde el punto de vista de inovacion			3	
14	1	2	Opciones de entrega del servicio/proyecto	Quien va a entregar el proyecto. (quien esta a cargo)			3	
14	1	3	Opciones de implementacion	Descripcion de las faces, tiempos y entregables para la implementacion del proyecto			3	

14	1	4	Evaluacion detallada de opciones	Proveer una explicacion detallada del enfoque general de cada una de las opciones, tomando en cuenta el calculo de costos y beneficios			3	
14	1	5	Cuantificacion de riesgos y analisis de sensibilidad	Descripcion de los riesgos de cada una de las opciones, asi como, para el analisis de sensibilidad, es necesario analisar cambios en los factores criticos (p.e. Que afecta un cambio en las politicas de comercio de un pais, etc)			3	
14	1	6	Evaluacion de beneficios	Identificar los principales beneficios de las opciones			3	
14	1	7	Opcion preferida	Resumen de los resultados de la evaluacion economica, evaluacion de beneficios, analisis de sensibilidad y una clasificacion general			3	
15	0	0	Aspectos comerciales	TITLE ONLY			3	
15	1	0	Output based identification				3	
15	2	0	Mecanismos de pago				3	
15	3	0	Duracion del contrato	Para proyectos internos			3	
15	4	0	Implicaciones del personal				3	
15	5	0	Plazos de ejecucion				3	
16	0	0	Para Obtencion Capital (bancos)	Especifico del business case			3	
16	1	0	Cantidad del préstamo a pedir				3	
16	2	0	Uso de los Fondos	Como serán usados los fondos			3	
16	3	0	Resumen del Business Plan	Como se va a lograr			3	
16	4	0	Términos requeridos de pago	Terminos y condicines de pago			3	
16	5	0	Garantías ofrecidas				3	

Table xiv: Definitions and relationships of the BID

References

ABRAHAMS, J., 2010. *QuickMBA Knowledge to Power Your Business "the Business Vision and Company Mission Statement".* Internet Center for Management and Business Administration, Inc. Available from: http://www.quickmba.com/strategy/vision/.

ADLER, P. and ADLER, P., 1994. Observational Techniques. In: 3rd ed. SAGE, pp. 377-392.

AFUAH, A. and TUCCI, C.L., 2003. *Internet Business Models and Strategies : Text and Cases.* Second ed. New York: McGraw-Hill Publishing Co.

AL-DEBEI, M.M., 2010. *The Design and Engineering of Innovative Mobile Data Services: An Ontological Framework Founded on Business Model Thinking.* Brunel University.

AL-DEBEI, M.M., R. EL-HADDADEH and D. AND AVISON., 2008. Defining the Business Model in the New World of DigitalBusinessAnonymous *Proceedings of the 14th Americas Conference on Information Systems, AMCIS'08.* Toronto, Canada.

AL-DEBEI, M.M. and AVISON, D., 2010a. Developing a Unified Framework of the Business Model Concept. *European Journal of Information Systems*, vol. 19, no. 3, pp. 359-376.

AL-DEBEI, M.M. and FITZGERALD, G., 2010b. The Design and Engineering of Mobile Data Services: Developing an Ontology Based on Business Model Thinking. *IFIP Advances in Information and Communication Technology*, vol. 318, pp. 28-51.

AL-DEBEI, M.M. and G. FITZGERALD., 2010c. The design of innovative mobile artifacts: How to develop powerful value networks?Anonymous *5th IEEE International Conference on Management of Innovation and Technology, ICMIT2010*

AL-DWAIRI, R.M. and M.A. KAMALA. Business-to-consumer e-commerce Web Sites: Vulnerabilities, Threats and quality evaluation modelAnonymous *20th International Conference on Electronics, Communications and Computer (CONIELECOMP)*. Cholula, 2010.

ALT, R. and ZIMMERMANN, H., 2010. Preface: Introduction to Special Section – Business Models. *Electronic Markets*, vol. 11, no. 1, pp. 3-9.

ALTRICHTER, H., KEMMIS, S., MCTAGGART, R. and ZUBER-SKERRITT, O., 2002. The Concept of Action Research. *Learning Organization*, vol. 9, no. 3, pp. 125-131.

ANSEC., 2010. *Business Case Definition.* Information Assurance, ICT Architecture & procurement, Digital Forensics and Software Quality Assurance. Available from: http://www.ansecia.com/Business-Case-Definition-6377.html.

APPLEGATE, L.M., 2000. E-business Models: Making sense of the Internet business landscape". In: G. DICKSON and G. DESANTIS eds., Information Technology and the future enterprise, New Models for managersN. J.: Prentice Hall, pp. 49-101.

ARGYRIS, C., PUTNAM, R.D. and SMITH, D.M., 1985. *Action Science : Concepts, Methods, and Skills for Research and Intervention.* San Francisco, CA.: Jossey-Bass /z-wcorg/. ISBN 0875896650.

ARMSTRONG, J. and JONES, S., 1987. *Business Documents. their Origins, Sources and Uses in Historical Research.* London: /z-wcorg/. ISBN 0720118468 9780720118469.

ASPRAY, W. and CERUZZI, P.E., 2008. *The Internet and American Business.* Second Ed. ed. Cambridge, Mass.: MIT Press /z-wcorg/. ISBN 9780262012409 0262012405.

ATHANASIOS, H., 1999. Barriers to Innovation for SMEs in a Small Less Developed Country (Cyprus). *Technovation*, 9, vol. 19, no. 9, pp. 561-570 ISSN 0166-4972. DOI 10.1016/S0166-4972(99)00034-6.

AVISON, D., BASKERVILLE, R. and MYERS, M., 2007. The Structure of Power in Action Research Projects. *Integrated Series in Information Systems*, -02-05, vol. 13.

AVISON, D., LAU, F., MYERS, M. and NIELSEN, P.A., 1999. Action Research. *Communications of the ACM*, vol. 42, no. 1, pp. 94(4) ISSN 00010782.

AVISON, D.E., 2006. *Information Systems Development : Methodologies, Techniques & Tools 4th Ed.*

AVISON, D.E. and PRIES-HEJE, J., 2005. *Research in Information Systems : A Handbook for Research Supervisors and their Students.* Amsterdam; Boston; London: Elsevier/Butterworth-Heinemann /z-wcorg/. ISBN 0750666552 9780750666558.

AVISON, D. and WOOD-HARPER, A.T., 1991. Conclusions from Action Research – the Multiview Experience. Conference Information: 2ND INTERNATIONAL CONF OF THE UNITED KINGDOM SYSTEMS SOC : SYSTEMS THINKING IN EUROPE, pp. 591-596.

BAILEY, C.A.,., 2007. *A Guide to Qualitative Field Research.* Thousand Oaks, Calif.: Pine Forge Press /z-wcorg/. ISBN 1412936500 9781412936507.

BAROUDI, J.J. and ORLIKOWSKI, W.J., 1989. The Problem of Statistical Power in MIS Research. *MIS Quarterly*, 03, vol. 13, no. 1, pp. 87-106 ISSN 02767783.

BARROW, C., 2009. *Get Backed, Get Big, Get Bought: Plan Your Start-Up with the End in Mind - the Money – Who has it and Why You might just Get Your Hands on some of it.* eBook ed. Chichester, U.K.: Capstone ISBN 9781906465513.

BASKERVILLE, R. and WOOD-HARPER, A.T., 1998. Diversity in Information Systems Action Research Methods. *European Journal of Information Systems*, vol. 7, no. 2, pp. 90-107.

