Value Co-Creation Framework for Co-Designing Strategic Approach in Public Service:

A Grassroots Enterprise Development Programme in Thailand (the OTOP Programme)

A Thesis Submitted for the Degree of Doctor of Philosophy

By

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Declaration

I hereby declare that I am the sole author of this thesis, unless otherwise stated in the text. The work was carried out in accordance with the university's regulations. The results of this thesis are based on my own investigations and evaluations. I confirm that this work has not been previously submitted for any other degree or academic award.

Mathurada Bejrananda

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Abstract

OTOP (One Tambon One Product) is a grassroots enterprise development programme initiated by the Thai government. Its objective is to promote the local economy by encouraging locals to create and sell products that utilise local resources. However, the programme has been executed in a top-down manner, resulting in mismatched support for local communities. This research proposes a value co-creation framework with co-design principles to give local entrepreneurs more ownership over the OTOP programme. The research methodology employed a combination of qualitative and quantitative methods, and the exploration of the theoretical perspective was informed by a literature review and cross-national case studies. Interviews with local authorities, entrepreneurs, and experts were conducted in order to identify barriers, while questionnaire surveys were used to obtain insights from OTOP customers during the investigation stage. The initial framework was co-designed with design experts. In the evaluation stage, workshops and interviews were conducted with local enterprises and local authorities in order to evaluate the framework. The findings were then formed into the final recommendation: a value co-creation framework with facilitator and implementation guidelines for co-creating mutual value that is constructed collectively and creatively through interactions among stakeholders. Mutual value is key to enterprise development and can be used to co-design a strategic approach to public service. This approach enables the planning of meaningful actions and supports tailored to the needs of the locals. The value co-creation framework can help establish an equal partnership between local entrepreneurs and the government, promoting a shared sense of ownership and commitment towards development activities. This approach enables entrepreneurs to have a comprehensive understanding of their business goals, leading to sustainable benefits for all stakeholders. This research provides a practical implementation that can be utilised by local authorities and other supporting bodies in the grassroots enterprise development field, beyond just those participating in the OTOP programme.

Definition of terms

Co-creation	Co-creation refers to any act of collective creativity. It is characterised by new interpretations and discoveries triggered by social interaction. Co-creation can be applied according to three perspectives: (1) as a mindset, (2) as a method, and (3) as a tool or technique.
Co-design	Co-design is a means used in this research to develop a strategic approach for the OTOP service. The objective is to give locals more ownership over the OTOP programme by treating participants as equal partners throughout the process, from idea generation to decision-making. The principles of co-design are also utilised in research methodology, such as co-designing the workshop activity with design experts.
Community-based enterprise (CBE)	The community-based enterprise is a type of business rooted in the local community and operating with the goal of promoting economic development and social welfare within the community. It is usually run by community members.
Facilitator guidelines	Facilitator guidelines for the value co-creation framework refer to step-by-step instructions for facilitators to conduct workshop activities in each phase of the framework. These guidelines help achieve the expected outcomes of the workshop.
Implementation guidelines	Implementation guidelines for the value co-creation framework provide a more holistic picture of how to work with the framework, rather than just the step-by-step facilitator guidelines. Facilitators should consider these factors before, during, and after implementing the framework's activities.
Key areas for development	Key areas for development for grassroots enterprise development can be categorised according to four areas, namely: (1) products and services; (2) marketing and communication; (3) production and management; and (4) networking and social relationships.

Local authorities	Local authorities in this research refer to government service providers in the OTOP programme, which mainly refers to the personnel in the Community Development Department (CDD), Ministry of Interior. However, it also refers to other government agencies (e.g., the Ministry of Agriculture and Cooperatives and the Ministry of Industry) that are involved in the OTOP programme.
Mutual value	Mutual value refers to a set of values that are expanded upon through the co-creation process among stakeholders. This concept serves as the foundation for further action in development.
OTOP products	OTOP products refer to locally made items that are part of the OTOP programme. These include a variety of items such as decorative pieces, handicrafts, souvenirs, textiles, food, beverages, and herbal products.
OTOP programme	The OTOP programme is a government initiative aimed at developing grassroots enterprises. Its goal is to boost the local economy by inspiring locals to produce and market goods that utilise locally-sourced resources.
OTOP service	OTOP service refers to the assistance provided by the government to local businesses in order to promote their growth and development.
Single-owner enterprise	The single-owner enterprise refers to a business that is solely owned by one individual. Although the business belongs to one person, it may still employ family or community members.
Stakeholders	Stakeholders in the OTOP context refer to three groups of people: (1) local entrepreneurs, (2) local authorities, and (3) OTOP customers. In comparison, the key stakeholders refer to only the first two groups that are directly involved in the OTOP programme and service.
Sustainable development	Sustainable development in this research is based on the fundamental principles of the original OVOP (One Village One Product) movement in Japan. These principles include fostering local pride, developing human resources, promoting self-reliance, and encouraging creativity. Together, they form what is known as

community capacity, which is a critical element for grassroots enterprise development.

Value co-creation Value co-creation is a process of creating value (or benefit) that is realised through collective activities and interactions among stakeholders, using integrated resources (such as knowledge, skills, expertise, and preferences) in order to find mutual value.

Value Co-Creation (VCo) framework The Value Co-Creation (VCo) framework is the result of this research. It is provided to local authorities under the OTOP programme as an approach to collaborating with local entrepreneurs. The framework aims to co-create value for local businesses and co-design a strategic approach for OTOP services in order to provide profound support to the locals.

Value dimensions Value dimensions in the OTOP context refer to the values associated with grassroots enterprise development. These values include (1) emotional, (2) knowledge, (3) social, regional, and environmental, (4) functional (of the product and service), and (5) economic values.

Value drivers Value drivers are broad categories that can be determined based on overarching goals. In the context of this research, value drivers can be derived from key areas for development, including products and services, marketing and communication, production and management, and networking and social relationships. Discussions on these categories can provide valuable insights that can be used as value drivers.

Value source Value source or resource in value co-creation comes from people's thoughts, opinions, preferences, perceptions, expertise, knowledge, and norms. This source of value can be determined as the subject for discussion and can be used as a starting point for value exploration in a co-creation process

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Chapter 1 – Introduction and research background

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Table 1.1 Overall structure of Chapter 1

This chapter introduces the research, including the background of the One Tambon One Product (OTOP) programme implemented in Thailand and the original One Village One Product (OVOP) in Japan. The chapter also discusses the current implementation barriers. Finally, the research question, aims, and objectives are presented to clarify the research focus of this PhD.

1.1 Introduction to OTOP

OTOP is a Thai nationwide programme launched in 2001. The programme promotes the development of the rural economy by developing local products that utilise local resources. It was implemented from the earlier movement called 'OVOP' (One Village One Product), initiated in Oita prefecture, Japan, in 1979, with a minor change of the wording from 'OVOP' to 'OTOP' (One Tambon One Product). The word 'Tambon' means village or township in the Thai language.

1.1.1 The origins of the programme

The origin of the movement, OVOP, is defined as a 'strategic movement' by rediscovering and revitalising the rural economy through a community-based business activity (Kurokawa, Tembo and Te Velde, 2010). The primary model of the programme started from a small village called Oyama in 1961. Due to the problem of the depopulation in Oyama, the people in this town were facing poverty and the town was viewed as the most impoverished in Oita prefecture (Kurokawa, Tembo and Te Velde, 2010). This is because of the geographical disadvantage there, such as being surrounded by cedar-forested mountains and lacking land to do agriculture or farming. Many farmers retired from the farm business and sought a job in the urban areas instead (Miyoshi *et al.*, 2014). In order to overcome poverty, 'the NPC' (New Plum and Chestnut) was introduced by Harumi Yahata, the head of the cooperative. It aimed to encourage and practice agricultural diversification in the town by introducing appropriate economic crops (including plums, chestnuts, and high-grade mushrooms) that could be grown around the town. Oyama's agricultural cooperative became the most successful rural enterprise in Japan, driven by the belief of 'local wisdom' as the key success of the movement (Natsuda *et al.*, 2012).

According to the achievement in Oyama, Dr Morihiko Hiramatsu, the governor of Oita prefecture, applied the Oyama model to the whole prefecture and called it the OVOP programme. The OVOP approach encouraged local people to develop unique regional products to be known at the national and global levels (Kurokawa, Tembo and Te Velde, 2008). The Japan International Cooperation Agency (JICA) and the Overseas Development Institute (ODI) reported the impetus for the OVOP principles, which has three aspects as follows (Kurokawa, Tembo and Te Velde, 2010):

(i) Local Yet Global: developing potential products that represent the local or regional area to compete in the national and global market

(ii) Self-reliance/Creativity: encouraging the local people to raise their ideas and make decisions on what products to sell for their village; the local government only assist in technical support

(iii) Human Resources Development: fostering innovation and creativity by inspiring local people to improve and harness their skills

In addition to these principles, value creation and the generation of local brands can be evidenced as one of the main activities in the OVOP programme (Natsuda *et al.*, 2012). The products were developed from primary agricultural products into other processed goods under the designed brands. The activities were mainly locally-led rather than led by the government. The role of local authorities acted as a catalyst for the local community, which only provided support and training, which underlay the threefold aspect of the OVOP principles.

1.1.2 Applications of OVOP worldwide

Inspired by the success of the OVOP programme in Japan, the programme has been adapted and used in many countries, such as Taiwan, Thailand, Pakistan, Indonesia, Cambodia, the Philippines, Malaysia, Mongolia, Malawi and Senegal. However, the pursuits are different from country to country. Experts have observed that the OVOP programme had been implemented internationally as a quick fix for community development and local industrial promotion (Kurokawa, Tembo and Te Velde, 2008; Stenning and Miyoshi, 2008).

In the 1980s, China was the first country to develop the OVOP programme outside Japan in Shanghai city under the so-called ‘One Hamlet One Product’. The objective was to enhance the regional economy by producing rural products, consequently mitigating the economic gap between the population in the urban and rural areas. Table 1.2 presents the OVOP movements that have implemented in Asia.

One of the high-flying flagships of the OVOP concept is the ‘One Tambon, One Product’ in Thailand. With the application at the national level, the number of participating communities exceeded 50,000. The support from the government also provided funding alongside the programme implementation. Likewise, in Cambodia and Laos, the same strategy was activated in both countries (Thanh *et al.*, 2018).

Table 1.2 OVOP Movement in Asia (Igusa, 2006)

China	(1) One Hamlet One Product Movement (Shanghai) (2) One Town One Product Movement (Shanghai) (3) One Region One Vista Movement (Shanghai) (4) One Village One Treasure Movement (Wuhan) (5) One Community One Product Movement (Jiangsu province) (6) One Product Movement (Jiangsu province) (7) One Village One Product Movement (Shaanxi province) (8) One Village One Product Movement (Jianxi province)
Philippines	(9) One Barangay One Product Movement (10) One Region One Vision Movement
Malaysia	(11) Satu Kampung, Satu Produk Movement
Indonesia	(12) Back to Village (East Java)
Thailand	(13) One Tambon One Product Movement
Cambodia	(14) One Village One Product Movement
Laos	(15) Neuang Muang, Neuang Phalittaphan Movement
Mongolia	(16) Neg Baag, Neg Shildeg Buteegdekhuun

Noticeably in the Asian context, the OVOP movement is strongly led, guided and supported by the government. This practice is dissimilar to the Japanese OVOP programme, which advocated the independent people's movement and encouraged the locals to be less reliant on government support (Kurokawa, Tembo and Te Velde, 2008). Furthermore, the application of the OVOP programme in Asian developing countries was influenced by the globalisation trend. As a result, the implementation was perceived as an alternative to national economic development, particularly in Thailand, the Philippines and China (Igusa, 2006), resulting in the promotion of export products on the global scale (Kurokawa, Tembo and Te Velde, 2008).

Figure 1.1 The timeline of OVOP implementation in another countries (IOVOP, no date)

Outside Asia, in 2003, the Republic of Malawi was the first country to implement the OVOP movement in Sub-Sahara Africa as a national project. In this case, the OVOP is considered as a microfinance initiative granted to the chosen entrepreneurs based on the review of the proposal carried out by the government's OVOP secretariats (Mukai and Fujikura, 2015). Another case in the sustainability of the OVOP's execution is in the Kyrgyz Republic which began in 2006. With cooperation from the Japan International Cooperation Agency (JICA), the development plan is based on the collaborative approach to promote socio-economic development. This approach involved on-the-job training from experts and volunteers from Japan to provide real business experience and to support participants' self-reliance in future projects (Mukai and Fujikura, 2015).

1.1.3 The aims and expected outcomes of the Thai OTOP programme

Looking back to the reasons that led to the development of the programme, in 1997, Thailand was hit by the Asian financial crisis and went into a long period of recession. The economy plunged, and poverty was a critical problem (Son, 2012). This crisis significantly affected rural areas due to their depopulation, which was a result of the investment of foreign capital and modern industries in the urban areas since the 1980s (Kurokawa, 2010; Son, 2012). The populist government at that time, led by Prime Minister Thaksin Shinawatra (2001-2006), introduced the OTOP programme as a means to overcome poverty with a highlight on the grassroots economy. The initial government support began by issuing a moratorium on farmer debt payments for three years and established a Village and Rural Revolving Fund, which allowed each village to borrow up to one million baht (approx. $27,000). This fund, therefore, became the primary source of capital for the OTOP programme in each region (Zerrillo and Thomas, 2007).

With an intention to overcome the economic crisis, the aim of the OTOP programme focused on poverty alleviation and rural economy revitalisation (Kurokawa, 2009; Natsuda *et al.*, 2012) and promoted microeconomic efficiency at the grassroots level (Zerrillo and Thomas, 2007) by utilising local resources with the participation of the local community. The expected outcomes was to strengthen the rural economy and societies and mitigate the overall country's economic crisis (Kurokawa, 2009).

1.1.4 OTOP product categories

OTOP products are based on local resources, knowledge and cultures, which differ in different regions of the country. They range from agricultural products to processed food, textiles, clothing, home decoration, souvenirs, herbs, food supplements, and personal care items. In

2010, the Community Development Department (CDD) reported that the total number of registered products was 85,183, which can be divided into (1) decorative items, handicrafts and souvenirs 36.8%; (2) textiles 25.1%; (3) food 23.9%; (4) herbal products 10.9%; and (5) beverage 3.6% (Natsuda *et al.*, 2012).

Figure 1.2 Example of OTOP products (Department of Business Development, 2017)

1.1.5 Type of OTOP entrepreneurs

According to the Fifth National Socio-Economic Development Plan, which was active between 1982 and 1986, the Thai government focused on promoting community-based enterprises (CBEs) as additional income for rural households. Subsequently, when the OTOP programme was introduced in 2001, CBEs became a foundation for the OTOP scheme. In 2010, the Community Development Department reported that 4,228 entrepreneurs were registered in the OTOP programme, which can be categorised as (1) community-based enterprises (CBEs) at 66.8%; (2) single-owner enterprises at 31.1%; and (3) small and medium-sized enterprises (SMEs) at 2.2% (see Figure 1.3). CBEs remained the majority of OTOP entrepreneurs, and this group accounted for 34% of the nationwide CBEs (Natsuda *et al.*, 2012).

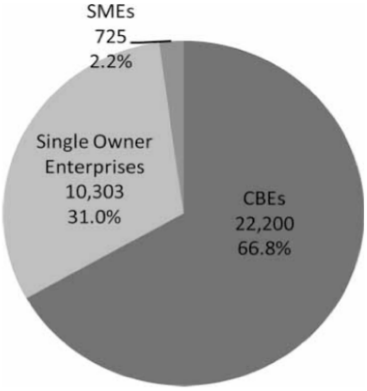


Figure 1.3 Proportions of OTOP entrepreneurs by types in 2010 (Natsuda *et al.*, 2012)

1.1.6 OTOP system

1.1.6.1 Management structure

In order to understand the structure of the programme, it is necessary to investigate how it has been managed. As mentioned earlier, OTOP implementation was promoted under the master plan from the central government administrated by the Community Development Department of the Ministry of Interior. In Figure 1.4, it can be seen that the programme management structure was organised hierarchically and had top-down decision-making from the central government, which had the National OTOP Committee as the centre. The roles of the National OTOP Committee include: (1) deciding on strategies and master plans; (2) allocation of budgets; (3) setting standards of the OTOP products; (4) managing the OTOP product database; and (5) providing an advisory review of the overall OTOP operation to the cabinet (Natsuda *et al.*, 2012). The intermediate-level administrations are carried out by provincial, regional and local authorities, which include the Provincial OTOP committee, the District OTOP Committee and the Tambon OTOP Committee, respectively. At the provincial level, its essential roles are: (1) conducting workshops and training; (2) rating the OTOP product s; and (3) OTOP logo mark authorisation. At the lower level, the District OTOP Committee has a role in the OTOP registration process, OTOP product evaluation, and community frontline enquiry.