BASKERVILLE, R.L. and WOOD-HARPER, A.T., 1996. A Critical Perspective on Action Research as a Method for Information Systems Research. *Journal of Information Technology*, vol. 11, no. 3, pp. 235-246.

BASKERVILLE, R.L., 1999. Investigating Information Systems with Action Research. *Communications of the AIS , Es*, vol. 2, no. 3.

BASSEY, M., 1990. On the Nature of Research in Education (Part 2), Research Intelligence. *British Educational Research Journal* ISSN 14693518; 0141-1926.

BEER, M., 2001. Why Management Research Findings Are Unimplementable: An Action Science Perspective. *Reflections: The SoL Journal.* 2, 58-65.

BENBASAT, I., GOLDSTEIN, D.K. and MEAD, M., 1987. The Case Research Strategy in Studies of Information Systems. *MIS Quarterly*, vol. 11, no. 3, pp. 369-386 SCOPUS.

BENBASAT, I. and ZMUD, R.W., 1999. Empirical Research in Information Systems: The Practice of Relevance. *MIS Quarterly*, 03, vol. 23, no. 1, pp. 3-16 ISSN 02767783.

BHARATI, P. and A. CHAUDHURY., 2006*.* Small and medium enterprises' (smes') Adoption of technology along the value chainAnonymous *European and Mediterranean Conference on Information Systems (EMCIS)*. Costa Blanca, Alicante, Spain, 2006.

BIRLEY, S. and WESTHEAD, P., 1994. A Taxonomy of Business Start-Up Reasons and their Impact on Firm Growth and Size*. Journal of Business Venturing*, 1, vol. 9, no. 1, pp. 7-31 ISSN 0883-9026. DOI DOI: 10.1016/0883-9026(94)90024-8.

BLAIKIE, N.W.H., 2000. *Designing Social Research : The Logic of Anticipation.* Cambridge, UK; Malden, MA: Polity Press ; Blackwell /z-wcorg/. ISBN 0745617662 0745617670 9780745617664 9780745617671.

BOEIJE, H., 2009. *Analysis in Qualitative Research.* London: SAGE /z-wcorg/. ISBN 1847870066 9781847870063 1847870074 9781847870070.

BONOMA, T.V., 1985. Case Research in Marketing: Opportunities, Problems, and a Process. *Journal of Marketing Research*, vol. 22, no. 2, pp. 199-208.

BOYATZIS, R.E., 1998. *Transforming Qualitative Information : Thematic Analysis and Code Development.* London: Sage Publications.

BRADFORD, R., DUNCAN, J.P. and TARCY, B., 2000. *Simplified Strategic Planning : A no-Nonsense Guide for Busy People Who Want Results Fast!* Worcester, Mass.: Chandler House Press /z-wcorg/. ISBN 1886284466 9781886284463.

BRAUN, V. and CLARKE, V., 2006. Using Thematic Analysis in Psychology*. Qualitative Research in Psychology*, 04, vol. 3, no. 2, pp. 77-101 ISSN 14780887. DOI 10.1191/1478088706qp063oa.

BREWER, J. and HUNTER, A., 1989. *Multimethod Research : A Synthesis of Styles.* Newbury Park, Calif.: Sage /z-wcorg/. ISBN 080393078X 9780803930780.

BRYSON, J.M., 2011. *Strategic Planning for Public and Nonprofit Organizations a Guide to Strengthening and Sustaining Organizational Achievement.* 4th ed. San Francisco, CA: Jossey-Bass /z-wcorg/. ISBN 9781118049938 1118049934 9781118050514 (e-book 1118050517 (e-book 9781118050538 (e-book 1118050533 (e-book.

BRYSON, J.M., 1993. *Strategic Planning for Public Service and Non-Profit Organizations.* 1st ed. Oxford; New York: Pergamon Press /z-wcorg/. ISBN 0080406726 9780080406725.

BURRELL, G., 1992. *Sociological Paradigms and Organisational Analysis : Elements of the Sociology of Corporate Life.*

Business Dictionary.com., 2011. *Dotcom Definition.* WebFinance, Inc. Available from: http://www.businessdictionary.com/definition/dotcom.html.

Cambridge., 2011. *Cambridge Dictionaries Online:* Cambridge University Press. Available from: http://dictionary.cambridge.org/dictionary/british.

CARR, W., KEMMIS, S., and Deakin University. School of Education. Open Campus Program., 1986. *Becoming Critical : Education, Knowledge and Action Research.* [Waurn Ponds, Vic.]: Deakin University : Distributed by Deakin University Press /z-wcorg/. ISBN 0730004376 : 9780730004370.

CARRIER, C., RAYMOND, L. and ELTAIEF, A., 2004. Cyberentrepreneurship:A Multiple Case Study. *Journals*, vol. 10, no. 5, pp. 349-363.

CARTER, N.M., GARTNER, W.B. and REYNOLDS, P.D., 1996a. Exploring Start-Up Event Sequences. *Journal of Business Venturing*, 5, vol. 11, no. 3, pp. 151-166 ISSN 0883-9026. DOI DOI: 10.1016/0883-9026(95)00129-8.

CARTER, N.M., GARTNER, W.B. and REYNOLDS, P.D., 1996b. Exploring Start-Up Event Sequences. *Journal of Business Venturing*, 5, vol. 11, no. 3, pp. 151-166 ISSN 0883-9026. DOI DOI: 10.1016/0883-9026(95)00129-8.

VINTON and KAHN,, 2006. Present at the Creation. *Economist*, 06/10, vol. 379, no. 8481, pp. 33-34 ISSN 00130613.

CHANG, Y.-. and J. YAN., 2007. Positioning in a new dynamic E-commerce business model.

CHARLES, L. and WARD, N., 2007. *Generating Change through Research: Action Research and its Implications.* Newcastle: Centre for rural economy, University of Newcastle Upon Tyne.

CHECKLAND, P. and SCHOLES, J., 1990. *Soft Systems Methodology in Action.* ISBN 0-471-92768-6.

CHECKLAND, P., 1984. *Systems Thinking, Systems Practice.* Reprinted with corrections February 1984 ed. Chichester, Sussex; New York: J. Wiley /z-wcorg/. ISBN 0471279110 9780471279112.

CHECKLAND, P. and POULTER, J., 2006. Learning for action: a short definitive account of soft systems methodology, and its use for practitioner, teachers and students. Hoboken, N.J., Wiley.

CHIASSON, M., & DEXTER, A. S., 2001. System development conflict during the use of an information systems prototyping method of action research: Implications for practice and research. *Information Technology & People*. 14, 91-108.

CHUA, W.F., 1986. RADICAL DEVELOPMENTS IN ACCOUNTING THOUGHT. *ACCOUNTING REVIEW*, vol. 61, no. 4, pp. 601-632.

CLARK, P.A., 1974. *Action Research and Organizational Change.* London: Harper & Row /z-wcorg/. ISBN 0063180014

COAD, P., and YOURDON, E., 1991. *Object-oriented design*. Englewood Cliffs, N.J., Prentice Hall.

COHEN, L. and MORRISON, K., 2000. Research Methods in Education. *Teaching in Higher Education*, vol. 41, no. 5th ISSN 1356-2517.

COUGHLAN, P. and COUGHLAN, D., 2002. Action Research for Operations Management. International Journal of Operations & Production Management, vol. 22, no. 2, pp. 220-240 ISSN 0144-3577.