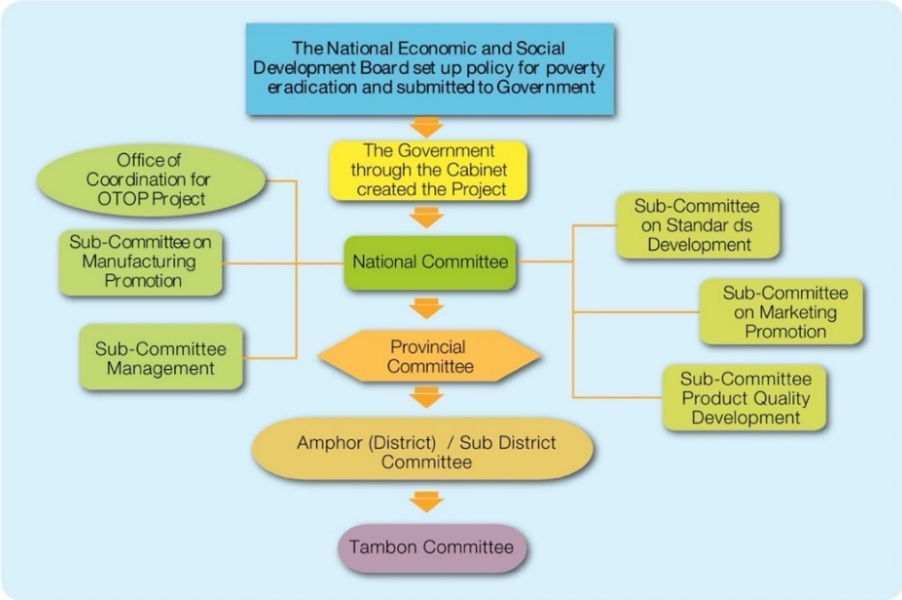


Figure 1.4 OTOP Programme management structure, modified from (TICA, 2010)

1.1.6.2 Main activities and type of supports

Since the programme has been operated for over a decade, the main activity has been refocused over time. The plan was proposed as a roadmap from the central government and strongly involved marketing promotion activities as a key (Natsuda *et al.*, 2012). Table 1.3 illustrates the focused activities from 2001 to 2018.

Table 1.3 Main focus of the OTOP programme and its purpose, summarised from CDD (no date), Natsuda *et al.* (2012), Son (2012) and Tanwattana (2012)

Year	Main focus	Purpose
2001	Ministerial Integration	○ To declare the programme to the public ○ To legislate the National OTOP committee ○ To rearrange the management system of the OTOP movement by involving the government divisions to work together ○ To issue the strategy and plan for the OTOP, support the network of entrepreneurs, help increase productivity and support the export market.
2002	Search for OTOP Products	○ To search for excellent products from the registered products (80,000 products)
2003	OTOP Product Champion (OPC)	○ To grade the OTOP products and promote the OTOP programme in the global market ○ To promote OTOP by organising the OTOP Midyear fair and the OTOP City Fair
2004	Standard Champion, Smart OTOP and OTOP premium	○ To emphasise the quality of product and standard for productivity
2005	Marketing OTOP	○ To promote the OTOP products to the global market by organising the OTOP City Fair, particularly highlighting the 3-5 stars products to display in the global exhibition
2006	Search for Excellent OTOP and OTOP Village Champion (OPC)	○ To search for the provincial Star OTOP in each region to promote the high product quality
2007	Knowledge-Based OTOP	○ To develop the Knowledge-Based OTOP (KBO) ○ To build the KBO network in 75 communities to improve the standard quality of the products and to distribute the products domestically and overseas
2008	Entrepreneur Promotion	○ To provide training and support to OTOP entrepreneur ○ To support the local entrepreneur with management and business skill
2009	New marketing strategy added and Promoting Young OTOP Camp	○ To increase the number of the channels for selling the OTOP products ○ To launch the OTOP Entrepreneur Conference scheme ○ To encourage the young generation to become OTOP entrepreneurs
2010	Sustainability of OTOP	○ To promote local wisdom as a value-added strategy to better compete in the market
2018	OTOP Nawatwithi	○ To promote community-based tourism

In 2018, the central government introduced another strategic direction called *'OTOP Nawatviti'* to promote historical and cultural tourism. The objective was to attract tourists to the local area,

broaden the opportunity for local business, bring the locals together, and build a connection between an OTOP product and its origin.

In order to achieve the OTOP's goals, the central government provides all of the support to the locals. The type of support includes product exhibitions, marketing support, financial support, technical support, and business advice. However, in the start-up stage, local entrepreneurs mainly rely on self-learning and their own experience. In terms of training, the government is concerned about how local entrepreneurs might acquire the essential skills to run their businesses. As a result, the government provides guidance and training programmes – some are organised by the government itself, and some are run by external organisers. The topics include advertising, management, accounting, packaging, and technical support (Natsuda *et al.*, 2012).

1.1.6.3 Process of participation and OTOP product ranking system

Looking at the process of participation, OTOP uses the registration system as a medium for the locals to join the programme. At first, the eligible entrepreneur has to meet the following criteria: the business must relate with the local community (e.g., the product is produced in the local community, the product uses local resources, management is run by the locals, and/or the local community are beneficiaries). Enterprises can join by signing up with their local authority, the Community Development Department, which oversees the registration process. After joining, they can benefit from government support. In 2003, the government introduced the OTOP Product Champion (OPC) scheme and OTOP certificates, which have been used to evaluate the quality of the products. Subsequently, OTOP-registered products are graded using the star grading system, from one star (the lowest quality) to five stars (the highest quality). The criteria for assessment include the potential for export, consistency in production, the level of consumer satisfaction related to the product, as well as the background of producing the product, which requires the use of local resources (Natsuda *et al.*, 2012). The entrepreneurs can utilise the OTOP logo mark (with the indicated star) on their products or packaging to ensure the product's quality for customers.

Table 1.4 OTOP star grading system (Kurokawa, Tembo and Te Velde, 2008)

5 stars	90 points and above	Good quality, exportable
4 stars	80-89 points	Fairly good quality, nationally recognised, and exportable upon improvement
3 stars	70-79 points	Average quality, able to attain 4 stars upon improvement
2 stars	50-69 points	Able to attain 3 stars, periodically assessed.
1 star	below 50 points	The product is unable to attain 2 stars due to its many weaknesses and difficulty for development.

1.2 The implementation of the programme in Thailand and its impact

1.2.1 Positive and negative impacts of the OTOP programme

The rapid rural development through the OTOP programme has helped to alleviate poverty and has generated wealth for the local people. However, it lacks considerations related to sustainability (Kurokawa, Tembo and Te Velde, 2010; Denpaiboon and Amatasawatdee, 2012). A number of studies have been conducted to identify the positive and negative impacts of the OTOP programme. Regarding the economic dimension, the positive impact includes 1) higher incomes for local individuals; 2) an increase in employment opportunities; 3) an expansion of the number of entrepreneurs from 7,000 in 2001 to 37,840 in 2006 (TICA, 2010); 4) an increase of sales revenue from 16.7 million baht in 2002 to 67.8 million baht in 2006 (TICA, 2010); and 5) a contribution of approximately 1% to the Thai GDP in 2003 as reported in the Japan International Cooperation Agency's OTOP Evaluation Report (Kurokawa, Tembo and Te Velde, 2010). In terms of the social dimension, the advantages are the rise in business skill development; the utilising of local traditional knowledge; the growth of local community leadership and pride (Wattanasiri, 2005); and reducing the incentives of immigration to urban areas (TICA, 2010).

Nonetheless, the OTOP programme has had many negative consequences. Son (2012) observed for example that the OVOP programme has a 'how-to' approach in its execution, while the OTOP programme takes a 'what-to-do' approach. The former is about empowering people in a bottom-up manner, while the latter is prescriptive and carried out in a top-down fashion. Subsequently, the OTOP programme could not be integrated into local communities (Tanwattana, 2012). Since each community faces different issues and possesses different resources, a 'one-size-fits-all' approach would not work with every group. For example, the major concern of agricultural product businesses is whether they can grow and harvest good-quality seasonal crops (which heavily relies on factors that are out of their control, such as irrigation), whereas the craft product business might not have to worry about this problem.

In conclusion, the OTOP programme has been operated successfully in terms of overcoming local poverty. However, from the social perspective, the negative impacts appear to outweigh the positive outcomes. In comparing the original OVOP in Japan, researchers imply that the OTOP programme lacks consideration regarding sustainable outcomes (Jaiborisudhi, 2011; Denpaiboon and Amatasawatdee, 2012; Tanwattana, 2012), and this can be seen as the main

reason that has led to the negative outputs. Table 1.5 emphasises the different aspects of the two schemes

Table 1.5 Comparison of different aspects of OVOP and OTOP programme, collected from literature

	OVOP	OTOP
Philosophy	Endogenous (Kurokawa, 2009)	Government-led (Kurokawa, 2009)
Initiative	Initiated by the local community (Jaiborisudhi, 2011)	Administrated by the government (Jaiborisudhi, 2011)
Operational structure	Bottom-up scheme (Thu, 2013) with the operation-oriented type of behaviour pattern (Son, 2012)	Top-down scheme (Thu, 2013) with an execution-oriented type of behaviour pattern (Son, 2012)
Marketing	Regional development-oriented with local marketing assistance (Thu, 2013)	Mass production-oriented with a series of government-led marketing activities (Thu, 2013)
Core focus	Focus on the improvement of social life and community revitalisation (Kurokawa, Tembo and Te Velde, 2010)	Emphasis on economic development (Kurokawa, Tembo and Te Velde, 2010)
Main actors	Employees of municipal governments or local cooperatives, producers' unions (Kurokawa, 2009)	Employees of Community Development Development (CDD) Office, Department of Agricultural Extension (DOAE), The Industrial Promotion Centre (IPC), Cooperatives (Kurokawa, 2009)
Joining procedure	Nothing in particular (Kurokawa, 2009)	OTOP registration (Kurokawa, 2009)
Labelling	Nothing in particular (Kurokawa, 2009)	National Common OTOP logo and common local logo (Kurokawa, 2009)
Accountability	Core business (Kurokawa, 2009)	Mainly Side business (Kurokawa, 2009)
Product distribution	Products are launched directly to the end-consumer (Suindramedhi, 2015) and available only at their source of origin (Jariyasombat, 2015)	Products are distributed to middlemen or brokers (Suindramedhi, 2015) and available across the country (Jariyasombat, 2015)

According to Table 1.5, the way in which the Thai government carried out the implementation might have had negative consequences. The OTOP programme aims to achieve poverty alleviation and to place emphasis on product creation rather than enhancing people's skills and knowledge in the long term (Jaiborisudhi, 2011; Denpaiboon and Amatasawatdee, 2012; Tanwattana, 2012). Therefore, the Thai people view the OTOP programme as a scheme to support product development instead of facilitating rural regeneration or social capital development (Jaiborisudhi, 2011). Regarding the quality and characteristics of the OTOP goods, the products have been criticised for the absence of local spirit (Tanwattana, 2012) and lack of innovation (Tanwattana and Korkietpitak, 2012); the local uniqueness was not

successfully translated into a unique value (Jaiborisudhi, 2012). The oversupply of similar products without distinctive local characteristics can be observed across various communities (Jaiborisudhi, 2012; Tanwattana and Korkietpitak, 2012), which highlights the critical problem of the programme (i.e., focusing on quantity rather than sustainable results).

1.2.2 Problem mapping

In order to identify the potential causes of problems in a more explicit way, all related aspects were mapped out and clustered under the three levels of management structure (namely strategic level, tactical level, operational level). This map has helped the researcher to identify the root of the problems as well as the consequences in order to see how they are related. Figure 1.5 illustrates the relations, causes and consequences of the problems at each level gathered from the literature.

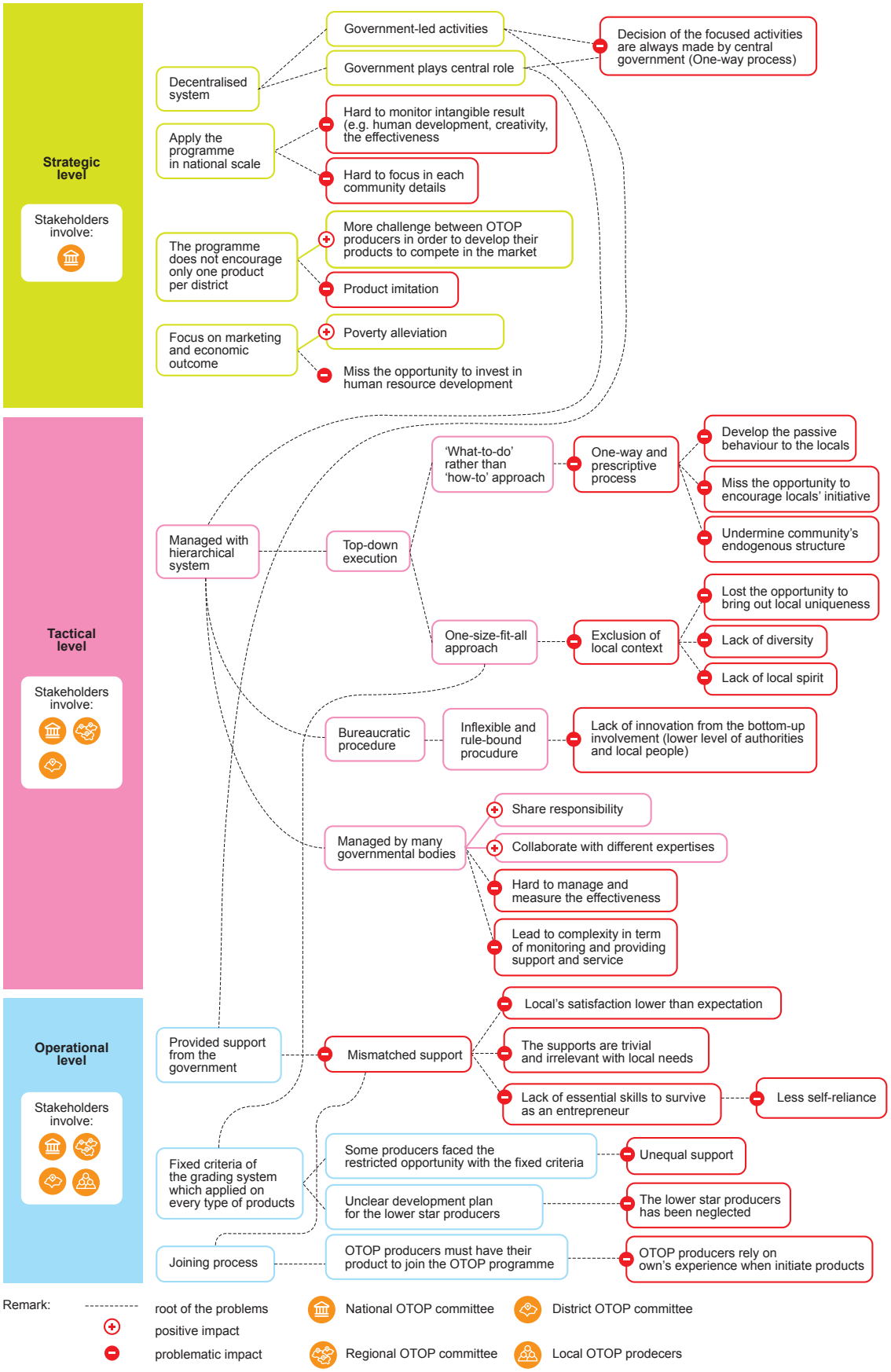


Figure 1.5 Problem mapping gathered from literatures (Kurokawa, Tembo and Te Velde, 2008; Kurokawa, 2009; Jaiborisudhi, 2011; Denpaiboon and Amatasawatde, 2012; Natsuda *et al.*, 2012; Son, 2012; Tanwattana, 2012; Tanwattana and Korkietpitak, 2012; Thu, 2013)

Figure 1.5 points out that the problems are mainly caused at the strategic level and lead to other problems at the tactical and operational levels. For example, the government plays a central role with the government-led activity appearing to be a one-way process that leads to mismatched support for the local community. The hierarchical system and top-down execution lead to the exclusion of local contributions and result in the lack of local spirit in product outcomes. All of these problems need to be solved at the strategic level in order to prevent effects that might occur at the tactical and operational levels. The next section will examine the current barriers that might prevent the programme from achieving sustainable development.

1.3 Barriers to sustainable development

1.3.1 Level of authorities and their roles

According to the examination of how the government has implemented the OTOP programme, the results of this investigation show that the top-down approach has led to a critical negative impact on the community. The central government plays a *'central role'* in terms of planning the OTOP strategy and roadmap, whereas the government in the OVOP plays only a *'catalytic role'* (Nutsuda *et al.*, 2012). Furthermore, the roles of the central government in OTOP implementation were also separated by several governmental agencies. To illustrate this, Table 1.6 provides the main responsibilities related to OTOP development.

Table 1.6 Roles and duties of the government agencies (TICA, 2010)

Role and duty	Government agencies
Searching for star products as well as strengthening people and community	- Ministry of Interior (province, district, Tambon)
Strengthening production of goods, raw materials, food process, and product development	- Ministry of Agriculture and Cooperatives - Ministry of Commerce - Ministry of Industry
Defining standards and criteria for product selection	- Ministry of Industry - Ministry of Public Health
Overseeing marketing and product promotion, product distribution, and intellectual property rights, such as trademarks.	- Ministry of Commerce - Tourism Authority of Thailand - Office of Small and Medium Enterprises
Research and development of products, packaging, and design	- Ministry of Science and Technology
Public relation	- The Prime Minister's Office
Monitoring and evaluation	- Ministry of Education - National Economic and Social Development Board
International cooperation on technology transfer	- The Prime Minister's Office

As shown in Figure 1.4 and Table 1.6, the accountabilities in each body were integrated to operate the OTOP scheme. To illustrate the key stakeholders and their roles, Figure 1.6 (see next page) maps out all of the stakeholders involved in the OTOP programme – from the strategic to an operational level – according to their essential roles. However, no previous study has investigated how effectively they work together in terms of driving the OTOP programme's development. Since the OTOP programme has been implemented nationwide with the involvement of various parties, this concept can lead to complexity in terms of providing support and services.

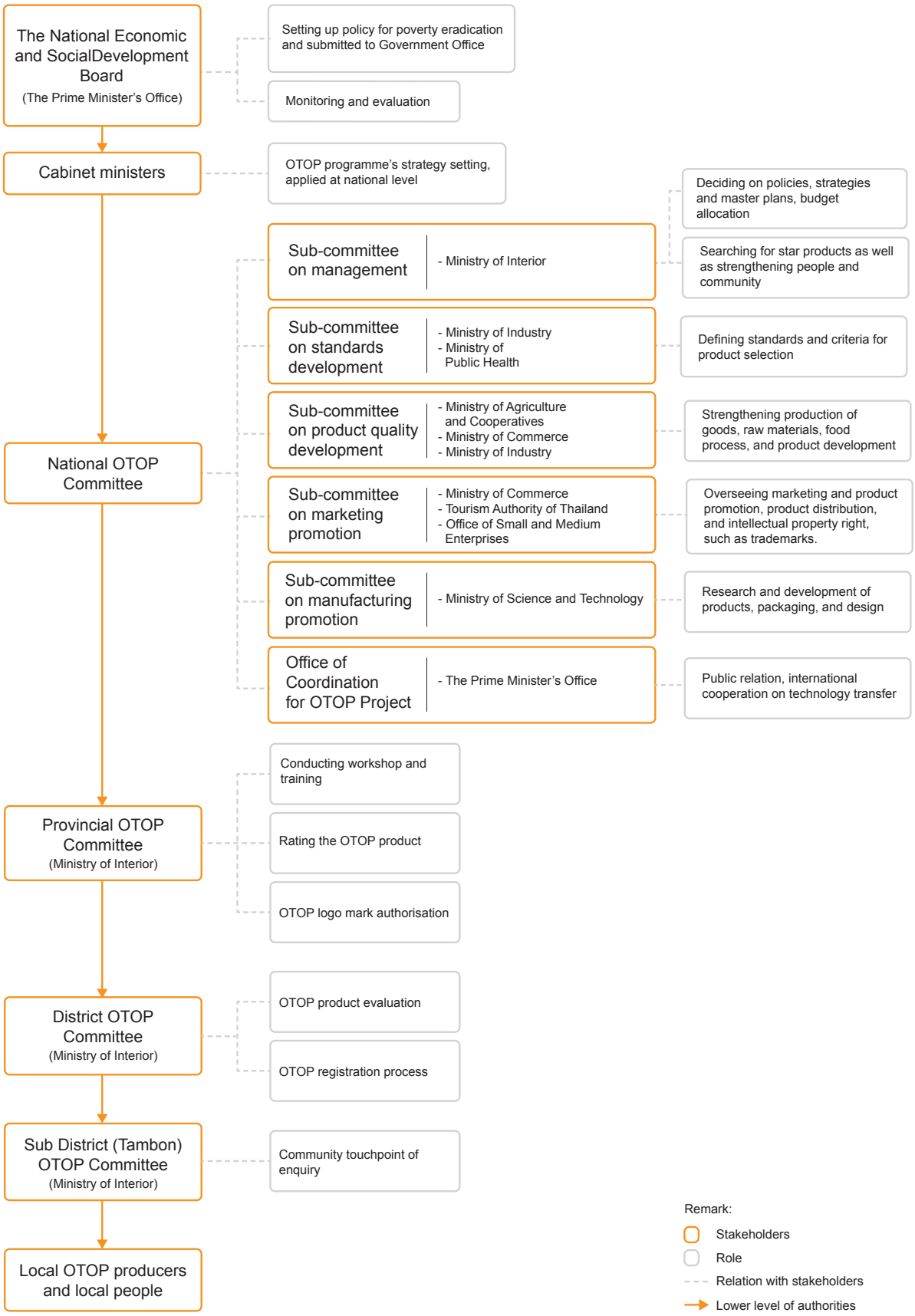


Figure 1.6 OTOP key stakeholder mapping, adapted from TICA (2010) and Natsuda *et al.* (2012)

1.3.2 Problems caused by the top-down scheme and the lack of local involvement at the strategic level

The top-down execution with hierarchical and bureaucratic behaviour appeared to be the main obstacle for sustainable development for the OTOP programme. The government missed the opportunity to (1) develop a better understanding of the local context, (2) embrace the distinctiveness of individual communities, and (3) place local involvement at the core of the development. Applying the same approach to every district makes it difficult for a community to innovate. This issue can be evident in the imitated product outcome. This is because the government did not focus on bringing out the unique assets in each community and promoting them as the community's value.

The mismatch support was also evident a the previous survey conducted by Nutsuda *et al.* (2012). The report states that the support and training from the government bodies were either irrelevant or trivial, and the level of satisfaction was lower than expected.

Moreover, top-down management and dictatorial orders can also develop recipient attitudes in the local people, resulting in extreme dependency on external resources or support all the time. Without developing self-reliance in the community, the value of the programme seems to be unsustainable; local people might find it difficult to initiate projects or plans on their own, mostly because the government-led activities are the key resources instead of local initiation.

Compared with the OVOP, Hiroshi Murayama, a technical adviser of Think Mate Research Co., Ltd., identifies three factors that drove the OVOP to success (see Figure 1.7). He introduced the 'Evaluating OVOP Radar Chart' for evaluating the OVOP movement. It comprises three axes and three areas, namely regional society, regional economy, and regional culture. The overlap of the three areas is the central element, which is the regional product (area no. 7 in the model). This model suggested that, in the OVOP movement, the creation of the product always emphasises awareness in all axes (Murayama and Son, 2012). On the other hand, the OTOP execution seems to focus on the development of the regional economy and might not place enough emphasis on the development of regional society and regional culture. For instance, the social system (area no. 5 in the model), which is the integration of society and culture creation, could be elaborated as a fundamental feature to create a strong network for achieving endogenous community goals.

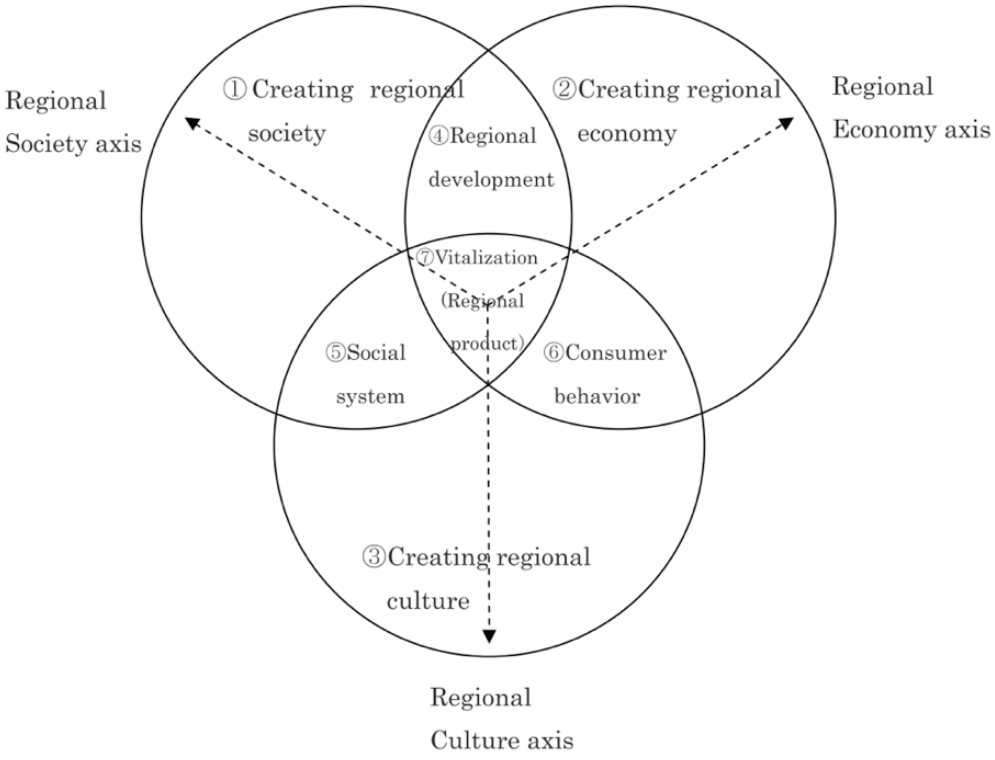


Figure 1.7 The three factors of the OVOP movement (Murayama and Son, 2012)

In conclusion, since the implementation of the Japanese OVOP model in Thailand was carried out without a clear plan regarding how to sustain local and regional development, the Thai government has missed opportunities to help rural residents become more self-reliant and develop their creative ability further through the OTOP programme due to its top-down approach. This can potentially be harmful to the community in terms of undermining its endogenous structures. Subsequently, this reserach aims to investigate how to tackle this issue. In order to determine the scope of the research, the research question, aims and objectives need to be formulated.

1.4 Research question, aims and objectives

This research aims to examine the opportunity to reframe the OTOP programme in a more bottom-up manner. The study aims to introduce co-design principles and the value co-creation process as a means to give local entrepreneurs (OTOP entrepreneurs) more ownership of the OTOP programme. The main principle of value co-creation and co-design is to treat all stakeholders as equal partners. The co-design activity equips all participants with the design

mindset to initiative ideas, thoughts and opinions creatively. With the two features combined, the OTOP programme's value can be realised collectively and creatively through interactions among stakeholders. Consequently, a service provider can adopt and work upon mutual values and deliver support relevant to local needs. By doing so, the OTOP programme can benefit all stakeholders fruitfully and encourage sustainable development for local businesses and their community.

The following research question focuses on what needs to be investigated. Consequently, research aims are defined to set the contribution of the research, followed by objectives that determine the scope of the research.

1.4.1 Research question

How can value co-creation with co-design principles help to shape the OTOP programme strategically in order to ensure equal partnerships between the local authorities and grassroots communities to overcome the barriers from current service implementation?

1.4.2 Research aims

This research aims to propose a value co-creation framework with implementation guidelines based on co-design principles for the local authorities under the OTOP programme to be used as an approach with grassroots communities to promote equal partnerships between them and to overcome the barriers from current service implementation.

1.4.3 Research objectives

Objective 1: To investigate the current relationships among stakeholders (i.e., the different levels of local authorities, local entrepreneurs, local people, and OTOP customers) in order to identify opportunities and barriers

Objective 2: To explore the current drivers and barriers of the OTOP programme from both economic and social perspectives in order to identify areas for improvement in terms of governmental service support

Objective 3: To identify the value of the OTOP programme from different stakeholders' perspectives in order to uncover mutual values (especially the potential for social impacts) and to explore how the value co-creation process can be applied to generate mutual value

Objective 4: To investigate how co-design can engage key stakeholders in the value co-creation process, promoting equal partnerships and contributing to the development of local enterprises and the OTOP service

Objective 5: To explore new opportunities to shape the future of the OTOP programme that benefit all stakeholders and their local community

Objective 6: To analyse data and develop a value co-creation framework and implementation guidelines

Objective 7: To evaluate the framework with key stakeholders and explore its potential impact

Objective 8: To finalise the framework and develop implementation guidelines on how to implement it as a strategic approach for local authorities to use with the local communities

1.5 Research scope

Once the research aims and objectives have been established, it is essential to determine the scope of the thesis research in order to ensure a clear and focused direction. This involves identifying the specific areas that the study will concentrate on in order to answer the research question and to achieve its aims and objectives. The research will explore value co-creation, co-design, and public service design as well as opportunities for sustainable development for the OTOP programme. This is in line with the research objective of gathering theoretical and practical insights from prior research and practice to gain a deeper understanding before conducting the primary research.

1.6 Outline of the thesis

The structure of this thesis is divided into four key phases: research clarification and methodology, exploration and investigation, development and evaluation, and finalisation and conclusion. A more detailed outline of the thesis is presented in Figure 1.8. The following is a breakdown of each chapter.

- **Research clarification and methodology**

  Chapter 1: Introduction and research background

  In this chapter, the background of the OTOP programme is introduced, along with its origins in Japan and how it is being implemented in Thailand. The chapter also highlights the barriers to achieving sustainable development. The literature was examined to identify issues with top-down implementation, and problem mapping was used to uncover the root causes and consequences of these challenges. Based on these findings, the research question was formulated, and the research aims and objectives were established to meet the requirements of the study.

  Chapter 2: Literature review

  This chapter reviews the existing literature on value co-creation, co-design, and public service design. It also explores potential sustainable development prospects for the OTOP enterprise and its community. Finally, the chapter discusses the potential new benefits that the OTOP programme may gain from a theoretical perspective.

  Chapter 3: Research methodology

  This chapter presents the research framework, including an explanation of the reasoning behind the selection of the research approach, purpose, strategy, methodology, and methods. The research design in this thesis adheres to Design Research Methodology (DRM), with research activities detailed according to each phase of the DRM. The research reliability and validity are also outlined, as well as research ethics and integrity.

- **Exploration and investigation**

  Chapter 4: Findings and discussion from exploration and investigation

  This chapter is divided into two stages. The first stage discusses the primary exploratory research of case studies in order to learn from the practices in other countries. The key findings of the case studies are presented as both the strategies implemented and their resulting impacts.

  The second stage presents an investigation with secondary research with the OTOP stakeholders. The main research activities are in-depth interviews and questionnaire surveys. In-depth interviews were conducted with OTOP entrepreneurs, local authorities, and experts that have had experience working in the OTOP programme. The questionnaire surveys were conducted with OTOP customers. The key findings from these two main activities are used to develop potential strategies for development.

- **Development and evaluation**

  Chapter 5: Value co-creation framework development and evaluation

  This chapter presents the development of the value co-creation framework. It begins with defining the framework's goal and formulating it based on the data from the previous

chapter. A literature review on co-creation/co-design activities is also presented, and it concludes the framework components to structure the initial framework.

The chapter also explains the evaluation undertaken during the development of the framework. The flow, activities, and tools of the framework were evaluated by design experts through co-design workshops. Local entrepreneurs were then invited to participate in user evaluation workshops in order to assess the framework's practicality, ease of use, and overall usefulness. At this stage, the framework was developed with facilitator guidelines. Finally, the framework was evaluated by stakeholders that could potentially implement it, namely local authorities. The aim was to evaluate the framework's ease of use, practicality, usefulness, applicability, and feasibility.

- **Finalisation and conclusion**

  Chapter 6: Recommendations

  This chapter presents the final value co-creation framework, which includes the framework phases and the facilitator's guidelines. It also includes consideration of the framework implementation, such as the relationships among stakeholders, the role of the implementor, the impact of the framework and reflection on the framework outcomes.

  Chapter 7: Conclusion

  This final chapter provides a summary of the research outcomes, including how the research objectives were met. The chapter also highlights the contributions to knowledge, examines the limitations of the research, and presents suggestions for future research.

The research objectives, correlated with the individual chapters within the thesis, are presented in the following table.

Table 1.7 Research objectives addressed in the thesis chapters

Objectives		Chapters
1	To investigate the current relationships among stakeholders (i.e., the different levels of local authorities, local entrepreneurs, local people, and OTOP customers) in order to identify opportunities and barriers	1 - Introduction and research background 4 - Findings and discussion from exploration and investigation
2	To explore the current drivers and barriers of the OTOP programme from both economic and social perspectives in order to identify areas for improvement in terms of governmental service support	4 - Findings and discussion from exploration and investigation
3	To identify the value of the OTOP programme from different stakeholders' perspectives in order to uncover mutual values (especially the potential for social impacts) and to explore how the value co-creation process can be applied to generate mutual value	2 - Literature review 4 - Findings and discussion from exploration and investigation 5 - Value co-creation framework development and evaluation

4	To investigate how co-design can engage key stakeholders in the value co-creation process, promoting equal partnerships and contributing to the development of local enterprises and the OTOP service	2 - Literature review 5 - Value co-creation framework development and evaluation
5	To explore new opportunities to shape the future of the OTOP programme that benefit all stakeholders and their local community	2 - Literature Review 4 - Findings and discussion from exploration and investigation 5 - Value co-creation framework development and evaluation
6	To analyse data and develop a value co-creation framework and implementation guidelines	4 - Findings and discussion from exploration and investigation 5 - Value co-creation framework development and evaluation
7	To evaluate the framework with key stakeholders and explore its potential impact	5 - Value co-creation framework development and evaluation
8	To finalise the framework and develop implementation guidelines on how to implement it as a strategic approach for local authorities to use with the local communities	6 - Recommendations

CHAPTER 1	CHAPTER 2	CHAPTER 3	CHAPTER 4	CHAPTER 5	CHAPTER 6	CHAPTER 7
Introduction and research background	**Literature review**	**Research methodology**	**Findings and discussion from exploration and investigation**	**Value co-creation framework development and evaluation**	**Recommendations**	**Conclusion**
• Introduction to OTOP • The implementation of the programme in Thailand and its impact • Barriers to sustainable development • Research question, aims and objectives	• Value co-creation • Co-design • Public service design • New opportunities for sustainable development for OTOP enterprise and its community • Summary of literature review and discussion for new opportunities for OTOP programme	• Research paradigm • Research approach • Research purpose • Research strategy • Research methodology • Research design • Research methods • Reliability and validity • Research ethic and integrity	• Exploration and lesson learnt from cross-national case studies • Investigation of current barriers and new potential of the OTOP programme • In-depth interviews with OTOP stakeholders • Questionnaire surveys with OTOP customers • Summary of findings from investigation (Descriptive Study I)	• The principal goal of the framework • Drawing data for formulating the framework • Framework components • Framework synthesis (an initial version 1.0) (Prescriptive Study I) • Expert evaluation (Descriptive Study II) • Improvement of framework (version 2.0) (Prescriptive Study II) • User evaluation (Descriptive Study III) • Improvement of the framework (version 3.0) and facilitator guidelines (Prescriptive Study III) • Stakeholders evaluation with local authorities (Descriptive Study IV) • Improvement of the final framework and facilitator guidelines	• Finalisation of the Value Co-creation framework • Consideration regarding framework implementation • Reflecting on the framework outcomes	• Research summary • Contributions to knowledge • Limitations of this research • Suggestions for future work
RESEARCH CLARIFICATION AND METHODOLOGY			→ EXPLORATION AND INVESTIGATION	→ DEVELOPMENT AND EVALUATION	→ FINALISATION OF RESEARCH OUTCOME AND CONCLUSION	

Figure 1.8 Outline of the thesis

Chapter 2 – Literature review

Literature review	2.1 Introduction	
	2.2 Value co-creation	2.2.1 Co-creation 2.2.2 What is value co-creation and why it is needed 2.2.3 Definition of value co-creation 2.2.4 Definition of value 2.2.5 The change of anticipation of value in the co-creation process 2.2.6 Understanding the value co-creation process 2.2.7 Benefits of value co-creation 2.2.8 Conclusion on value co-creation
	2.3 Co-design	2.3.1 The definition of co-design and its origin 2.3.2 Co-design principles 2.3.3 Roles of participants 2.3.4 Design devices 2.3.5 Benefits of co-design 2.3.6 Opportunity for greater impact 2.3.7 Conclusion on co-design
	2.4 Public service design	2.4.1 Service design definitions and value 2.4.2 Public service design 2.4.3 Co-designing public service and social innovation 2.4.4 Service design tools and techniques 2.4.5 Conclusion on public service design
	2.5 New opportunities for sustainable development for OTOP enterprise and its community	2.5.1 Community capacity building: definitions, focus and purposes 2.5.2 Dimensions of community capacity 2.5.3 Governmental roles in community capacity building 2.5.4 Conclusion on community capacity building
	2.6 Summary and discussion of the literature review	

Table 2.1 Overall structure of Chapter 2

This chapter presents the findings of the research from the literature review. The areas studied include value co-creation, co-design, public service design and opportunity for sustainable development. The conclusion of this chapter outlines the theories and principles that can be applied to the OTOP programme.