DAVENPORT, T.H. and MARKUS, M.L., 1999. Rigor Vs. Relevance Revisited: Response to Benbasat and Zmud. *MIS Quarterly*, vol. 23, no. 1, pp. 19-23.

AVISON, BASKERVILLE, MYERS, 2001. Controlling Action Research Projects. *Journals*, vol. 14, no. 1.

DAVID J., T., 2010. Business Models, Business Strategy and Innovation. *Long Range Planning*, 6, vol. 43, no. 2-3, pp. 172-194 ISSN 0024-6301. DOI 10.1016/j.lrp.2009.07.003.

DAVIDSSON, P., DELMAR, F. and WIKLUND, J., 2006. *Entrepreneurship and the Growth of Firms.* Cheltenham, UK; Northampton, MA: Edward Elgar /z-wcorg/. ISBN 1845425758 9781845425753.

DAVIS, W.S., and BENAMATI, J., 2003. *E-Commerce Basics : Technology Foundations and e-Business Applications.* Boston: Addison-Wesley WorldCat. ISBN 0201748401 9780201748406.

DAVISON, R.M., MARTINSONS, M.G. and KOCK, N., 2004. Principles of Canonical Action Research. *Information Systems Journal*, vol. 14, no. 1, pp. 65-86 ISSN 13501917.

DAVISON, R. and GALLUPE, B., 2001. GSS and Action Research in the Hong Kong Police. *Information Technology & People*, vol. 14, no. 1, pp. 60(18) ISSN 09593845.

DE VREEDE, G. Participative modelling for understanding: facilitating organizational change with GSSAnonymous , 1996.

DEL AGUILA-OBRA, A.R. and PADILLA-MELÉNDEZ, A., 2006. Organizational Factors Affecting Internet Technology Adoption. *Internet Research*, vol. 16, no. 1, pp. 94-110 ISSN 10662243.

DENZIN, N. and LINCOLN, Y., 2005. The SAGE Handbook of Qualitative Research 3rd Ed.

DENZIN, N. and LINCOLN, Y., 2003. Collecting and Interpreting Qualitative Materials 2nd Ed.

DENZIN, N. and LINCOLN, Y., 2000. The Discipline and Practice of Qualitative Research. *Handbook of Qualitative Research*, pp. 1.

DENZIN, N. and LINCOLN, Y., 1998. "Mayor Paradigms and Perspectives." In Strategies of Qualitative inquiri. In: Sage Publication, Thousand Oaks.

DENZIN, N.K., 2008. *Strategies of Qualitative inquiryVolume 2 of Handbook of Qualitative Research.* Norman K. Denzin and Yvonna S. Lincoln eds., 3rd ed. California: Sage & Thousand Oaks.

DENZIN, N.K., 1989. *The Research Act : A Theoretical Introduction to Sociological Methods.* Englewood Cliffs, N.J.: Prentice-Hall /z-wcorg/. ISBN 0137743815 9780137743810.

DICKENS, L. and WATKINS, K., 1999. Action Research: Rethinking Lewin. *Management Learning*, June 01, vol. 30, no. 2, pp. 127-140 DOI 10.1177/1350507699302002.

DRORI, I., HONIG, B. and SHEAFFER, Z., 2009. The Life Cycle of an Internet Firm. *Entrepreneurship Theory and Practice*, -05-01, vol. 33, no. 3, pp. 715-738 ISSN 1540-6520.

EIKEBROKK, T.R. and OLSEN, D.H., 2007. An Empirical Investigation of Competency Factors Affecting e-Business Success in European SMEs. *Information & Management,* 6, vol. 44, no. 4, pp. 364-383.

ESPER, T., et al, 2010. Demand and Supply Integration: A Conceptual Framework of Value Creation through Knowledge Management. *Journal of the Academy of Marketing Science*, vol. 38, no. 1, pp. 5(14) ISSN 00920703.

EUROPEAN COMMISSION., 2010. *Small and Medium-Sized Enterprises (SMEs): SME Definition.* European Commission. 31 August 2010, Available from: http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm.

EUROPEAN COMMISSION., 2009. *COMMISSION STAFF WORKING DOCUMENT on the Implementation of Commission Recommendation of 6 may 2003 Concerning the Definition of Micro, Small and Medium-Sized Enterprises.* working document ed. Brussels: Europe economic area ISBN 1350 final.

EUROPEAN COMMISSION., 2007. *Europe's Information Society. Helping SMEs Win in the Information Society.* European Commision. March 2007, Available from: http://ec.europa.eu/information_society/tl/ecowor/smes/index_en.htm.

Farlex clipart collection., 2003. *The Free Dicctionary. Thesaurus (WordNet Based).* WordNet 3.0, Farlex clipart collection. 2003-2008, Available from: ttp://www.thefreedictionary.com/dot-com.

FAY, B., 1975. *Social Theory and Political Practice.*

FERNANDEZ A. El Balanced Scorecard: Ayudando a implantar la estrategia. Revista de Antiguos Alumnos del IESE. 2001;75:31-42.

FITZGERALD, D.E.A., G., 1998. *Information Systems Development: Methodologies, Techniques, and Tools, 2nd Edition.*

FLICK, U.,., 1998. *An Introduction to Qualitative Research.* London; Thousand Oaks, Calif.: Sage /z-wcorg/. ISBN 0761955887 9780761955887 0761955879 9780761955870.

FONTANA, A. and FREY, J., 2003. Interviewing - The Art of Science. In: Collecting and interpreting qualitative materials2nd ed. London: SAGE Publications, pp. 47-78.

FORBAT, L. and HENDERSON, J., 2005. Theoretical and Practical Reflections on Sharing Transcripts with Participants. *Qualitative Health Research*, vol. 15, no. 8, pp. 1114-1128.

GALBRAITH, C. and SCHENDEL, D., 1983. An Empirical Analysis of Strategy Types. *Strategic Management Journal (Pre-1986)*, vol. 4, no. 2, pp. 153-153 ABI/INFORM Research. ISSN 01432095.

GALLIERS, R., 1992a. *"Choosing Appropiete Information Systems Research Approaches" in Information System Research, Issues Methods and Practical Guidelines.* Blackwell scientific publications.

GALLIERS, R.,., 1992b. *Information Systems Research : Issues, Methods, and Practical Guidelines.* Oxford; Boston: Blackwell Scientific Publications /z-wcorg/. ISBN 0632028645 9780632028641.

GARTNER, W.B., 1985. A Conceptual Framework for Describing the Phenomenon of New Venture Creation. *Academy of Management Review*, 10, vol. 10, no. 4, pp. 696-706 ISSN 03637425. DOI 10.5465/AMR.1985.4279094.

GARTNER, W.B., BIRD, B.J. and STARR, J.A., 1992a. Acting as if: Differentiating Entrepreneurial from Organizational Behavior. *Entrepreneurship: Theory & Practice*, Spring92, vol. 16, no. 3, pp. 13-31 ISSN 10422587.

GARTNER, W.B., BIRD, B.J. and STARR, J.A., 1992b. Acting as if: Differentiating Entrepreneurial from Organizational Behavior. *Entrepreneurship: Theory & Practice*, Spring92, vol. 16, no. 3, pp. 13-31 ISSN 10422587.