2.1 Introduction

In recent years, there has been a shift in the trend of creating programmes and public services for users and the community – from a one-way process (or top-down) to a more two-way co-production (or bottom-up) approach (Bovaird, 2007). The emergence of the 'co' paradigm in the public sector has become a crucial mechanism in public service transformation. The 'co' practice involves different stakeholders or citizens participating in creating innovative strategies or services, which has increasingly become a new challenge in public service (Rizzo, Deserti and Cobanli, 2017). The role and relation of stakeholders have changed into a more collaborative approach, moving from developing and designing 'for' them to developing and designing 'with' them (Boylston, 2019).

In terms of promoting social change, Mulgan et al. (2007) emphasise the interaction and alliance between two types of stakeholders, which they describe as 'bees' and 'trees'. The 'bees' are small-scale organisations, individuals, or groups with mobility and quickness characteristics and are enthusiastic about cross-pollination. On the other hand, the 'trees' are large-scale organisations (e.g., governments, NGOs) that often lack creativity but have firm roots and can scale change from micro to macro. These two types have a reciprocal relationship in order to generate social innovation. The term 'social innovation' has attracted interest from policymakers, researchers, foundations, and academic institutions. According to Phills, Deiglmeier and Miller (2008, p.39), social innovation is defined as *"a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals"*. The Young Foundation (2012) provides a more practical understanding of social innovation and proposes the following common features: (1) cross-sectoral, (2) open and collaborative, (3) grassroots and bottom-up, (4) pro-sumption and co-production, (5) mutualism, (6) creation of new roles and relationships, (7) better use of assets and resources, and (8) development of assets and capabilities.

Based on the above discussion, it is clear that current research, particularly in social innovation, is focused on similar areas such as social participation, collaboration among different stakeholders, grassroots involvement, mutual value, and social needs. These areas aim to create innovative changes. By gathering relevant aspects around social innovation, potential innovative solutions can be framed to address the OTOP problems discussed in Chapter 1. This chapter examines the findings from the literature review, analysis, and synthesis in order to identify potential solutions to overcome the research problem.

2.2 Value co-creation

Research on social change and innovation highlights the significance of collaboration and co-creation among stakeholders to foster innovation. This section presents a compilation of prior studies exploring co-creation and the context of value co-creation.

2.2.1 Co-creation

The concept of ‘co’ has brought about a transformation in the relationships between companies and their customers in the private sector and service providers and citizens in the public sector. This shift has resulted in a more reciprocal relationship, moving away from a ‘power over’ to a ‘power with’ dynamic (Ind and Coates, 2013). This approach has been implemented in numerous practices and studies, with variations such as co-production and co-creation. Many researchers tend to use the terms ‘co-creation’ and ‘co-production’ interchangeably (Payne, Storbacka and Frow, 2008). These terms both convey a sense of participation or integration among stakeholders that work together toward contributing to something.

The term co-creation refers to any act of collective creativity (Sanders and Stappers, 2008). This includes new interpretations and discoveries triggered by social interaction (Hargadon and Bechky, 2006). Sanders and Stappers (2018) illustrate three perspectives of co-creation: (1) co-creation as a mindset, (2) co-creation as a method, and (3) co-creation as a tool or technique. These perspectives correspond to the design development process and the possibility of value co-created at different levels (see Figure 2.1).

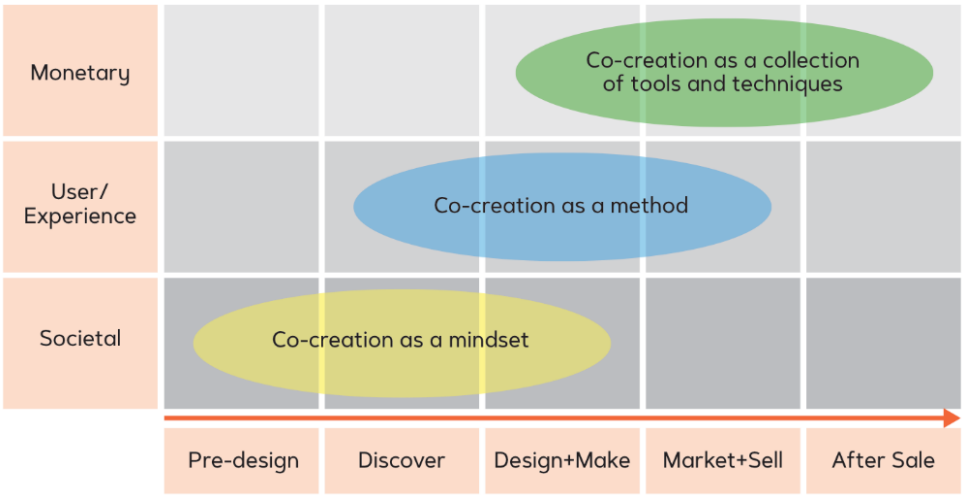


Figure 2.1 Three perspectives of co-creation (Sanders and Stappers, 2018)

As shown in Figure 2.1, co-creation can produce different outcomes depending on the perspective taken. When approached as a mindset, co-creation can increase societal value. On the other hand, using it as a method can foster a new level of engagement with stakeholders. By treating co-creation as a set of tools and techniques, it can generate greater financial value. Hence, co-creation can be adopted from any perspective and even utilised across multiple perspectives.

2.2.2 What is value co-creation and why it is needed

In order to make the OTOP programme more bottom-up, this research proposes using value co-creation as a medium of collaboration. This approach allows for a revisit of the programme's core procedures at the strategic level. This section examines the results of the literature review on the topic of value co-creation.

In 1996, Kambil, Ginsberg, and Bloch introduced the term *'value co-creation'*. The concept involves creating and delivering unique value propositions by identifying the co-creator role. It refers to the cooperative relationship among customers and suppliers in producing expected value (Kambil, Ginsberg and Bloch, 1996). Since then, the term has been applied in various perspectives, such as service logic and service-dominant logic (Lusch and Vargo, 2006; Vargo and Lusch, 2006, 2008; Vargo, Maglio and Akaka, 2008), service exchange with social construction (Edvardsson, Tronvoll and Gruber, 2011), the marketing perspective (Prahalad and Ramaswamy, 2004b), the management-related aspect (Prahalad and Ramaswamy, 2004a; Ramaswamy, 2009), branding (Payne *et al.*, 2009; Tajvidi *et al.*, 2017), and consumer relationships with the network approach (Kozinets, Hemetsberger and Schau, 2008). However, previous studies have tended to focus on the private rather than the public sector. Therefore, this research examines the concept of value co-creation in the literature, with the aim of applying this understanding to the public sector, which is relevant to the OTOP programme.

2.2.3 Definition of value co-creation

First of all, it is useful to gain an understanding of the terminology of value co-creation from previous scholars in order to develop one's own research terminology. The definitions from previous research can be summarised as shown in Table 2.2.

Table 2.2 Value co-creation definitions, partly from Agrawal, Kaushik and Rahman (2015)

Authors	Definition
Prahalad and Ramaswamy (2004b)	Personalised experiences with the customers
Ramaswamy (2011, p.195)	*"[...] is the process by which mutual value is expanded together, where the value to participating individuals is a function of their experiences, both their engagement experiences on the platform and productive and meaningful human experiences that result"*
Vargo, Maglio and Akaka (2008, p.146)	*"[...] value is always co-created jointly and reciprocally, in interactions among providers and beneficiaries through the integration of resources and application of competences"*
Grönroos and Voima (2013, p.133)	*"[...] refers to customers' creation of value-in-use where co-creation is a function of interaction"*
Ind and Coates (2013, p.92)	*"[...] as a process that provides an opportunity for on-going interaction, where the organisation is willing to share its world with external stakeholders and can generate in return the insight that can be derived from their engagement"*
Reypens *et al.* (2016, p.41)	*"[...] benefits realised from integration of resources through activities and interactions with collaborators"*
Edvardsson, Tronvoll and Gruber (2011, p.327)	*"[...] is shaped by social forces, is reproduced in social structures, and can be asymmetric for the actors involved"*
Payne, Storbacka and Frow (2008 p.84)	*"[...] process involves the supplier creating superior value propositions, with customers determining value when a good or service is consumed"*
Sanders and Simons (2009)	*"[...] refers to one or more form(s) of value(s) produced through the collective creativity of people"*

In order to comprehend the complexity of the concept of 'value co-creation, Saarijrvi *et al*. (2013) break it down into three key components: **'value'**, **'co'**, and **'creation'**. The emphasis is on three elements and on raising simple questions to help reflect each element. First, it focuses on '*value*' or '*what kind of value for whom?*'; second, '*co*' or '*by what kind of resources?*'; third, '*creation*' or *through what kind of mechanism?* This approach can provide a better understanding of the fundamental nature of the value co-creation term and serve as a basis for implementing it in real practice.

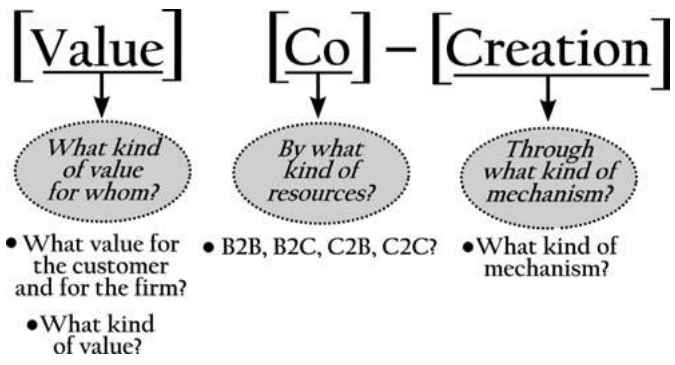


Figure 2.2 Dismantling value co-creation into parts (Saarijärvi, Kannan and Kuusela, 2013)

To summarise, the terminology of value co-creation within the context of OTOP in this research is derived from various literature sources (Vargo, Maglio and Akaka, 2008; Sanders and Simons, 2009; Edvardsson, Tronvoll and Gruber, 2011; Grönroos and Voima, 2013; Reypens, Lievens and Blazevic, 2016). It refers to the process of value (or benefit) realised through the collective activities and interactions of OTOP stakeholders (i.e., local authorities, OTOP entrepreneurs, OTOP customers, and local people) by using integrated resources (e.g., knowledge, skills, expertise, norms).

2.2.4 Definition of value

The concept of value is difficult to define, as it encompasses multiple dimensions and meanings (Sanders and Simon, 2009). Ultimately, it is a function of human experience (Ramaswamy, 2011). Value can be perceived as one's judgment of what is important in life (Sanders and Simon, 2009) and is always unique to the beneficiary's perception, experience, and determination (Vargo, Maglio, and Akaka, 2008; Grönroos and Voima, 2013). It covers a wide range of aspects, such as rank, importance, material or monetary value, power, or usefulness (ibid), which contribute to the beneficiary's well-being or make them better off in some respects (Grönroos and Voima, 2013).

In terms of value creation in an organisation, Haksever, Chaganti and Cook (2004, p.292) explain that value can be obtained from activities, programmes, and practices. They define value as the *"capacity of a good, service, or activity to satisfy a need or provide a benefit to a person or legal entity".* Since the perception and construction of value vary among different individuals, it is difficult to define its nature (Grönroos and Voima, 2013). Therefore, co-creation is a more effective approach than sole-creation in benefiting stakeholders and achieving a better understanding. Through co-creation, mutual value can be expanded collectively, leading to meaningful human experiences (Ramaswamy, 2011).

Looking further into the types of value, Sanders and Simon's (2009) research identified three types of value that could be created through the process of value co-creation: monetary value, use or experience value, and social value. First, monetary value refers to the potential for generating sustainable and efficient income. Second, use or experience value is based on the idea of treating consumers as users and providing them with products and services that meet their specific needs. This concept of personal experience is aligned with Prahalad and Ramaswamy's (2004a) study. Third, social value involves promoting a humanistic and sustainable way of living, which should be considered at the earliest stages of strategy development. All three types of value are interconnected and should be taken into account

during the co-creation process. Understanding the different possibilities and characteristics of value can be useful in preparing for primary research.

Table 2.3 Comparison of three types of value co-creation (Sanders and Simon, 2009)

CO-CREATION OF VALUE	Objectives	Mindset	How people are seen	Deliverables	Timeframe
Monetary	Production Consumption Maximization of shareholder wealth	Business Commercial Economic	Customers Consumers	Marketplace results Business advancement Products that sell	Short-term
Use/Experience	Positive experiences Personalization Customization	Experience-driven Service orientation	End-users Empowered consumers	Products and services that people need and want	From life-stage to lifetime Long-term
Societal	Improve quality of life Sustainability	Human-centered Ecological	Partners Participants Owners	Transformation Ownership Learning Behavior change Happiness Survival	Over many generations Longer-term

2.2.4.1 Value dimensions in the local enterprise context

Determining value is subjective. Therefore, it is impossible to list all of the values that might occur during the co-creation process. However, looking at possible values in other contexts could be helpful in terms of understanding potential value dimensions.

Researchers describe value using different typologies. For example, Holbrook (1999) suggests that values are based on three dichotomies: (i) extrinsic versus intrinsic, (ii) self-oriented versus other-oriented, and (iii) active versus reactive. In the service context, Sheth, Newman, and Gross (1991) categorise the form of value into five dimensions: (1) functional value, (2) social value, (3) emotional value, (4) epistemic value, and (5) conditional value. Studying the typologies of value from broader contexts provides a better understanding of the potential for value.

Narrowing down to study the value dimension in a similar context as the OTOP programme, which is about developing local enterprises, these similar research areas share comparable value dimensions: local business development and social enterprise development. According to the triple bottom line in social enterprise research, Elkington (2004) proposes that social enterprises should focus on three aspects: prosperity, planet, and people. Researchers in this area use the triple bottom line as the foundation for developing social enterprise value. For

instance, Emerson, Bonini and Brehm (2003) adapt it into three blended value propositions: economic, social, and environmental value. However, some researchers conclude that there are only two dimensions instead of three. Alter (2007) suggests dual value creation, which consists of economic and social value creation (with the environmental dimension attached). Kim and Lim (2017) categorise value into six dimensions: economic, social, regional, environmental, cultural/artistic, and political. By learning about value dimensions from similar contexts, the anticipation of OTOP's value dimensions can be formed. The figure below displays the value dimensions adapted from the literature.

Figure 2.3 Value dimensions in the OTOP context

Adopting the typologies and definitions of value from various researchers (Sheth, Newman and Gross, 1991; Holbrook, 1999; Kim and Lim, 2017), combined with the nature of OTOP enterprises, the value dimension can be categorised into five dimensions, ranging from intrinsic to extrinsic.

a) *Emotional value* is personally perceived value, defined as the feelings aroused when associating with tasks related to the OTOP business, for example, satisfaction, pleasure, or ecstasy from doing or achieving something.
b) *Knowledge* is the human-earned value gained from achieving novel skills or having expertise by practising new knowledge. It can be, for example, leadership, craftsmanship, or management skills.
c) *Social, regional, and environmental values* refer to the values that benefit the local community as a whole. Combining these values is straightforward when asking locals to think about the value of their community holistically. Separating them might cause confusion and unnecessary contemplation. These values enhance social relationships, preserve cultural practices and traditions, and promote environmental sustainability.
d) *Functional (of product and service) value* is the value perceived through the physical attributes and utility of the product and service.
e) *Economic value* can be seen as a monetary value that creates financial support for the enterprise and employment.

The value dimensions defined above would act as guidelines to determine possible value while in the value co-creation process.

2.2.5 The change of anticipation of value in the co-creation process

The concept of value co-creation has evolved from solely creating value to a collaborative process. Vargo and Lusch (2006) introduced the idea of value co-creation through the lens of service science and service-dominant logic. In their view, providing a service involves using one's knowledge and skills to carry out activities that benefit others, forming the basis of all exchanges. With the service-dominant logic, the idea of anticipated value has shifted from *'value-in-exchange'* (created and offered solely by the firm) to *'value-in-use'*, where values naturally arise during the exchange process, co-created through mutually beneficial relationships between providers and beneficiaries. In this scenario, the value cannot be packaged by the firm, enterprise or organisation. Instead, only the value proposition can be offered.