GATEWOOD, E.J., SHAVER, K.G. and GARTNER, W.B., 1995. A Longitudinal Study of Cognitive Factors Influencing Start-Up Behaviors and Success at Venture Creation. *Journal of Business Venturing*, 9, vol. 10, no. 5, pp. 371-391 ISSN 0883-9026. DOI DOI: 10.1016/0883-9026(95)00035-7.

GIBB, A. and RITCHIE, J., 1982. Understanding the Process of Starting Small Businesses. *International Small Business Journal*, vol. 1, no. 1, pp. 26-45.

GIBBS, G.R., 2010. *Online QDA: Learning Qualitative Data Analysis on the Web.* University of Huddersfield, School of Human & Health Sciences. Thursday, December 9, 2010 17:59, Available from: http://onlineqda.hud.ac.uk/methodologies.php.

GILLMER, S., ANGUS, J. and GALLAGHER, S., 1999. New Model for e-Commerce. *InformationWeek*, Jun 28, no. 741, pp. 65 ISSN 87506874.

GOLDFARB, B., PFARRER, M. and KIRSCH, D., 2005. *Searching for Ghosts: Business Survival, Unmeasured Entrepreneurial Activity and Private Equity Investment in the Dot-Com Era.* Maryland, USA: University of Maryland, School of Business, October 12, 2005.

GORDIJN, J., A. OSTERWALDER and Y. PIGNEUR. Comparing two Business Model Ontologies for Designing e-Business Models and Value ConstellationsAnonymous *18th Bled eConference - eIntegration in Action*, 2005.

GRANDON, E.E. and PEARSON, J.M., 2004. Electronic Commerce Adoption: An Empirical Study of Small and Medium US Businesses. *Information & Management,* 12, vol. 42, no. 1, pp. 197-216.

GREGORY, M., 2009. The Sage Handbook of Qualitative Research, 3rd Edition. *QUALITATIVE RESEARCH*, vol. 9, no. 3, pp. 388-389.

GRØNHAUG, K. and OLSON, O., 1999. Action Research and Knowledge Creation: Merits and Challenges. *Journals*, vol. 2, no. 1.

GUBA, E.G. and LINCOLN, Y.S., 1994. Competing paradigms in qualitative research. In: *Handbook of qualitative research*2nd ed. London: Sage, pp. 105-117.

HAAKER, T., FABER, E. and BOUWMAN, H., 2006. Balancing Customer and Network Value in Business Models for Mobile Services. *International Journal for International Communications*, vol. 4, no. 6, pp. 645-661 /z-wcorg/. ISSN 1470-949X.

HAMBRICK, D.C. and CANNELLA, A.A.,Jr., 1989. Strategy Implementation as Substance and Selling. *The Academy of Management Executive*, Nov, vol. 3, no. 4, pp. 278 ISSN 08963789.

HAMMER, M., & CHAMPY, J., 1993. *Reengineering the corporation: a manifesto for business revolution.* New York, NY, HarperBusiness.

HANSEN, E.L., 1995. Entrepreneurial Networks and New Organization Growth. *Entrepreneurship: Theory & Practice*, Summer95, vol. 19, no. 4, pp. 7-19 ISSN 10422587.

HEADD, B., 2003. Redefining Business Success: Distinguishing between Closure and Failure. *SMALL BUSINESS ECONOMICS*, vol. 21, no. 1, pp. 51-61 /z-wcorg/. ISSN 0921-898X.

HELMERS, C. and ROGERS, M., 2011. Does Patenting Help High-Tech Start-Ups?. *Research Policy*, 9, vol. 40, no. 7, pp. 1016-1027 ISSN 0048-7333. DOI 10.1016/j.respol.2011.05.003.

HERR, K. and ANDERSON, G.L.,., 2005. *The Action Research Dissertation : A Guide for Students and Faculty.* Thousand Oaks, Calif.: SAGE Publications /z-wcorg/. ISBN 0761929908 9780761929901 0761929916 9780761929918.

HIRSCHHEIM, R.A., LYYTINEN, K. and KLEIN, H., 1995. *Information Systems Development and Data Modeling : Conceptual and Philosophical Foundations.* Cambridge; New York: Cambridge University Press /z-wcorg/. ISBN 0521373697 9780521373692.

HODDER, I., 2003. The Interpretation of Documents and Material Culture. In: Collecting and interpreting qualitative materials2nd ed. SAGE Publication, pp. 110-129.

HUBERMAN, M. and MILES, M., 2005. Data Management and Analysis Methods. In: The SAGE handbook of qualitative research3rd ed. California: Sage publications, pp. 179-210.

HULT, M. and LENNUNG, S., 1980. Towards a Definition of Action Research: A Note and Bibliography. *Journal of Management Studies*, vol. 17, no. 2, pp. 241-250 ISSN 1467-6486. DOI 10.1111/j.1467-6486.1980.tb00087.x.

HUYGHEBAERT, N. and VAN DE GUCHT, L., 2007. The Determinants of Financial Structure: New Insights from Business Start-Ups. *European Financial Management*, 01, vol. 13, no. 1, pp. 101-133 ISSN 13547798. DOI 10.1111/j.1468-036X.2006.00287.x.

Industry of Canada., 2011. **Key Small Business Statistics - July 2011**. Industry of Canada. 2011-08-31, Available from: http://www.ic.gc.ca/eic/site/ic1.nsf/eng/06724.html.

IVES, B. and OLSON, M.H., 1984. User Involvement and Mis Success: A Review of Research. *Management Science*, 05, vol. 30, no. 5, pp. 586-603 ISSN 00251909.

JANESICK, V., 2000. The Choreography of Qualitative Research Design: Minuets, Improvisations, and Crystallization. In: K. DENZIN and Y.S. LINCOLN eds., The Handbook of Qualitative Research 2nd ed. California: Sage, pp. 379-400.

JANESICK, V.J., 1994. The dance of qualitative research design: Metaphor, methodolatry, and meaning. In: N.K. DENZIN and Y.S. LINCOLN eds., Handbook of qualitative research.2nd ed. California US: Thousand Oaks, Sage Publications, pp. 209-219.

JARVENPAA, S.L., DICKSON, G.W. and DESANCTIS, G., 1985. Methodological Issues in Experimental IS Research: Experiences and Recommendations. *MIS Quarterly*, 06, vol. 9, no. 2, pp. 141-156 ISSN 02767783.

JENSSEN, J. and KOENIG, H., 2002. The Effect of Social Networks on Resource Access and Business Start-Ups. *European Planning Studies*, vol. 10, no. 8, pp. 1039-1046 ISSN 0965-4313.

JEPSEN, L., MATHIASSEN, L. and NIELSEN, P., 1989. "Back To The Thinking Mode: Diaries for The Management of Information Systems Development Projects," *Behaviour and Information Technology*, (8) 3, pp. 207-217.

JIWA, S., LAVELLE, D. and ROSE, A., 2004. Netrepreneur Simulation: Enterprise Creation for the Online Economy . *International Journal of Retail and Distribution Management*, vol. 32, no. 11/12, pp. 587-596.

JOHNSON, G., SCHOLES, K. and WHITTINGTON, R., 2008. *Exploring Corporate Strategy.* 8th Edition ed. Harlow, England; New York: FT/Prentice Hall /z-wcorg/. ISBN 1405887338 140588732X 9781405887328 9781405887335 9780273711919 0273711911 9780273711926 027371192X.

JONES, P., BEYNON-DAVIES, P. and MUIR, E., 2003. Ebusiness Barriers to Growth within the SME Sector. *Journal of Systems and Information Technology*, vol. 7, no. 1/2, pp. 1-25 ISSN 1758-8847; 17588847.