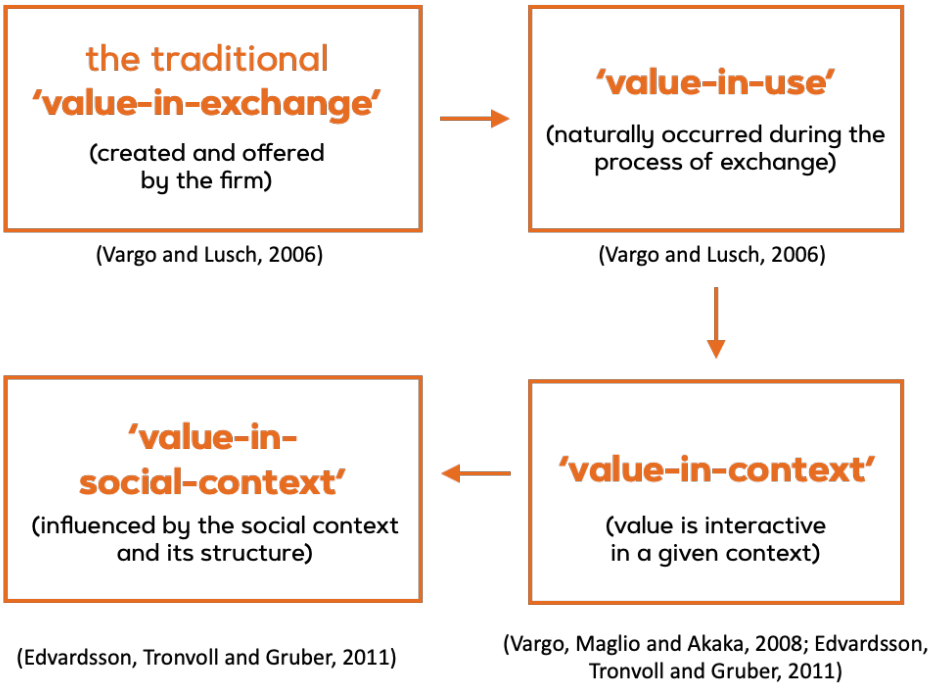


Figure 2.4 The change of anticipation of value

In the service science approach, Edvardsson, Tronvoll, and Gruber (2011) refer to the concept of *'value-in-context'*, which aligns with the idea proposed by Vargo, Maglio, and Akaka (2008), that value is interactive within a given context. In order to frame this context, Chandler and Vargo (2011) identify an opportunity to construct it by exploring the role of resources (actors) and reframing the role of services (link/network). They define this particular context as *"a set of unique actors with unique reciprocal links among them"* (p. 41). Additionally, they propose three multi-level conceptualisations of context: micro-context, meso-context, and macro-context. These range from small-scale exchanges between two actors (micro-context) to

medium-scale exchanges between dyads and triads (meso-context), and large-scale exchanges among triads as an ecosystem (macro-context). The value co-creation process can be replicated at any level, making the context more dynamic through exchanges at different levels. By exchanging the context among complex networks, a sustainable and reciprocal network of resources is created (what they call the layer of meta-context), which can be seen as a service ecosystem (see Figure 2.5).

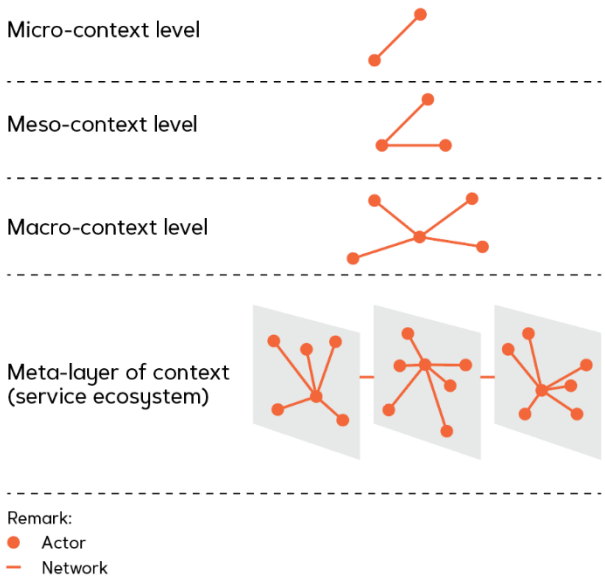


Figure 2.5 Multi-level conceptualisation of context, adapted from Chandler and Vargo (2011)

Furthermore, according to the social construction approach, Edvardsson, Tronvoll and Gruber (2011) introduce the concept of *'value-in-social-context'*. This approach views context as a social construction that contributes to value co-creation. The process of defining and achieving values is influenced by collective social forces and norms. Value is assessed in relation to the social context, which has a collective and intersubjective dimension. The assessment of resources, perception of value, and the process of value co-creation are all affected by the structure and context of society.

2.2.5.1 Resources in value co-creation

Noticeably, researchers in value co-creation emphasise the significant role of resources (Lusch and Vargo, 2006; Vargo and Lusch, 2006; 2008; Vargo, Maglio and Akaka, 2008). In the service realm, the service system shifts the focus from *'operand resources'* (tangible resources, such as goods, characterised as inert resources) to *'operant resources'* (intangible resources, such as knowledge and skills, characterised as dynamic resources) that act upon other resources. In this focus, the process of using operand resources is seen as continuous

resource integration (Vargo, Maglio and Akaka, 2008) and as the fundamental source of competitive advantage (Lusch and Vargo, 2006; Vargo and Lusch, 2006; 2008; Vargo, Maglio and Akaka, 2008).

From a social science perspective, Kozinets, Hemetsberger and Schau (2008) highlight that *'social interaction'* among consumers should be viewed as a resource that triggers new interpretations and discoveries. Interacting with others enables consumers to develop collective consumer creativity, and this creativity motivates and helps consumers to recognise and develop ideas that can be turned into the essence of innovation. When looking at OTOP, the current resources can be viewed as activities provided by the government, which are more like inactive resources. These resources are not very effective in promoting innovation. To give OTOP entrepreneurs more opportunities, the OTOP committee should shift its focus to supporting and educating local people with knowledge and skills (operant resources) so that they can better integrate their resources and sustain the system.

2.2.6 Understanding the value co-creation process

This section explores the process of value co-creation and outlines the practical steps and essential factors that should be considered in real-life practice. The section divides the factors into two stages: *before* the process and *during* the process, with a focus on capturing value at the final stage.

2.2.6.1 Considerations prior to value co-creation

Most of the literature discusses what needs to be considered in the value co-creation process but does not highlight how the process is undertaken. Two frameworks, one by Grönroos and Voima (2013) and the other by Payne *et al*. (2009), shed light on how the value co-creation process is undertaken. Their studies offer insights into the interaction between the provider and customer spheres and how they come together in a joint sphere (as depicted in Figure 2.6 of Grönroos and Voima's framework) or encounter process (as shown in Figure 2.9 of Payne, Storbacka, and Frow's framework).

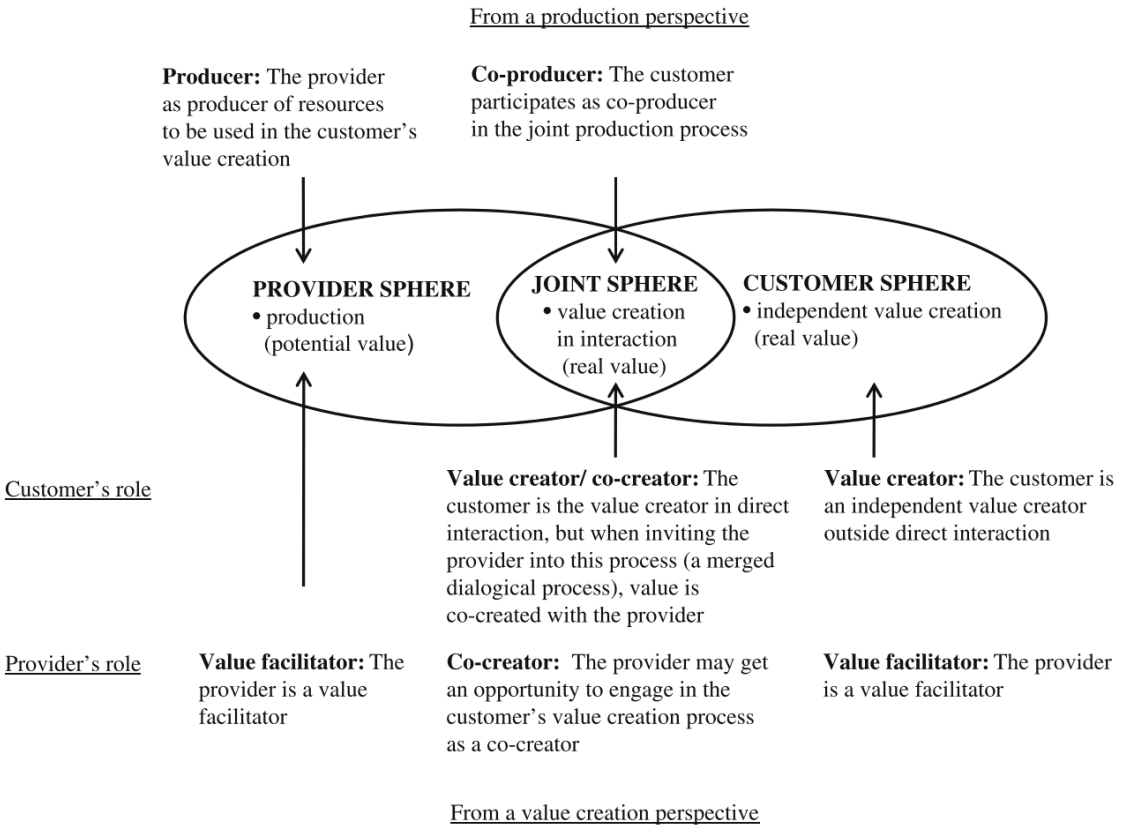


Figure 2.6 Value creation spheres (Grönroos and Voima, 2013)

- **Role of participants**

In the context of value co-creation, participants are divided into two types and have different roles prior to the process, according to research by Grönroos and Voima (2013) and Payne, Storbacka, and Frow (2008). The provider or supplier role involves reviewing co-creation opportunities, generating potential value, and producing resources and contexts for the customers' value creation. On the other hand, the customers' role is to create an independent value outside the direct interaction and to integrate their cognitions, emotions, and behaviour in order to reflect the value. In the context of OTOP, these two types of actors can be applied, while the customer domain can be substituted with OTOP entrepreneurs.

- **Understanding value drivers**

In order to effectively co-create value, it is crucial to first understand the value drivers. These drivers can be broadly categorised based on overarching goals (Info-Tech Research Group, 2019). In a context similar to that of the OTOP programme, Thambar *et al.* (2019) suggest that the key value drivers for measuring mutual value from the Cooperative and Mutual Enterprises (CMEs) programme in Australia are (1) commerciality, (2) shaping markets, (3) member relationships, (4) community relationships, (5) ecosystem and reciprocity, and (6)

mutual mindset. They also highlight the mutual mindset as the foundation for the other five dimensions. These value drivers can be utilised for OTOP enterprises; however, they need to be modified in order to be aligned with the specific context.

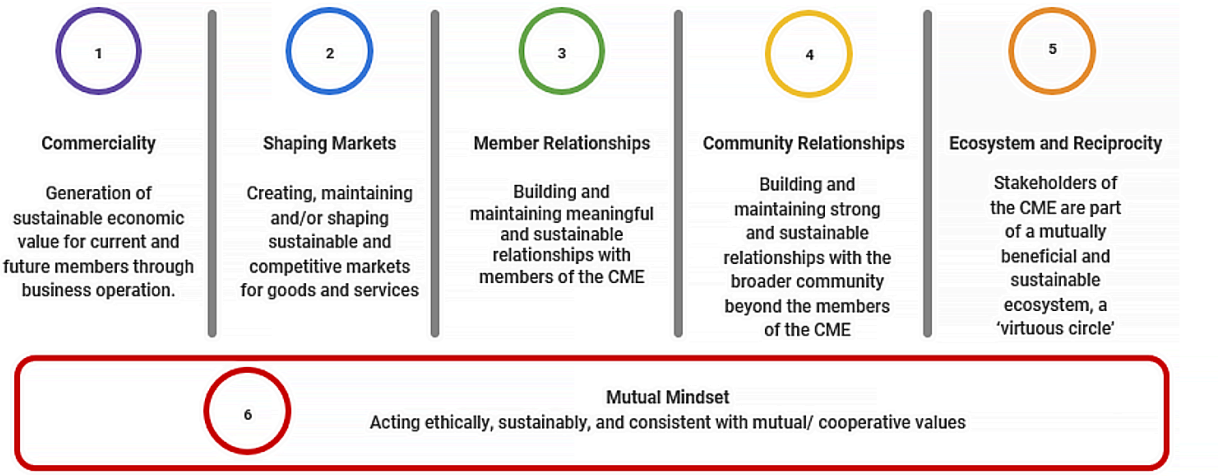


Figure 2.7 Value drivers from the Cooperative and Mutual Enterprises (CMEs) programme in Australia (Thambar *et al.*, 2019)

- **Motivating participants**

Another factor to consider is how to inspire and motivate co-creating participants. The findings of Pedrosa's (2009) study propose four motivational strategies that can increase stakeholders' willingness to participate in the co-creation process and stimulate potential innovation. These strategies include:

- *Opportunity to reduce risks:* When activities are co-created, potential issues can be identified and addressed, leading to increased satisfaction for all involved.
- *Opportunity to build a new relationship:* By connecting representatives from stakeholder groups, it can help stimulate greater engagement among people from different backgrounds.
- *Opportunity to develop new knowledge:* Generating new learning leads to the possibility of acquiring relevant knowledge for all.
- *Opportunity to build a new capability:* In this sense, all stakeholders bring their capabilities to the co-creation process and integrate them into new possibilities for innovation.

The strategies mentioned above can be utilised to motivate participants in co-creating value within the OTOP context.

2.2.6.2 During the process

The aim of this section is to examine value co-creation through a review of pertinent literature in order to gain theoretical insight into how it can be accomplished.

- **The building blocks of value co-creation**

According to Prahalad and Ramaswamy (2004a; 2004b), there is a DART model of value co-creation that consists of four building blocks. These blocks are:

- *Dialogue* refers to the interaction between two equal partners that involves deep engagement and a propensity to act. The focus of the dialogue should be on the interests of both partners. It is the starting point for shared learning, which helps to raise multiple aspects from stakeholders.
- *Access* refers to the flow of a dialogue. It would be difficult if both partners could not access information, tools, or processes. Providing access enables a rich and meaningful exchange of information, which is essential to the process of value co-creation.
- *Transparency* helps to reduce information asymmetry between firms and customers, and is a critical concern, especially for the private sector. In the public sector, while transparency may not directly support relationships, it can be the essential mindset that leads to building a trusted environment with all stakeholders.
- *Risk assessment* refers to the possibility of harm. In the process of value co-creation, it is important to reflect on questions related to risk-benefit assessment in order to ensure that all partners understand the potential risks involved.

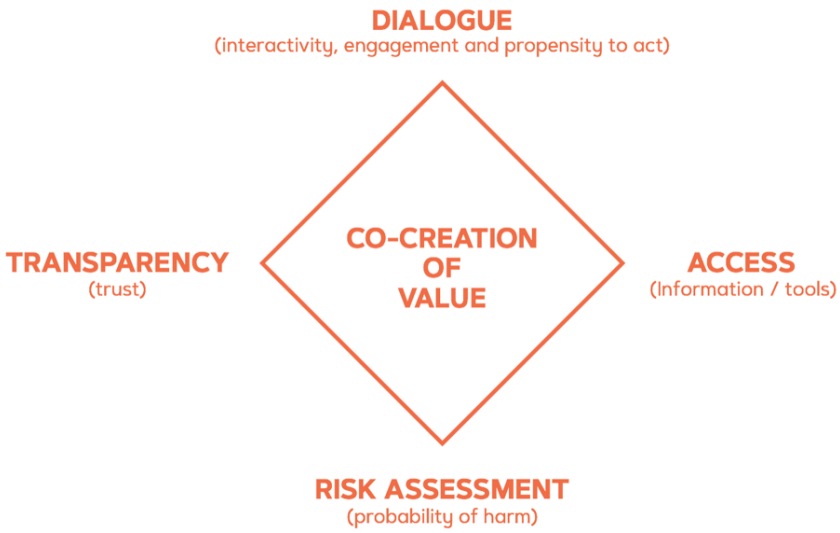


Figure 2.8 DART model, adapted from Prahalad and Ramaswamy (2004a)

The DART model serves as a helpful starting point for initiating the key features of value co-creation. However, it falls short in terms of identifying the exact location where the co-created value should take place. As a result, the following section provides more information about the interactions involved in the process.

- **The interaction**

According to research conducted by Grönroos and Voima (2013) and Payne, Storbacka, and Frow (2008), it is crucial to comprehend the location where the co-creation process between the providers and customers takes place. Grönroos and Voima (2013) categorise interaction into indirect and direct. In *indirect interaction*, actions occur in separate spheres for providers and customers before co-creating value together. Payne, Storbacka, and Frow (2008) explain that providers can create opportunities for co-creation, and plan and facilitate potential value, whereas customers can independently create value from their cognition, emotions, and behaviour. Therefore, providers must observe their customers' behavioural logic in the customer sphere in order to better understand them.