KANTER, R.M., 2001. *Evolve! : Succeeding in the Digital Culture of Tomorrow.* Boston, Mass.: Harvard Business School Press WorldCat. ISBN 1578514398 9781578514397.

KAO, D. and DECOU, J., 2003. A Strategy-Based Model for e-Commerce Planning. *Industrial Management and Data Systems*, vol. 3, no. 4, pp. 238-252 ISSN 0263-5577.

KAPLAN, B. and DUCHON, D., 1988. Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study. *MIS Quarterly*, vol. 12, no. 4, pp. 571.

KATZ, J. and GARTNER, W.B., 1988. Properties of Emerging Organizations. *Academy of Management Review*, 07, vol. 13, no. 3, pp. 429-441 ISSN 03637425. DOI 10.5465/AMR.1988.4306967.

KAZANJIAN, R.K. and DRAZIN, R., 1990. A Stage-Contingent Model of Design and Growth for Technology Based New Ventures. *Journal of Business Venturing*, 5, vol. 5, no. 3, pp. 137-150 ISSN 0883-9026. DOI 10.1016/0883-9026(90)90028-R.

KEMMIS, S. and MCTAGGART, R., 1998. *The Action Research Planner: Action Research and the Critical Analysis of Pedagogy.* 3rd ed. Australia: Deakin University Press.

KESKIN, H. and SENTURK, C., 2010. The Importance of Small and Medium-Sized Enterprises (SMEs) in Economies: Swot Analyses of the SME Sector in Turkey and Albania. *Journal of Economics and Administrative Sciences of Nigde University*, vol. 3, no. 1, pp. 116-132.

KLEIN, H.K. and MYERS, M., 1999. A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, vol. 23, no. 1, pp. 67-93 ISSN 0276-7783.

KROLL, C., LEE, D.and SHAMS, N., 2010. *The Dot-Com Boom and Bust in the Context of Regional and Sectoral Changes.*

KYNG, M. and GREENBAUM, J. M., 1991. Design at work: cooperative design of computer systems. Hillsdale, N.J., L. Erlbaum Associates.

LAMERSDORF, W., V. TSCHAMMER and S. AMARGER. Building the E-service society E-commerce, E-business, and E-government : (13E 2004) Toulouse, FranceAnonymous *4th International Conference on E-Commerce, E-Business, E-Government*, 2004.

LAWSON-BODY, A. and O'KEEFE, T.P., 2006. Interorganizational Relationships in the Context of SMEs' B2B E-Commerce. *Journal of Electronic Commerce in Organizations*, Oct-Dec, vol. 4, no. 4, pp. 1 ISSN 15392937.

LEBRASSEUR, R., ZANIBBI, L. and ZINGER, T., 2003. Growth Momentum in the Early Stages of Small Business Start-Ups. *International Small Business Journal*, vol. 21, no. 3, pp. 315-330 ISSN 0266-2426.

LECOMPTE, M.D., PREISSLE, J. and TESCH, R., 1993. *Ethography and Qualitative Design in Educational Research.* San Diego, Calif. ; Toronto: Academic /z-wcorg/. ISBN 0124405754 9780124405752.

LEE, A., 1999a. A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, 03, vol. 23, no. 1, pp. 1-1 ISSN 02767783.

LEE, T.W., 1999b. *Using Qualitative Methods in Organizational Research.* Thousand Oaks, Calif. [u.a.]: Sage Publ. /z-wcorg/. ISBN 0761908064) 9780761908067 ((cloth: acid-free paper)) 0761908072.

LEVIN, B. and D. CLOWES. From Positivism to Post-Modernism: Can Education Catch up with the Paradigm Shift. Virginia, US, 1991.

LEVINE, H.G., 1985. Principles of Data Storage and Retrieval for use in Qualitative Evaluations. *Educational Evaluation and Policy Analysis*, vol. June, no. 7, pp. 169-186.

LEWIN, K., 1948. *Resolving Social Conflicts; Selected Papers on Group Dynamics.* Gertrude W. Lewin (ed.) ed. New York: Harper & Row.

LEWIS, J., STANWORTH, J. and GIBB, A., 1984. *Success and Failure in Small Business.* Aldershot, Hampshire, England; Brookfield, Vt.: Gower Pub. Co. /z-wcorg/. ISBN 0566006456 9780566006456.

LIAO, J. and WELSCH, H., 2008. Patterns of Venture Gestation Process: Exploring the Differences between Tech and Non-Tech Nascent Entrepreneurs. *The Journal of High Technology Management Research*, vol. 19, no. 2, pp. 103-113 ISSN 1047-8310. DOI 10.1016/j.hitech.2008.10.003.

LIAO, J., WELSCH, H. and TAN, W., 2005. Venture Gestation Paths of Nascent Entrepreneurs: Exploring the Temporal Patterns. *The Journal of High Technology Management Research*, 9, vol. 16, no. 1, pp. 1-22 ISSN 1047-8310. DOI 10.1016/j.hitech.2005.06.001.

LIND, M.R., 1998. Reducing the Barriers to Interorganization Electronic Data Interchange. *ELECTRONIC MARKETS*, vol. 8, no. 1, pp. 42-44 /z-wcorg/. ISSN 1019-6781.

LINDER, J. and CANTRELL, S., 2000. *Changing Business Models : Surveying the Landscape.* Working paper ed. Accenture: Institute for Strategic Change /z-wcorg/.

LINDGREN, R., HENFRIDSSON, O. and SCHULTZE, U., 2004. Design Principles for Competence Management Systems: A Synthesis of an Action Research Study. *MIS Quarterly*, vol. 28, no. 3, pp. 435-472 ISSN 0276-7783.

LIVARI, J., R. HIRSCHHEIM and H.K. KLEIN. Beyond methodologies: keeping up with information systems development approaches through dynamic classificationAnonymous *Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences 1999*. Maui, HI , USA, 1999.

LÖFMAN, P., PELKONEN, M.and PIETILÄ, A., 2004. *Ethical Issues in Participatory Action Research.* - Blackwell Science Ltd ISBN - 1471-6712.

LUKACS, E., 2005. *the Economic Role of SMEs in World Economy, especially in Europe.* Miskolc, Hungary: European Integration Studies.

MAGRETTA, J., 2002. Why Business Models Matter. *Harvard Business Review*, 05, vol. 80, no. 5, pp. 86-92 ISSN 00178012.

MAHADEVAN, B., 2000. Business Models for Internet-Based E-Commerce: An Anatomy. *CALIFORNIA MANAGEMENT REVIEW*, vol. 42, no. PART 4 ISSN 0008-1256.

MAHAJAN, V., SRINIVASAN, R. and WIND, J., 2002. The Dot.Com Retail Failures of 2000: Were there any Winners?. *Journal of the Academy of Marketing Science*, vol. 30, no. 4, pp. 474-486.

MALTERUD, K.K., 1993. Shared Understanding of the Qualitative Research Process. Guidelines for the Medical Researcher. *Family Practice*, vol. 10, no. 2, pp. 201-206 ISSN 0263-2136; 14602229.

MARSHALL, C. and ROSSMAN, G., 2011. *Designing Qualitative Research.* 5th ed.

MAXWELL, J.A.,., 2005. *Qualitative Research Design : An Interative Approach.* Sage Publications ISBN 0803973284.

MARTENSSON, P., and LEE, A. S., 2004. Dialogical Action Research at Omega Corporation. *MANAGEMENT INFORMATION SYSTEMS QUARTERLY.* 28, 507-536.

MAYES, D.G. and MOIR, C., 1990. The growth of small firms in the UK. In: C. MOIR and J. DAWSON eds., Competition and MarketsBasingstoke,: Macmillan, pp. 41-62.

MAZZAROL, T., VOLERY, T., DOSS, N. and THEIN, V., 1999. Factors Influencing Small Business Start-Ups: A Comparison with Previous Research. *International Journal of Entrepreneurial Behaviour & Research*, vol. 5, no. 2, pp. 48-63 ISSN 1355-2554.

MCKAY, E.G., 2001. *Strategic Planning : A Ten-Step Guide.* 2nd ed. Washington, D.C.: National Council of La Raza /z-wcorg/.

MCKAY, J.J. and MARSHALL, P., 2001. The Dual Imperatives of Action Research. *Information Technology & People (West Linn, Or.)*, vol. 14, no. 1, pp. 46-59 ISSN 0959-3845.

MCMULLAN, W.E. and LONG, W.A., 1990. *Developing New Ventures: The Entrepreneurial Option.* last edited 2002 ed. San Diego: Harcourt Brace Jovanovich ISBN ISBN 0155175912.

MILES, M.B., and HUBERMAN, A.M.,., 1994. *Qualitative Data Analysis : An Expanded Sourcebook.* Beverly Hills: Sage. /z-wcorg/. ISBN 0803946538 9780803946538.

MINGERS, J., 2001. Combining IS Research Methods: Towards a Pluralist Methodology. *Information Systems Research*, vol. 12, no. 3, pp. 240-259.

MOLLA, A. and LICKER, P.S., 2005. ECommerce Adoption in Developing Countries: A Model and Instrument. *Information & Management,* 9, vol. 42, no. 6, pp. 877-899.

MORGAN, T., 2002. *Business Rules and Information Systems Aligning IT with Business Goals.* eBook ed. Boston: Addison-Wesley Available from: http://0proquestbus.safaribooksonline.com.library.ecu.edu.au/0201743914 /z-wcorg/. ISBN 0201743914 9780201743913.

Mumford, E., 1983. Designing Human Systems, Manchester Business School, Manchester

NAICS., 2010. *North American Industry Classification System (NAICS).* August 03, 2010, Available from: http://www.census.gov/eos/www/naics/.

NAUR, P., 1983 Program development studies based on diaries. In: Green, T., Payne, S. and van der Veer, G., OHENPsychology of Computer Use, Academic Press, London

NARAYANASWAMY, R.R., 2007. A Critical Assessment of Information Systems Action Research. In: Information systems action research : an applied view of emerging concepts and methodsBoston, MA: Springer, pp. 327-353 ISBN 9780387360591.

NONAKA, I. and TOYAMA, R., June 2005. The Theory of the Knowledge-Creating Firm: Subjectivity, Objectivity and Synthesis. *Industrial and Corporate Change*, June 2005, vol. 14, no. 3, pp. 419-436 DOI 10.1093/icc/dth058.

O'BRIEN, R., 2001. An Overview of the Methodological Approach of Action Research [Um exame da abordagem metodológica da pesquisa ação]. In: R. RICHARDSON ed., Theory and Practice of Action Research [*Teoria e Prática da Pesquisa Ação]*Brazil: Universidade Federal da Paraíba.

OGC., 2010. *Business Case.* OGC. 3 October 2010, Available from: http://www.ogc.gov.uk/documentation_and_templates_business_case.asp.

ORLIKOWSKI, W. and BAROUDI, J., 1991. Studying Information Technology in Organisations: Research Approaches and Assumptions. *Information Systems Research*, vol. 2, no. 1, pp. 1-28.

OSTERWALDER, A., 2007. *An e-Business Model Ontology for the Creation of New Management Software Tools and IS Requirement Engineering.* Université de Lausanne.

OSTERWALDER, A., 2004. *The Business Model Ontology: A Proposition in a Desing Science Approach.* Université de Lausanne.

OSTERWALDER, A. and Y. PIGNEUR., 2002. An e-Business Model Ontology for Modeling e-BusinessAnonymous . Bled, Slovenia.

PETROVIC, KITTL and TEKSTENC., 2001. Developing Business Models for eBusinessAnonymous *International Conference on Electronic Commerce*. Vienna, Austria.

Oxford Advanced Learner's Dictionary., 2011. *Definition of Interview Noun from the Oxford Advanced Learner's Dictionary.* Oxford University Press. Available from: http://oald8.oxfordlearnersdictionaries.com/dictionary/interview_1.

PANDYA, A.M. and DHOLAKIA, N., 2005. B2C Failures: Toward an Innovation Theory Framework:. *Journal of Electronic Commerce in Organizations*, vol. 3, no. 2, pp. 68.

PAPAZAFEIROPOULOU, A., A. POULOUDI and W.L. CURRIE., *2001.* Applying the stakeholder concept to electronic commerce: extending previous research to guide government policy makers *System Sciences. Proceedings of the 34th Annual Hawaii International Conference on*, 2001.

PATELI, A.G. and GIAGLIS, G.M., 2004. A Research Framework for Analysing eBusiness Models. *European Journal of Information Systems*, 12, vol. 13, no. 4, pp. 302-314 ISSN 0960085X. DOI 10.1057/palgrave.ejis.3000513.

PEEL, M. and BRIDGE, J., 1998. How Planning and Capital Budgeting Improve SME Performance. *Long Range Planning*, vol. 31, no. 6, pp. 848-856 /z-wcorg/. ISSN 0024-6301.

PINSON, L., 2008. *Anatomy of a Business Plan : A Step-by-Step Guide to Building the Business and Securing Your Company's Future.* 7th ed. Tustin, CA: Out of Your Mind & into the Marketplace /z-wcorg/. ISBN 9780944205372 0944205372.

POOL, R., 1989. Ecologists Flirt with Chaos: The Jury is Still Out on Whether Biological Populations Exhibit Chaos, but the Search for this Unusual Type of Order is Leading to New Ways of Thinking about Ecology. *Science (New York, N.Y.)*, vol. 243, no. 4889, pp. 310-3 /z-wcorg/. ISSN 0036-8075.

PORTER, M.E., 2001. Strategy and the Internet. *Harvard Business Review*, 03, vol. 79, no. 3, pp. 62-78 ISSN 00178012.

PORTER, M.E. 1996. What is Strategy?. *Harvard Business Review* **November-December**, 61-78.

RADOVILSKY, Z., 2005. Defining Components and Taxonomy of e-Commerce Business Models. *Journal of Academy of Business and Economics*, 03/01/2005, vol. 5, no. 3 ISSN 1542-8710.

RAPPA, M., 2010. *Business Models on the Web.* Managing The Digital Enterprise. Sunday, 17-Jan-2010, Available from: http://digitalenterprise.org/models/models.html#Utility.

RAPPA, M.A., 2004. The Utility Business Model and the Future of Computing Services. *IBM Systems Journal*, vol. 43, no. 1, pp. 32-32-42 ABI/INFORM Research. ISSN 00188670.

RAPPORT, R.N., 1970. Three Dilemas of Action Research. *Human Relations*, vol. 23, no. 6, pp. 499-513.