In the joint sphere of *direct interaction* (Grönroos and Voima, 2013), also known as the encounter process (Payne, Storbacka, and Frow, 2008), resources from both parties are integrated with engaging in an active and ongoing dialogue. This allows for two-way communication between the parties involved. In order to facilitate the encounter process, the provider can offer emotion-supporting encounters (such as themes, metaphors, stories, analogies, and design), cognition-supporting encounters (such as scripts, customer promises, value-explaining messages, outcomes, references, and testimonials), and behaviour and action-supporting encounters (such as trials, know-how communication, and usage) (ibid).

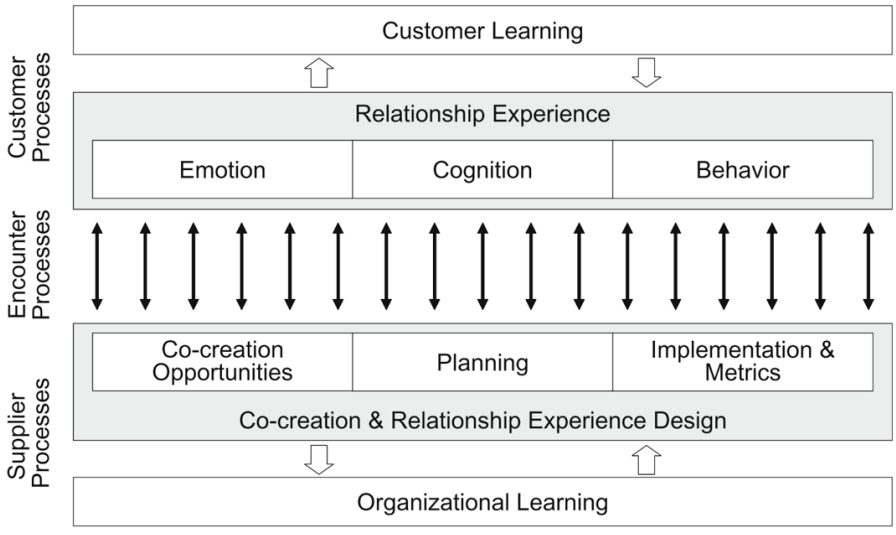


Figure 2.9 A conceptual framework for value co-creation (Payne, Storbacka and Frow, 2008)

- **Co-creating and capturing**

Not only is the process of co-creating value essential, but the moment of capturing value is also undeniably necessary. Reypens, Lievens, and Blazevic (2016) point out the factors that need to be considered during the creation and capture of value in their research on the development of the European Medical Information Framework (EMIF). Their study involves multiple stakeholders in the co-creation of value, and they describe the main practical processes in value co-creation and capture.

In the value co-creation process, *coordination* of stakeholders is required in the beginning. This includes planning and following up on activities, as well as sharing and synergising information. Secondly, the process involves c*onsultation*, which is described as inclusive and participatory. Participants are invited to share and discuss ideas, needs, and expectations. Lastly, the process requires *compromise* in order to listen to and reconcile others' points of view before making a decision.

In the value capture process, the first step is to *anticipate* the value that will be created before and during the collaboration. Researchers note that the difficulty for participants at this stage is to imagine tangible results. Therefore, participants need to ask themselves what their anticipated values are, what types of outcomes could be expected, and how they can be used later. The second step is *assessing* value, which involves participants perceiving the added value as a group. This step also requires regular evaluation throughout the collaboration. The third step is the *application* process, which involves transferring value to the firm or organisation and implementing it in real-world practice.

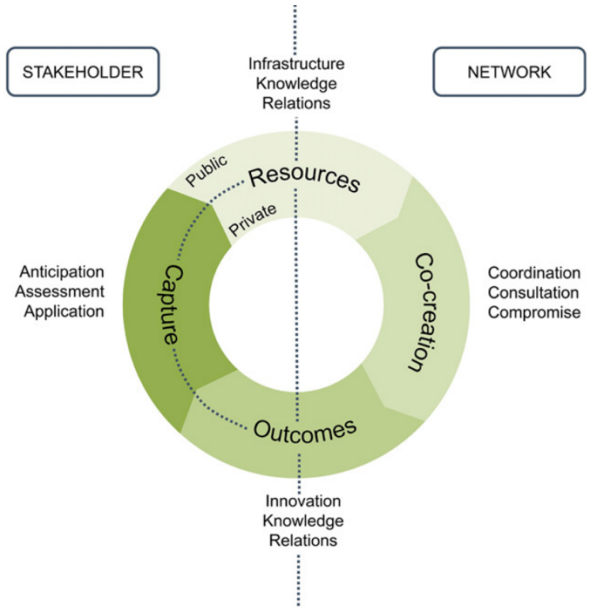


Figure 2.10 Cyclical process framework of value leveraging (Reypens, Lievens and Blazevic, 2016)

Understanding the process of co-creating and capturing value brings clarity to the vague concept of value co-creation. This understanding helps to identify important considerations before, during, and after the process. Knowing what could be considered provides practical guidelines that can be useful for synthesising research and preparing for the primary research in the next steps.

2.2.7 Benefits of value co-creation

The process of value co-creation benefits both the company and its customers. By incorporating co-created value as a fundamental source of competitive advantage, companies can leverage it as a new opportunity for marketing and management strategies (Lusch and Vargo, 2006; Vargo and Lusch, 2006, 2008; Vargo, Maglio and Akaka, 2008). However, the concept of value co-creation can extend beyond just competitiveness; it can also be viewed as a sustainable system for both business and service. Kruger *et al*. (2018, p.404) refer to the benefit of co-creation as *"a powerful way of advancing sustainability transformations. The adoption of sustainable practices fosters dialogue among stakeholders, provides a systemic view of societal problems, and acts as a holistic, participatory, and integrative strategy that leverages the co-creative environment"*. By bringing stakeholders together, joint verification of problems or solutions can lead to a greater outcome (Bovaird, 2007), generate valuable insights, and reduce risks and time by leveraging resources within the community (Ramaswamy, 2009).

Furthermore, Austin and Seitanadi (2012) compare the creation of value through collaboration versus individual efforts, as represented by their value creation spectrum (see Figure 2.11). The spectrum highlights that value sources are high, unique, and have shared directionality, while also encompassing diverse interests. Additionally, the types of value generated are renewable, involve maximum interaction, exhibit strong synergy, and frequently spark innovation.

Noticeably, value co-creation researchers consider the integration of resources as a sustainable system. Arnold (2017) suggests that sustainable co-creation involves combining resources, knowledge, and (cap-)abilities with various actors in order to improve products, services, and value chains. Ind and Coates (2013) also refer to this integration as a *'reciprocal relation'*, which is in line with Ramaswamy's (2009) view that the relationship should give all stakeholders a sense of being equal partners. This approach can increase satisfaction levels among all partners and result in their willingness to remain in the joint process for longer periods, thereby keeping the process of value co-creation ongoing.

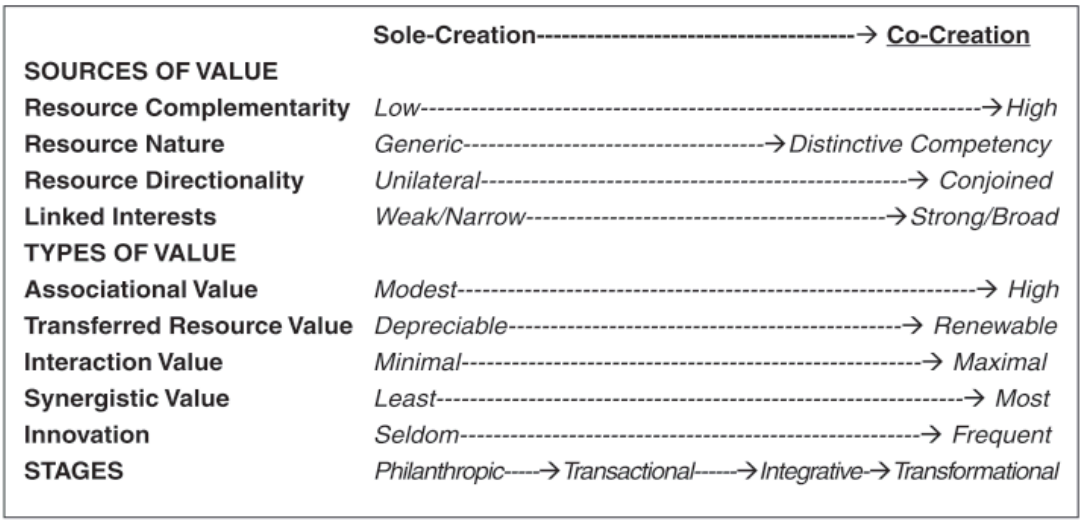


Figure 2.11 Collaborative value creation spectrum (Austin and Seitanidi, 2012)

In addition, Ramaswamy (2009) uses the tree and fruit metaphor to illustrate this sustainable system as a co-creation paradigm. A tree is a strong co-creative organization that produces fruit (new opportunities) through its branches (engagement platform). As the tree grows, the fruit multiplies. The tree then seeks to cross-pollinate with other trees (establish a new network), resulting in unique and hard-to-imitate fruit. Holistically, the trees produced in the entire orchard can be seen as a sustainable ecosystem of the service, which continues to discover new opportunities naturally and instinctively.

In the realm of social innovation, value co-creation is essential for successfully innovating and designing solutions for social issues (Yang and Sung, 2016). The outcomes of value co-creation can be seen as the mutual value that is created together among stakeholders. Thambar *et al*. (2019) suggest that mutual value can help shape purpose and business strategy, engage and communicate value to members, and determine future actions that align with purpose.

2.2.8 Conclusion on value co-creation

After reviewing the research theme of value co-creation, the following theoretical perspectives and key findings were identified for their potential application in the OTOP context:

- Co-creation can be used as a mindset, method, and technique (Sanders and Stappers, 2018). In developing the OTOP programme, value co-creation can be a useful process to find mutual benefits among stakeholders and to practice the bottom-up approach.
- Value is determined by beneficiaries and is perceived and constructed differently by various actors (Vargo, Maglio, and Akaka, 2008; Grönroos and Voima, 2013).

- Three types of value (namely societal value, use or experience value, and monetary value) are always linked and should be taken into consideration. Societal value should be considered at the early stage of strategy building (Sanders and Simon, 2009).
- The research examined the value dimensions within the local business environment that can be utilised in the OTOP programme. There are five value dimensions that range from intrinsic to extrinsic. These dimensions encompass emotional, knowledge, social, regional, and environmental factors, functional aspects of the product and service, and economic values.
- Operant resources, such as knowledge, skills, and expertise, are useful resources in value co-creation. These resources are characterised as dynamic and active and can lead to innovation. Social interactions can also be seen as a resource that triggers new interpretations and discoveries (Kozinets, Hemetsberger and Schau, 2008).
- According to the Info-Tech Research Group in 2019, value drivers can be classified into different categories based on overarching goals. In order to identify goals for OTOP enterprises, primary research must be conducted first. Establishing a mutual mindset can serve as the basis for other dimensions.
- The concepts of value co-creation, joint sphere, and encounter process provide insight into the roles of providers and customers (can be substituted with OTOP entrepreneurs) and how providers can support the value co-creation process by providing emotional, cognitive, and behavioural support.
- The concepts of building blocks of innovation (Prahalad and Ramaswamy, 2004a; 2004b) and motivation strategies for stakeholders (Pedrosa, 2009) provide useful insights for preparing to conduct primary research.
- Reypens, Lievens, and Blazevic (2016) provide a clear and detailed explanation of the co-creation process and value capture. Their breakdown of each step helps to eliminate any ambiguity and provides greater understanding.

In conclusion, this section explores the strategic approach of the OTOP programme and finds that value co-creation can offer potential advantages. The key to effective value co-creation is involving stakeholders in the activities, from grassroots to governance, as this serves as the foundation of the 'co' approach. However, engaging locals in the value-creation process can be challenging, as they tend to rely on providers rather than initiating the process themselves. In order to address this issue, co-design principles can help to facilitate the creation of value within a social setting and provide a collaborative approach when determining support strategies. Therefore, the following section will explore the benefits of integrating co-design with value co-creation.

2.3 Co-design

The main aim of this study is to encourage innovative change from the bottom up. Co-design activities can be employed to involve collective actions from stakeholders, ensuring that the service providers and users (i.e., OTOP entrepreneurs) co-design a service that would best benefit them. This section will examine how co-design can serve as a creative catalyst for the value co-creation process and how it can help shape public services.

2.3.1 The definition of co-design and its origin

Co-design refers to *"collective creativity as it is applied across the whole span of a design process"* (Sanders and Stappers, 2008, p.6). The practice of co-design is rooted in and builds on the early Scandinavian movement called *'participatory design,'* which began in the 1970s (Schuler and Namioka, 1993; Steen, 2013; Wang *et al.*, 2019). This approach leans towards the research-oriented. The traditional participatory design movement initially dealt with the political ideology of engaging workers to democratically promote a new workplace environment by utilising a technology-enabled system (Simonsen and Robertson, 2013) under the principle of involving voices from all stakeholders in the design process as they would be affected by the design (Ehn, 2008). Participatory design involves users in different forms of practice; many of them make use of design perspectives (Holmlid, 2009). Within the design realm, the term co-design has been growing (Schuler and Namioka, 1993; Sanders and Stappers, 2008b; Kankainen *et al.*, 2012) as the practice of involving people in co-designing artefacts, processes, and environments that affect them (Simonsen and Robertson, 2013).

2.3.2 Co-design principles

Co-design has adopted various approaches, such as generative tools, where designers create tools for non-designers to express themselves or research-oriented applied ethnography (Steen, 2013). Despite comprising different approaches, the co-design's main principle is to treat participants as equal partners, from idea generation to decision-making (Sanders and Stappers, 2008). Even if individuals do not consider themselves to be creative, the co-design can enhance their ability to create by providing design tools and activities (Manzini, 2015).

The co-design is a highly dynamic, creative, proactive, and open-ended process that involves constructive consensus building among participants. Proper use of a co-design can lead to a meaningful *social conversation* (Manzini, 2015). All of the actors in the co-design, whether a group of citizens or designers, can lead in conceptualising and implementing new solutions (Manzini and Rizzo, 2011). In this sense, the energy that passes to each participant also

results in the collaboration's effectiveness. Kozinets, Hemetsberger and Schau (2008) describe this flow of action as a *sense of innovation* motivated by one another, resulting in the development, realisation, propagation, and promotion of ideas.

2.3.3 Roles of participants

During the design process, designers typically concentrate on solving problems. In order to achieve this, a designer must think in terms of both the present and future, envisioning what is likely to occur, and in order to do so, the designer needs to make sense of things and become a *'producer of sense'* (Manzini, 2015). With this attitude applied to co-design, all actors actively combine their ideas in problem-solving and sense-making. The co-design requires creative participants (Sanders and Stapper, 2008); however, not everyone views him/herself as creative. Therefore, a designer needs to cultivate creativity in co-design activities. To clarify, this section will explain the role of participants in the co-design process, which consists of two types of participants: (1) non-design participants and (2) designers-researchers (or researchers-designers).

Manzini and Rizzo (2011) suggest that the co-design serves as a platform for social innovation, enabling the integration and enhancement of social resources from a diverse group of individuals. Instead of viewing traditional *'users'* as individuals that have needs and problems, they should be seen as *'non-design experts'* that possess local knowledge and specific expertise that can enhance existing resources. By shifting this perspective, an equal sense of participation and respect for users as important creators can be provided.

The challenge at hand is how to encourage individuals without a background in design to become active and imaginative contributors. According to Manzini (2015), it is crucial to employ the design mode, which involves utilising critical thinking, creativity, and practicality in all activities to comprehend what can be accomplished, and in order to activate the design mode, the design expert must play a significant part in guiding and supporting participants throughout the design process. Moreover, regarding creative ability, Sanders and Stappers (2008) outline four levels of creativity: (1) doing, (2) adapting, (3) making, and (4) creating. In co-design, designers and researchers (or researchers-designers) play an essential role as facilitators (Sanders and Stappers, 2008; Manzini, 2014), which helps non-design participants at each level of creativity. At the *doing* level, design experts help *lead* the way. At the *adapting* level, the design expert helps *guide* participants. Next, at the *making* level, design experts *provide scaffolds* to help participants express themselves. Lastly, at the *creating* level, design experts *offer a clean slate* to participants (Sanders and Stappers, 2008). All of the parties involved in the roles mentioned are working towards the primary goals of co-design. These

goals include consolidating understanding as a part of the method within the practice of participation and enabling people to express their thoughts, including viewpoints, ideas, concerns, and new opportunities, even if they do not have a design or creative background (Sanders and Stappers, 2014).

2.3.4 Design devices

The co-design process aims to construct socio-materials, and design devices are essential tools in achieving this goal. Design devices are fundamental co-design tools, referred to as *"artefacts aimed at triggering or supporting design initiative"* (Manzini and Rizzo, 2011, p.212). According to Manzini and Rizzo (2011), design devices can be categorised according to the stages of activities in the co-design process. These stages begin with the use of *subjects of conversation* (e.g., probes, workshops), followed by *tools for conversation* (e.g., posters, slideshows, possibility cards, interactive media), and conclude with *enablers of experience* (e.g., prototypes, scenarios). In the same vein as Sanders and Stappers (2018), the focus is on utilising tools and techniques that enhance individual abilities and lead to collective creativity. They propose the three-stage process of Say, Do, and Make (refer to Figure 2.12) that draws upon various methods and techniques to acquire different levels of knowledge (see Figure 2.13). During the generative session, there is a chance to tap into not just implicit knowledge but also unacknowledged latent needs (Sleeswijk Visser *et al.*, 2005; Sanders and Stappers, 2018).

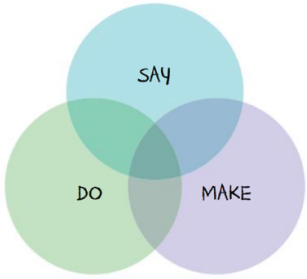


Figure 2.12 Three elements of 'Say, Do, and Make' (Sanders and Stappers, 2018)

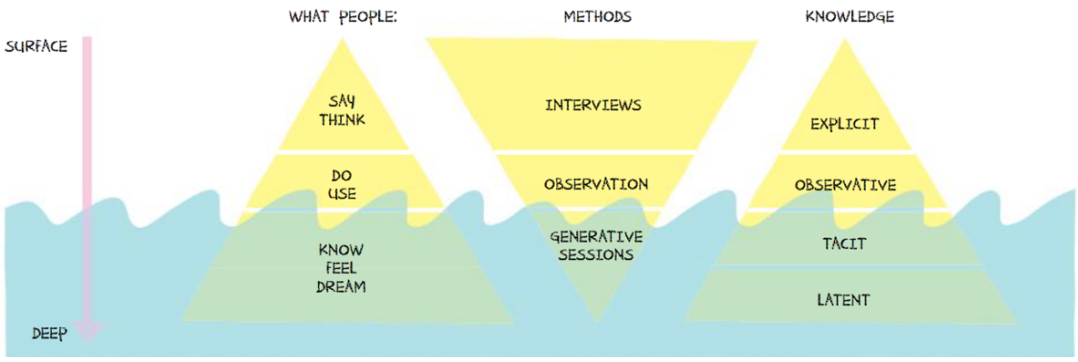


Figure 2.13 The 'Say, Do, and Make' technique in relation to different methods and levels of knowledge (Sanders and Stappers, 2018)

Furthermore, Sanders and Stappers (2014) discuss three techniques (probes, toolkits, and prototyping) for the co-design during different design phases (pre-design, generative, and evaluative). During the generative phase, a generative toolkit can be used to trigger the co-design process, which underpins the 'designing with' principle (see Figure 2.14). The generative toolkit can consist of 2D or 3D materials, such as photos, words, symbolic shapes, cartoon-like expressions, systematic sets, puppets, raw collections of scrap materials, or Lego and other construction kits. The toolkit should be open and encourage participants to freely express their ideas with the help of facilitators (researchers or designers). It should vary in content, abstraction, level of openness, aesthetics, and form. The purpose of using the generative toolkit is to support participants in expressing their ideas creatively, for example, by recalling memories, making interpretations, making connections, seeing and explaining feelings, or imagining future experiences (Sanders and Stappers, 2018).

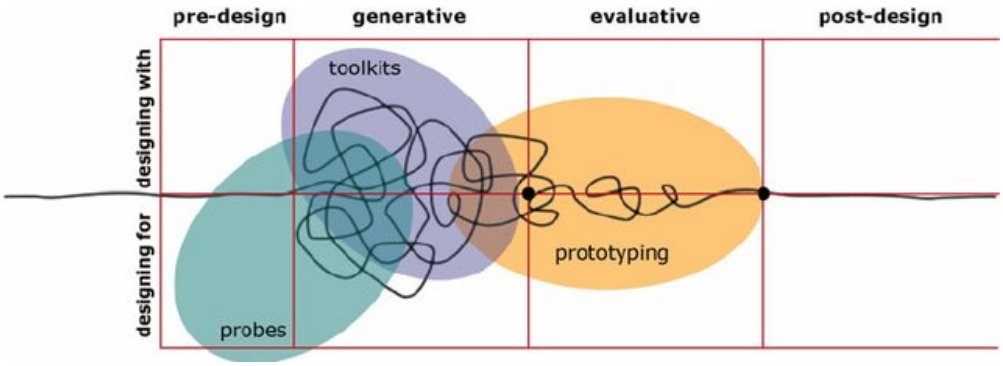


Figure 2.14 Three co-design techniques in relation to the mindsets and design phases (Sanders and Stappers, 2014)

In the realm of contextual research, context mapping is widely used as a method to help researchers and designers identify all of the factors that influence the user's experience (Sleeswijk Visser *et al*., 2005). The foundation of context mapping consists of two components: *context* and *mapping* (Sanders and Stappers, 2018). The context can vary, and the *canvas* can be designed to fit the context in the mapping process. By visualising the information, researchers and designers can explicitly see the related needs, problems, opportunities, and challenges.

Reviewing design devices from the literature can help incorporate the value co-creation process effectively. This process involves the use of various techniques, tools, and phases, which can be customised to align with the value co-creation framework later.

2.3.5 Benefits of the co-design

This section aims to review the benefits of the co-design from a theoretical perspective in order to ensure its usefulness. Looking through the lens of social innovation, co-design combines the practices of doing and reflecting, as well as divergence and convergence (Steen, 2013). Using co-design with public services and local people as participants can be seen as a bottom-up social innovation that allows locals to generate better solutions for their communities (Manzini and Rizzo, 2011), resulting in a better stock of social capital (Skidmore, Bound and Lownsbrough, 2006). By practising co-design in the local community, social conversations can become sustainable in the future (Manzini, 2015). Collaborative behaviour in co-design can benefit in the long term, as it takes collective viewpoints, possible risks, and limitations into consideration (Steen, Manschot and de Koning, 2011).

Focusing on individual empowerment, the co-design can improve creative ability (Steen, Manschot and De Koning, 2011). The co-design process is essential in evoking participants' tacit knowledge (Ehn, 2008) and latent knowledge (Sanders and Stappers, 2018), which can lead to innovative outcomes.

In relation to public services, the co-design creates a sense of involvement and ownership (Bradwell and Marr, 2008). By energising the co-design process with user input, it speeds up the generation and evaluation process (Bradwell and Marr, 2008), leading to a more responsive service (Skidmore, Bound and Lownsbrough, 2006). In addition, the co-design is a valuable approach for addressing the diverse needs of public service and government in a complex society; it facilitates a collaborative environment that integrates social perspectives, enabling service providers to comprehend the nature of complexity. Through empathy and sympathy, co-design establishes reciprocal relationships, allowing participants in the process to recognise the challenges and limitations of service delivery if issues arise (Bradwell and Marr, 2008).

2.3.6 Opportunity for greater impact

From a social innovation perspective, researchers emphasise starting small at the local level and expanding for greater impact (Mulgan *et al.*, 2007; The Young Foundation, 2012). With this goal in mind, Manzini (2015) provides an insightful process for local participation in the co-design process called the *'SLOC scenario'*, which stands for 'Small, Local, Open, and Connected' (p. 178). It is essential to consider how to increase the impact of such a small initiative without losing its sense of collaborative nature. Manzini's SLOC scenario has two basic strategies: *replicating* and *connecting*. The former idea, replication (or scaling out

horizontally), is to implement the same practice in a new context, such as a new community. However, the solution must adapt to the local context and circumstances, which may lead to different outcomes in the end. The latter idea, connecting (or scaling up vertically), is to connect small projects into a larger programme by using a multiplying effect, integrating and synergising previous project strategies. Alternatively, it can be done by connecting with other types of organisations. By doing this, a network can be created and continue to expand on its own.

2.3.7 Conclusion on co-design

In summary, the literature on co-design research provides valuable insights that can be relevant to the OTOP context. The key findings can be summarised as follows:

- Co-design can be considered a medium for social innovation, as it can integrate social resources from cross-disciplinary areas by engaging people from different backgrounds and expertises (Manzini and Rizzo, 2011).
- The main principle of co-design is treating participants as equal partners (Sanders and Stappers, 2008). The process is highly dynamic, creative, proactive, and open-ended, and can lead to a meaningful social conversation (Manzini, 2015).
- The core mindset in the co-design process is the design mode (Manzini, 2015), which combines three human gifts: critical sense, creativity, and practical sense.
- The review of design devices to assist with co-design practices can benefit from the 'Say, Do, and Make' technique. Generative toolkit materials were explored as examples. Context mapping, composed of context and mapping, can be used with a customised canvas designed for use in a value co-creation framework.
- The use of the co-design in programme development creates a sense of involvement and ownership (Bradwell and Marr, 2008), leads to better responsive services (Skidmore, Bound and Lownsbrough, 2006), and results in a better stock of social capital (ibid).

Incorporating co-design with value co-creation can encourage people to participate creatively and actively. Value can be created through a highly dynamic process and creative and proactive activities. Collective creativity can be applied in the value co-creation process as a useful resource for engaging participants and enhancing the opportunity to generate unique value. Co-design activities can make it easier to create and capture value-in-context under a designed and controllable context, helping to turn intangible value into tangible value. Collaborating with its users to co-create new approach for OTOP services is an effective way

to enhance the support provided by the programme. This strategic approach results in innovative changes that are better adapted to the local context.

2.4 Public service design

The OTOP programme, as a government initiative, can be viewed as a public service, with OTOP administrators acting as service providers and OTOP entrepreneurs as users. This section of the literature review examines the concept of 'design for service' or 'service design', particularly in the public sector, to address the problem and find solutions for OTOP implementation.

2.4.1 Service design definitions and value

Service design has historically been associated with interaction design principles and practices. Essentially, it involves an open-ended, interactive relationship between service providers and users, resulting in a co-produced, bespoke, and customised service outcomes (Sangiorgi, 2009).

By asking a simple question such as *'What will people get from the service?'*, the answer itself could reflect the value of the service. According to Polaine, Løvlie and Reason (2013), the fundamental values of service can be categorised into three main spheres: *care, response,* and *access*. One service may concentrate on only one of these spheres, or typically, integrate all three of them. The first area, *care*, is about providing maintenance (for objects) or a wide range of support (for people). The second sphere is *access*, which is the essential core value. It is about accessible infrastructure or information that the user cannot obtain on his/her own. Third, *response*, refers to the user's needs, which can be seen as a moment of reaction to the request. All of these can overlap and unite to create the performance, which is an overall experience packaged and offered to users.

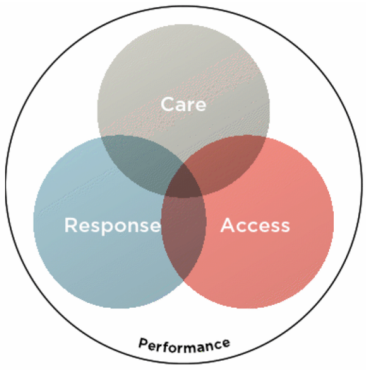


Figure 2.15 Core value of service (Polaine, Løvlie and Reason, 2013)

Moreover, service design holds significant value as a strategic resource for organisations since it provides a comprehensive and contextual understanding of the overall experience (Yu and Sangiorgi, 2018). In this sense, the organisations can see ahead and plan out their strategy and their value better. Service design can be developed in two ways; first, by enhancing its capacity to reach out to users or customers, and second, by deepening its integration into the organisation through the provision of tools and a mindset to deal with new challenges (Sangiorgi, 2009; 2011).

2.4.2 Public service design

In the public sector, policymakers and public service providers often work separately, and this results in incoherent services provided to citizens. Nesta, IDEO, and Design for Europe (2017) suggest using design thinking to bridge the gap. Applying design thinking to public services allows for a simultaneous approach rather than a sequential one (ibid). This approach considers service *design* and *delivery* together, resulting in synchronised efforts and a cohesive outcome for citizens. Without a design-led approach, the service can be viewed as transaction-based rather than relationship-building, which is important for understanding citizens' needs (see Figure 2.16). However, the *human-centred* approach, a fundamental practice in design thinking, offers a new opportunity to understand people's needs and add value to the practice, bringing a fresh outlook to old problems (ibid).

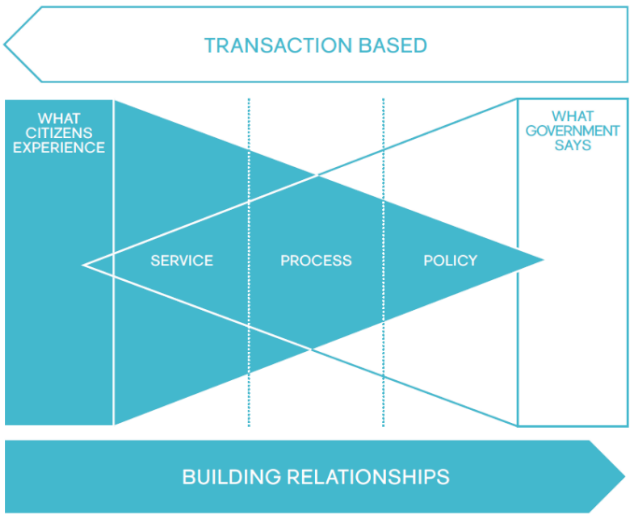


Figure 2.16 Citizens and government relations in public service (Nesta, IDEO and Design for Europe, 2017)

2.4.3 Co-designing public service and social innovation

Recently, many practices in service design have shifted their focus from designing objects to paying more attention to societal transformation with new objectives such as a collaborative,

sustainable, creative society and economy (Sangiorgi, 2011). Viewed in this way, it offers a sense of social innovation. Social innovation in service design (or *transformative service*) can be illustrated as *"an enabler of society-driven innovation"* (Sangiorgi 2011, p.30). This practice requires the good use of service design in order to address social challenges and catalyse societal and economic change (ibid).

Social innovation in public service can occur through community involvement and idea exchange. In order to generate innovative solutions, it is important to work with the community. Wates (2014) presents a participation matrix in his Community Planning Handbook, which outlines different levels of participation in shaded areas (see Figure 2.17). Collaborative planning and design are essential elements when working with a community. This method fosters partnerships by promoting shared responsibilities and decision-making.

		Project stages			
		Initiate ▸	Plan ▸	Implement ▸	Maintain
Level of community involvement	**Self Help** Community control	Community initiates action alone	Community plans alone	Community implements alone	Community maintains alone
	Partnership Shared working and decision-making	Authorities & community jointly initiate action	**Authorities & community jointly plan and design**	Authorities & community jointly implement	Authorities & community jointly maintain
	Consultation Authorities ask community for opinions	Authorities initiate action after consulting community	Authorities plan after consulting community	Authorities implement with community consultation	Authorities maintain with community consultation
	Information One way flow of information Public relations	Authorities initiate action	Authorities plan and design alone	Authorities implement alone	Authorities maintain alone

Figure 2.17 Participation matrix (Wates, 2014)

When it comes to innovative solutions in public service, Yang and Sung (2016) suggest the term 'transformative service,' which is in line with Burns et al. (2006) and Sangiorgi (2011). They propose that transformative service practice should not only focus on the end result but also create a system that empowers stakeholders to handle unexpected issues. In order to achieve this, the organisation's values should be redefined with sustainability in mind. The key

to success in transformative service design (Burns *et al*., 2006; Sangiorgi, 2011; Yang and Sung, 2016) includes:

- Redefining problems with key stakeholders
- Collaborating with cross-disciplinary teams to overcome complex problems and new challenges
- Employing co-design to exchange ideas, expertise, and knowledge
- Building organisational capacity to reduce dependency
- Designing with the purpose of intervention that goes beyond traditional solutions by applying a holistic perspective
- Initiating fundamental change that can expand into a long-term solution

To summarise, transformative service design is built upon collaboration, co-design, and the participation of important stakeholders and individuals from various disciplines. The process itself is just as crucial as the end result, as it not only yields innovative solutions but also empowers individuals throughout the journey.

2.4.4 Service design tools and techniques

In service design practice, systematic design activities are provided (Yang and Sung, 2016) along with innovative tools and technologies that make intangible things visible (Nesta, IDEO and Design for Europe, 2017). Visualisation can be used in giving the description at the early stage (Sangiorgi, 2009), at the middle stage in analysing and modelling (Holmlid, 2009), or at the evaluation stage in testing service experience (Sangiorgi, 2009).

According to the Double Diamond design process proposed by the Design Council (2019), service design tools are suggested to be used along with the four stages of the design process, which are: *Discover, Define, Develop,* and *Deliver*.

In the *Discover* phase, the tools aim to gather inspiration and insights from users' needs to develop initial ideas. Examples of such tools include user journey mapping, user diaries, the service safari, and the user shadow.

In the *Define* phase, the tools help to synthesise and align ideas with the organisation's objectives. Examples of tools in this phase include user personas, brainstorming, and design briefs.

In the *Develop* phase, the focus is on prototyping, developing, and testing the design-led solutions with tools such as service blueprinting, experience prototyping, and the business

model canvas. This process can be iterative, with testing and learning from errors in order to refine the final ideas.

Finally, in the *Deliver* phase, tools such as the 'scenario' can be used to finalise and launch the service.

The four phases of the Double Diamond framework provide a systematic approach to developing a strategic approach to the OTOP programme; it provides the appropriate tools to work with in each phase and can be applied to the value co-creation process.

2.4.5 Conclusion on public service design

To summarise, the literature review on service design and public service design provides both theoretical and practical perspectives that can be applied in the context of the OTOP programme. The key findings are as follows:

- The interactive activity approach in service design results in a co-produced, bespoke, and customised outcome (Sangiorgi, 2009).
- Service design values, as a strategic resource for the organisation, provide a contextual and holistic understanding of the experience as a whole, leading to better strategic planning.
- The core values of service are *care* (providing a wide range of support), *access* (accessible infrastructure or information), and *response* (reaction to the request) (Polaine, Løvlie and Reason, 2013).
- Applying the service design principle synchronises the design and delivery of the service, resulting in a coherent outcome provided to citizens.
- The human-centred approach provides a new opportunity to understand people's needs, adding value to the practice and bringing perspective to old problems (Nesta, IDEO and Design for Europe, 2017).
- The Double Diamond framework (2019) consists of four phases that offer a structured method for service design. Each phase incorporates specific service design tools, such as user journey mapping, user diaries, the service safari, and the user shadow during the Discovery phase; user personas, brainstorming, and a design brief in the Define phase; service blueprinting, experience prototyping, and a business model canvas in the Develop phase; and the scenario in the Deliver phase.