RAY, D.M., 1993. Understanding the Entrepreneur: Entrepreneurial Attributes, Experience and Skills. *Entrepreneurship and Regional Development*, vol. 5, no. 4, pp. 345-357 /z-wcorg/. ISSN 0898-5626.

RAYPORT, J.F. and JAWORSKI, B.J., 2002. *Introduction to e-Commerce.* Boston: McGraw-Hill/Irwin marketspaceU WorldCat. ISBN 0072510242 9780072510249.

REPONEN, T., 1992. Action research in information systems strategy: formulation and implementation. In: von Hellens, L. (ed.) Action Research in Management Information Systems Studies, Turku School of Economics, Turku, Finland

REYNOLDS, P. *Reducing Barriers to Understanding New Firm Gestation*: *Prevalence and Success of Nascent Entrepreneurs*Anonymous *Academy of Management Meetings*. Dallas, TX., 1994.

REYNOLDS, P. and WHITE, S.B., 1993. *Wisconsin's Entrepreneurial Climate Study : Summary Report to Wisconsin Housing and Economic Development Authority.* Milwaukee, Wis.: University of Wisconsin-Milwaukee, Urban Research Center /z-wcorg/.

REYNOLDS, P. and MILLER, B., 1992. New Firm Gestation: Conception, Birth, and Implications for Research. *Journal of Business Venturing*, 9, vol. 7, no. 5, pp. 405-417 ISSN 0883-9026. DOI DOI: 10.1016/0883-9026(92)90016-K.

RICHARD BASKERVILLE, J.P., 1999. Grounded Action Research: A Method for Understanding IT in Practice. *Accounting, Management and Information Technologies*, vol. 9, no. 1, pp. 1-23 ISSN 09598022.

OSBORNE, R., 1993. Why Entrepreneurs Fail: How to Avoid the Traps. *Management Decision*, vol. 31, no. 1, pp. 18-21 /z-wcorg/. ISSN 0025-1747.

ROBSON, C., 1995. *Real World Research : A Resource for Social Scientists and Practitioner-Researchers.* Oxford [u.a.]: Blackwell /z-wcorg/. ISBN 0631176896 9780631176893.

ROGERS, D.H., AKELEY, W. and EDELSON, R., 2011. *SECOND-STAGE ENTREPRENEURS - Entrepreneur's Resource Center: Are You Prepared to Succeed in Business?* Edward Lowe Foundation. originally appeared in the Spring 1996 issue of Entrepreneurial Edge., Available from: http://edwardlowe.org/index.elf?page=sserc&storyid=8810&function=story.

ROWLEY, J.E., 2002. *E-Business : Principles and Practice.* New York: Palgrave WorldCat. ISBN 0333949137.

Ruby Roy Dholakia and,Nir Kshetri, 2004. Factors Impacting the Adoption of the Internet among SMEs. *Small Business Economics*, vol. 23, no. 4.

SCALA, S. and MCGRATH, R., 1993. Advantages and Disadvantages of Electronic Data Interchange an Industry Perspective. *Information & Management*, 8, vol. 25, no. 2, pp. 85-91 ISSN 0378-7206. DOI DOI: 10.1016/0378-7206(93)90050-4.

SCHEIN, J., 2011. *The Role of the Business Model and Strategy for Business.* Streetdirectory.com Business and Finance Guide. Available from: http://www.streetdirectory.com/travel_guide/10738/business_and_finance/the_role_of_the_business_model_and_strategy_for_business.html.

SCHEIN, E.H., 1988. *Process Consultation, Volume I.* Reading, Mass.: Addison-Wesley Pub. Co. /z-wcorg/. ISBN 0201067366 9780201067361.

Secretaria de Gobernacion (Mexico)., 2011. *Diario Oficial De La Federación.* Gobierno de la Republica Mexicana. 3 February, 2011, Available from: dof.gob.mx/.

SEDDON, P. and G. LEWIS. Strategy and Business Models: What's the Difference?Anonymous *Pacific Asia Conference on Information Systems (PACIS)* . Adelaide, South Africa, 2003.

SELHOFER, H., 2005. *the European Business Report. 4th Synthesis Report of the e-Business W@tch.* http://www.ebusiness-watch.org/key_reports/documents/EBR05.pdf ed. Luxembourg: European Commission: Enterprise & Industry Directorate General.

SERAROLS, C. and URBANO, D., 2008. Do Dot.Com and Traditional Entrepreneurs Succeed in the Same Way? A Multiple Case Study in Catalonia. *International Journal of Technoentrepreneurship*, vol. 1, no. 4, pp. 405 ISSN 1746-5370.

SERAROLS-TARRÉS, C., 2009. Entrepreneurship in the Internet. In: M. KHOSROW-POUR ed., Encyclopedia of Information Science and Technology, Second EditionSecond ed. Hershey, PA: IGI Global, pp. 1405-1411 ISBN 978-159904-988-5. DOI 10.4018/978-1-60566-026-4.ch222.

SERRANO, A., S. DECESARE and R. PAUL. An ontology to model the research process in information systems. *Sustainable IT Collaboration Around the Globe, 16th Americas Conference on Information Systems*. Lima, Peru, 2010a.

SERRANO, A.E., A. SERRANO and M. AL-DEBEI. Implementing an e-business model for a dot-com SME: Lessons LearnedAnonymous . Lima, Peru, 2010b.

SHANE, S. and VENKATARAMAN, S., 2000. The Promise of Enterpreneurship as a Field of Research. *Academy of Management Review*, vol. 25, no. 1, pp. 217-226 /z-wcorg/. ISSN 0363-7425.

SHARMA, S.K., 2009. *Human Resource Management : A Strategic Approach to Employment.* First ed. New Delhi: Global India Pub.

SHAW, E.E., 1999. A Guide to the Qualitative Research Process: Evidence from a Small Firm Study. *Qualitative Market Research*, vol. 2, no. 2, pp. 59-70 ISSN 1352-2752.

SIENKIEWICZ, S., 2002. *The Evolution of EFT Networks from ATMs to New on-Line Debit Payment Products.* April 2002 ed. Ten Independence Mall, Philadelphia: Federal Reserve Bank of Philadelphia.

SIMPSON, M., TUCK, N. and BELLAMY, S., 2004. Small Business Success Factors: The Role of Education and Training. *Education + Training*, vol. 46, no. 8/9, pp. 481-491 /z-wcorg/. ISSN 0040-0912.

SMALIBONE, D., 1990. Success and Failure in New Business Start-Ups. *International Small Business Journal*, vol. 8, no. 2, pp. 34-47 ISSN 0266-2426.

SMITH, M.K., 2001. *Kurt Lewin: Groups, Experiential Learning and Action Research.* The encyclopedia of informal education. September 22, 2011, Available from: http://www.infed.org/thinkers/et-lewin.htm.

STEINFIELD, C., BOUWMAN, H. and ADELAAR, T., 2002. The Dynamics of Click-and-Mortar Electronic Commerce: Opportunities and Management Strategies. *International Journal of Electronic Commerce*, vol. 7, no. 1, pp. 93-119 /z-wcorg/. ISSN 1086-4415.

STREET, C. T., & MEISTER, D. B., 2004. Small Business Growth and Internal Transparency: The Role of Information Systems. *MANAGEMENT INFORMATION SYSTEMS QUARTERLY.* 28, 473-506

STONE, E.F., 1978. *Research Methods in Organizational Behavior.* Santa Monika, Calif.: Goodyear Publ. Co. /z-wcorg/. ISBN 0876208014 9780876208014 0876208022 9780876208021.

STONEHOUSE, G. and PEMBERTON, J., 2002. Strategic Planning in SMEs: Some Empirical Findings. *Management Decision*, vol. 40, no. 9, pp. 853-861 ISSN 00251747.

STOREY, D.J., 2002. *Understanding the Small Business Sector.* London [u.a..: Thomson Learning /z-wcorg/. ISBN 1861523815 9781861523815.

SUSMAN, G.I. and EVERED, R.D., 1978. *An Assessment of the Scientific Merits of Action Research. ,* Dec78, ISBN 00018392.

SWAYNE, C.B. and TUCKER, W.R.,., 1973. *The Effective Entrepreneur.* 2nd ed. Morristown, N.J.: General Learning Press /z-wcorg/.

The Companies Act., 2006. *The Companies Act 2006: CA23170 - PMA: FYA: Meaning of SME.* Legislation - Amendment ed. UK: , 2005,.

SHI DANG AN GUAN., 2009. *Business Documents.* Singapore; [Beijing, China]: Cengage Learning Asia ; China Renmin University Press Available from: http://galenet.galegroup.com/servlet/eBooks?ste=22&docNum=CX3292899999 /z-wcorg/. ISBN 9789814253772 9814253774.

TIMMONS, J.A., 1999. *New Venture Creation : Entrepreneurship for the 21st Century.* 5th ed. Boston: Irwin/McGraw-Hill /z-wcorg/. ISBN 0256197563 9780256197563 0071167900 9780071167901.

TUCKER, D. and LAFFERTY, A., 2004. Implementing Electronic Commerce in SMEs: Processes and Barriers*. Journal of Electronic Commerce in Organizations*, Oct-Dec, vol. 2, no. 4, pp. 20 ISSN 15392937.

TURBAN, E., LEE, l., KING, D. and CHUNG, H.M., 2000. *Electronic Commerce: A Managerial Perspective.* Upper Saddle River, NJ, USA: Prentice-Hall, Inc ISBN ISBN:0-13-023118-1.

VAN DE VEN, A.H. and POOLE, M.S., 1990. Methods for Studying Innovation Development in the Minnesota Innovation Research Program*. Organization Science*, vol. 1, no. 3, pp. 313-335 ISSN 1047.

VENKATARAMAN, S., Van De Ven, Andrew H., BUCKEYE, J. and HUDSON, R., 1990. Starting Up in a Turbulent Environment: A Process Model of Failure among Firms with High Customer Dependence*. Journal of Business Venturing*, vol. 5, no. 5, pp. 277-295 /z-wcorg/. ISSN 0883-9026.

VESPER, K.H., 1990. *New Venture Strategies (Revised Edition).* 2nd edition ed. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship: Prentice Hall.

VIDGEN, R., 2002. WISDM: Constructing a Web Information System Development Methodology. *Information Systems Journal*, 12 247-261.

WALLER, V., B. JOHNSTON and S. MILTON. An empirical investigation of the epistemological assumptions underlying two ISD approachesAnonymous . Costa Blanca, Alicante, Spain, 2006.

WALSHAM, G., 1995a. The Emergence of Interpretivism in IS Research*. INFORMATION SYSTEMS RESEARCH*, vol. 6, no. 4, pp. 376-394.

WALSHAM, G., 1995b. Interpretive Case Studies in IS Research: Nature and Method*. European Journal of Information Systems*, vol. 4, no. 2, pp. 74-81 ISSN 0960-085X.

WANG, M. and WANG, H., 2006. From Process Logic to Business Logic--A Cognitive Approach to Business Process Management*. Information & Management*, vol. 43, no. 2, pp. 179 ISSN 0378-7206.

WASTELL, D., KAWALEK, P., LANGMEAD-JONES, P. and ORMEROD, R., 2004. Information Systems and Partnership in Multi-Agency Networks: An Action Research Project in Crime Reduction. Information and Organization, vol. 14, no. 3, pp. 189 ISSN 1471-7727.

WATSON, K., HOGARTH-SCOTT, S. and WILSON, N., 1998. Small Business Start-Ups: Success Factors and Support Implications*. International Journal of Entrepreneurial Behaviour & Research*, vol. 4, no. 3, pp. 217-238 ISSN 1355-2554.

WEBER, R., 2004. The Rhetoric of Positivism Versus Interpretivism: A Personal View. *MIS Quarterly*, vol. 28, no. 1, pp. iii-xii.

WEBFINANCE, I., 2011. *BusinessDictionary.Com: A Business Case Definition.* WebFinance, Inc. Available from: http://www.businessdictionary.com/aboutus.php.

WEILL, P. and VITALE, M.R., 2001. *Place to Space : Migrating to Ebusiness Models.* New York, USA: Harvard Business School Press /z-wcorg/. ISBN 157851245X 9781578512454.

WEISMAN, J., 2000. *The Making of E-Commerce: 10 Key Moments.* The E-commerce Times. August 22, 2000, Available from: http://www.ecommercetimes.com/story/4085.html%20%20?welcome=1204830076.

WILSON, R.,F., 1999. Dot.Com Countdown: 7 Steps to E-Business Launch. *Web Marketing Today*, 13 December 1999, vol. December, no. 66 pp. 2011. Available from: http://www.wilsonweb.com/wmt5/jesuswalk-launch.htm.

WINDRUM, P. and DE BERENGER, P., 2004. Factors Affecting the Adoption of Intranets and Extranets by SMEs: A UK Study. *Manchester Metropolitan University Business School Working Paper Series* SCOPUS.

WINTER, R., 1987. *Action-Research and the Nature of Social Inquiry : Profession, Innovation and Education Work.* Aldershot u.a.: Avebury /z-wcorg/. ISBN 0566055325 9780566055324.

WIREDU, G.O., 2007. User Appropriation of Mobile Technologies: Motives, Conditions and Design Properties. Information and Organization, vol. 17, no. 2, pp. 110 ISSN 1471-7727.

WOLCOTT, H.F., 1996. *Transforming Qualitative Data : Description, Analysis, and Interpretation.* 4th ed. California: Thousand Oaks: Sage Publications.

WYMER, S. and REGAN, E., 2005. Factors Influencing e-commerce Adoption and use by Small and Medium Businesses. *Electronic Markets*, 12, vol. 15, no. 4, pp. 438-453 ISSN 10196781.

YIN, R.K., 2009. Case Study Research : Design and Methods 4th Ed.

ZENI, J.J., 1998. A Guide to Ethical Issues and Action Research. *Educational Action Research*, vol. 6, no. 1, pp. 9-19 ISSN 0965-0792; 17475074.

ZELLERMAYER, M., AND PEGGY RONN. (2000). Making tacit knowledge visible through the interplay between action research and videotaping. *Educational Administration Abstracts.* 35.

ZHENG, J., et al, 2004. Small Firms and e-Business: Cautiousness, Contingency and Cost-Benefit. *Journal of Purchasing and Supply Management*, 1, vol. 10, no. 1, pp. 27-39 ISSN 1478-4092. DOI 10.1016/j.pursup.2003.11.004.

ZOTT, C. and AMIT, R., 2008. The Fit between Product Market Strategy and Business Model: Implications for Firm Performance. *Strategic Management Journal*, vol. 29, no. 1, pp. 1-26.

ZUBER-SKERRITT, O. and PERRY, C., 2002. Action Research within Organisations and University Thesis Writing. *Journals*, vol. 9, no. 4.