Applying service design or transformative service design principles to the OTOP programme enables coherent design and delivery of the service. Service design provides a holistic

perspective that supports the OTOP programme at both the strategic and operational levels. This approach can make the service and support more relevant to local needs, while also equipping the OTOP administrator with the tools and mindset to face future challenges.

2.5 New opportunities for sustainable development for the OTOP enterprise and its community

The pursuit of locally-sourced product development in the OTOP programme has been successful in terms of economic development. However, as discussed in Chapter 1, the endogenous community structure is not well-supported. This section aims to revisit the core principles of the OVOP and to identify areas for improvement in order to add new value to the OTOP programme.

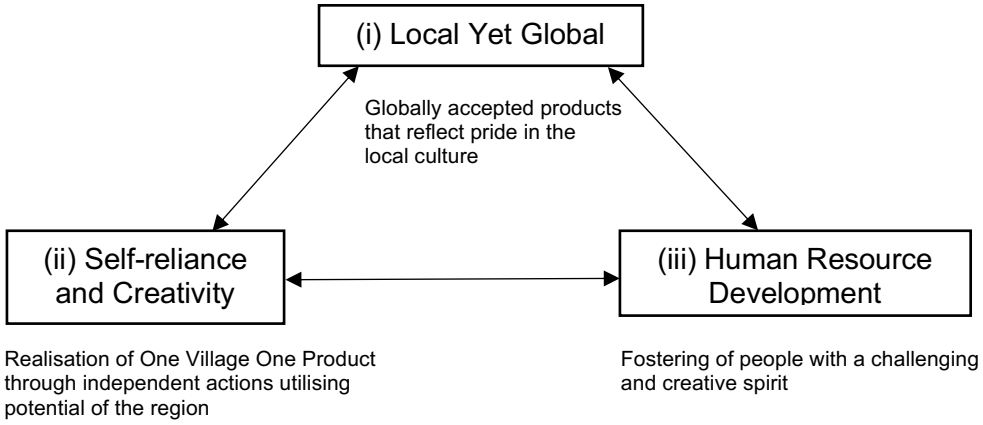


Figure 2.18 Three Basic Principles of OVOP (Igusa, 2006)

Considering the three basic principles of the original OVOP, there are other dimensions apart from developing the product and improving the local economy that need to be improved. Currently, the OTOP programme outcome evidence highlights product development in order to target the global level in line with the (i) *Local Yet Global* principle. Meanwhile, the other two aspects, (ii) *Self-Reliance and Creativity* and (iii) *Human Resource Development*, have not been focused on in the OTOP programme. These two elements can be seen as the sustainable aspects that bring success to the original model in Japan. This research aims to enhance people's creative abilities by involving them in the co-creation process. It could potentially address (iii) *Human Resource Development* and partially address (ii) *Creativity*. However, the other element – (ii) *Self-Reliance* – could be investigated further. Deconstructing the concept of self-reliance in the social context is not only about the individual level but also the underpinning of interpersonal relations in society. In sociology, self-reliance can be explained with the term *'community capacity',* which can be seen as a sustainable mechanism of informal social control (Chaskin, 2001). This section will focus on understanding this

concept and how it can help enable self-reliance mechanisms for local enterprises and their community.

2.5.1 Community capacity building: definitions, focus and purposes

Community capacity building has its roots in the community development movement, which focuses on strengthening civil society by encouraging the actions of communities and citizens towards the development of social, economic, and environmental policies (Craig, 2007). Within this movement, local community empowerment is seen as essential to encourage active citizens to promote an autonomous voice for bottom-up community development (ibid). As a result, the concept of community capacity building gained more awareness and began to be widely adopted in policy development in the late 1990s (ibid).

Looking at the term community capacity building, the UK Charity Commission defines it as *"developing the capacity and skills of the members of a community in such a way that they are better able to identify, and help meet, their needs and to participate more fully in society"* (Charity Commission, 2000, p.2). Similarly, the OECD describes it as developing the skills and competencies to enable community members to actively take control of their lives, facilitating inclusive local development (Noya and Clarence, 2009). Community capacity building can be achieved through interaction with community resources, such as human capital, social capital, and organisational resources, which can be leveraged to solve collective problems (Chaskin, 2001).

As seen from the definitions above, building community capacity requires a focus on two main aspects in practice. The first aspect is to provide an opportunity for people in the community to learn through experience (Charity Commission, 2000) and to equip them with essential skills and competencies (Craig, 2007). The second aspect is to involve people in using their own abilities confidently to make decisions and take responsibility in circumstances that are related to or affected by them (Charity Commission, 2000; Craig, 2007). In such a way, joining people together in collective activities can develop both aspects and significantly elaborate their potential as members of the community (Charity Commission, 2000).

The main purpose of community capacity building practice is directly related to local development in terms of creating social cohesion and community resilience (Noya and Clarence, 2009) by equipping people with new skills and also developing the potential of their existing skills (Charity Commission, 2000). Nonetheless, community capacity building differs from skill development. The process has been described as empowerment (Charity Commission, 2000), aiming to create powerful partners by developing their confidence and

self-esteem, resulting in promoting community structures and mechanisms that can be used to confront future challenges (Berestford and Martin, 2005; Craig, 2007).

2.5.2 Dimensions of community capacity

In order to encourage the improvement of community capacity through the OTOP programme, it is important to understand its fundamental dimensions. Goodman *et al.* (1998) identified the dimensions of community capacity and the sub-dimensions that emphasise related and detailed factors. Chaskin (2001) categorised the dimensions identified by Goodman *et al.* (1998) into groups, as shown in Figure 2.19. In his research, the primary core dimensions for community capacity are: (1) fundamental characteristics, (2) levels of social agency, and (3) functions. Other concerns include: (4) strategies for promoting community capacity, (5) conditioning influences (relevant social context), and (6) community-level outcomes resulting from community initiatives by exercising their capacity. Table 2.4 summarises these dimensions from Goodman *et al.* (1998), combined with the categories from Chaskin (2001).

Table 2.4 Dimensions and subdimensions of community capacity, combined from Goodman *et al.* (1998) and Chaskin (2001)

Dimensions (Goodman *et al.*, 1998)	**Subdimensions** (Goodman *et al.*, 1998)	**Grouping for framework** (Chaskin, 2001)
Citizen participation – or *level of commitment* in Chaskin (2000)	• Strong participant base • A diverse network that enables different interests to take collective action • Benefits overriding costs associated with participation • Citizens involvement in defining and resolving needs	(1) Characteristics of community capacity
Sense of community	• High level of concern for community issues • Respect, generosity, and service to others • Sense of connection with the place and people • Fulfilment of needs through membership	
Critical reflection – or *ability to address the problems, set objectives and pursue collective goals* in Chaskin (2000)	• The ability to reflect on the assumptions underlying our and others' ideas and actions • The ability to reason logically and scrutinize arguments for ambiguity • The ability to understand how forces in the environment influence both individual and social behaviour • The ability for community organizations to self-analyse their efforts at change over time	
Resources	• Access and sharing of resources that are both internal and external to a community • Social capital, or the ability to generate trust, confidence, and cooperation • The existence of communication channels within and outside of a community	
Social and inter-organisational networks – or *individuals, organisations and networks* in Chaskin (2000)	• Reciprocal links throughout the overall network • Frequent supportive interactions • Overlap with other networks within a community • The ability to form new associations • Cooperative decision-making processes	(2) Level of social agency

Skill – or *planning, decision making, implementation and evaluation* in Chaskin (2000)	• The ability to engage constructively in group process, conflict resolution, collection and analysis of assessment data, problem-solving and programme planning, intervention design and implementation, evaluation, resource mobilization, and programme and media advocacy • The ability to resist opposing or undesirable influences • The ability to attain an optimal level of resource exchange (how much is being given and received)	(3) Functions
Leadership	• Inclusion of formal and informal leaders • Providing direction and structure for participants • Encouraging participation from a diverse network of community participants • Implementing procedures for ensuring participation from all during group meetings and events • Facilitating the sharing of information and resources by participants and organizations • Shaping and cultivating the development of new leaders • A responsive and accessible style • The ability to focus on both task and process details • Receptivity to prudent innovation and risk-taking • Connectedness to other leaders	(4) Strategies
Community power	• The ability to create or resist change regarding community turf, interests, or experiences • Power with others, not control over them (non-zero-sum or win-win strategies) • Influence across a variety of domains or community contexts	
Community values	• Clearly defined norms, standards, and attributes • Consensus building about values	(5) Conditioning influences
Understanding of community history	• Awareness of important social, political, and economic changes that have occurred both recently or more distally • Awareness of the types of organizations, community groups, and community sectors that are present • Awareness of community standing relative to other communities	
n/a	n/a	(6) Community-level outcomes

The framework in Figure 2.19, created by Chaskin (2001), provides an understanding of how different dimensions are related. The framework consists of several components. First, the *fundamental characteristics* (including the sense of community, commitment, ability to solve problems, and access to resources) serve as the core starting point for community capacity building. Secondly, the *levels of social agency* (described as the type of network, from individuals to the organisational level) offer a view of different social forms in the social network. Thirdly, the understanding of *functions* (or skills and abilities) raises awareness of what needs to be developed in order to achieve the capacity building goal. Fourthly, the use of *strategies* (such as the role of the leader and collaboration among community stakeholders) provides a procedural action that can benefit the process. Fifthly, the *conditioning-influenced*

aspects provide contextual information from the social or community norm that should be taken into consideration. Finally, the *specific outcomes* that result from capacity building initiatives (such as economic well-being, better service, and influence on decision-making) can enhance capacity. The presented dimensions for capacity building can be applied to the OTOP programme, particularly in promoting sustainable development and a self-reliant mechanism.

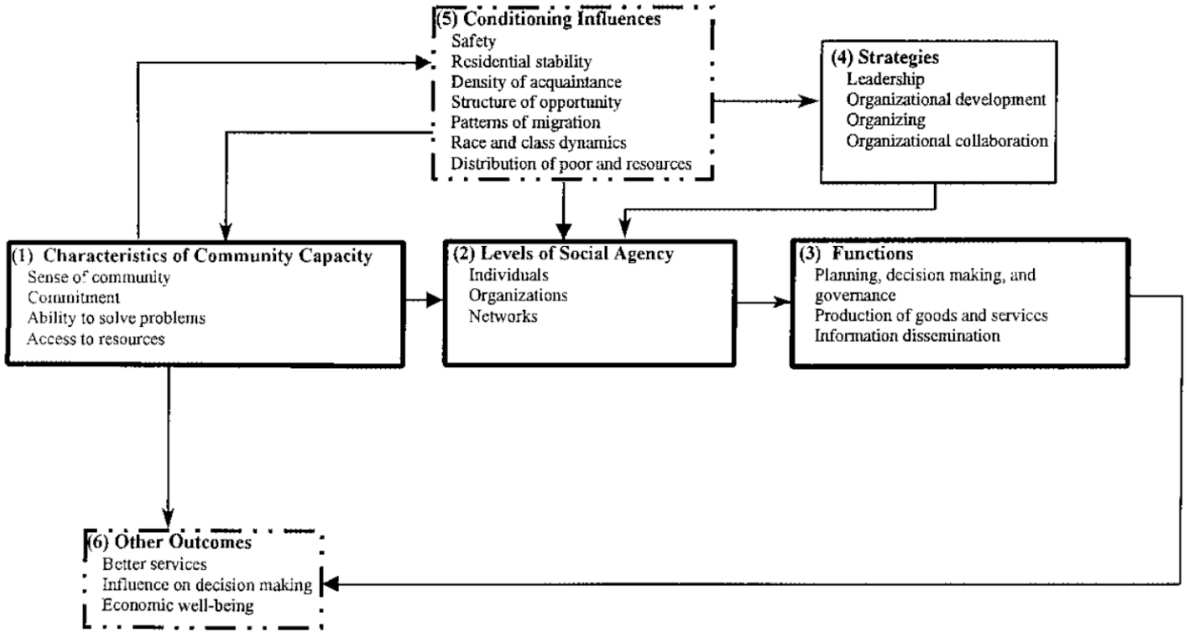


Figure 2.19 A relational framework for building community capacity (Chaskin, 2001)

2.5.3 Governmental roles in community capacity building

Community capacity building is a strategy that aims to improve community initiatives, particularly in bottom-up programmes where the government's role has shifted from traditional top-down dictation to stimulation and fostering (Noya and Clarence, 2009). Cavaye (1999) suggests that the government should determine the extent to which it should intervene in community initiatives. He proposes several governmental roles: first, to adopt a *'technical assistance'* attitude by providing services such as education, welfare, and physical infrastructure such as transportation and communication infrastructure; second, to move from a judgmental consultant's mindset to a *'genuine partnership'* attitude. Lastly, in order to equip citizens with critical thinking, the essential role of the government is to create a *'vehicle for concerns'* by providing a channel for local people to express their concerns through activities, meetings, and discussions that allow them to participate and take action. By doing so, it encourages constructive and strategic thinking throughout the process, resulting in the inclusion of local voices and an increasing level of trust between local government staff and local people.

2.5.4 Conclusion on community capacity building

Community capacity enables communities to cope with challenges and to sustain community-led development (Cavaye, 1999). Considering community capacity as the goal of the OTOP programme would create a self-reliance mechanism that enhances community resilience and supports endogenous community structures. The dimensions and subdimensions of community capacity building are key features that should be emphasised to benefit local enterprises and the community as a whole. By outlining the sustainable opportunities of the OTOP programme through the lens of community capacity, the researcher gained a theoretical perspective that can be emphasised during primary research and in developing the value co-creation framework.

2.6 Summary and discussion of the literature review

To summarise, Figure 2.20 visually represents the interrelation among value co-creation, co-design, and public service design based on the research areas explored in the literature review.

Figure 2.20 The flow of how different factors of research themes apply to the OTOP programme

This section presents the findings of the theoretical perspectives on the potential opportunities for the OTOP programme. In summary, the findings are as follows:

- **Social innovation for OTOP programme development:** According to the earlier discussion about the common features of social innovation proposed by The Young Foundation (2012), which are (1) cross-sectoral, (2) open and collaborative, (3) grassroots and bottom-up, (4) pro-sumption and co-production, (5) mutualism, (6) creates new roles and relationships, (7) better use of assets and resources, (8) develops assets and capabilities, the interrelationship of all research areas – including value co-creation, co-design, public service design, and community capacity – provides the opportunity for the OTOP programme to cover all common features in social innovation. For example, the correlation of value co-creation with the co-design lens can facilitate the bottom-up approach with grassroots, and provide new roles and relationships toward the co-creation of new solutions for the programme, resulting in the development of social resources and community capacity. Proposing new opportunities for an OTOP programme using the social innovation concept will lead to novel solutions to the social problem which are effective, efficient and sustainable (Phills, Deiglmeier and Miller, 2008).
- **Value co-creation with the co-design and service design principle offers a purposeful strategic approach:** Toward revisiting the OTOP programme, using value co-creation in the primary process would allow reframing the programme at the strategic level. By co-creation for new potential value with the locals, the perception of the programme would shift from *'what-to-do'* and *'how-to'* to *'why it matters'.* This is because the value can be considered as essential and the purpose of any action. The programme could be more meaningful if it began with the mutual value generated by the members of the community. This perspective is well-aligned with that of Sinek (2009), who gave an idea of an alternative perspective in his well-known Golden Circle framework, where organisations should begin by asking *'why'* as it provides a greater chance to achieve better outcomes. The most innovative organisation always gives people something to work towards instead of something to work on. This can be observed as a practical application that could result in a profound and long-lasting impact; by starting with *'why'*, it also provides a purposeful and consistent context in any strategic implementation. Together with the capability of co-design, the opportunity is greater since it can bring out the hidden inherent potential. The co-design could also engage participants better and result in giving a more meaningful experience during value co-creation. In this way, the OTOP service strategy could become more relevant to the social context and social needs.

- **Value co-creation with the co-design and service design principle as a hybrid process (when top-down meets bottom-up):** Emphasising the co-creation principle, the process, however, would not be viewed only as the bottom-up process, but it can be seen as a hybrid process – when top-down meets bottom-up, where innovation emerges from both sides (Manzini, 2015). Hence, it requires that the local participants in the implementation tap into the social needs and give the locals voices (bottom-up), while local government involvement provides the authority's viewpoint and also acts as the supporter that is capable of making a bigger impact. Therefore, regenerating value in the OTOP programme with a hybrid process with a user-centred perspective would help to facilitate a coherent outcome that works best for everyone.
- **Practising in the creative process improves the creative ability for local people:** Co-design activities have design tools and techniques as the mediums to bring out participants' creativity, even the participant that has no creative skill. Involving people in the design-led process can lead to new innovative ideas and hidden inherent value that arises from combining collective creativity from cross-functional participants.
- **Value co-creation with co-design practice could encourage community capacity building:** Community initiatives require a well-defined value orientation (Goodman *et al.*, 1998). This is why the interrelation of value co-creation and co-design could be benefit at the early stage of building community capacity. The inclusion of local voices with a diverse range of people can enhance community capacity (Cavaye, 1999).

Although the theoretical assumptions derived from the research themes have generated new opportunities, there is still a knowledge gap that needs to be identified with the intention of addressing it and fulfilling the research objectives. These gaps include:

- **Lack of implementation of value co-creation in the public sector:** Many studies on value co-creation have focused on its application in the private sector. However, the public sector has been largely overlooked in terms of implementation. Although the public sector has been studied in the context of value co-creation, there is a lack of successful implementation in this sector that can serve as an example.
- **Limitations of research in understanding the trifold stakeholders in the OTOP service:** When it comes to the OTOP service, there are three groups of stakeholders involved: local entrepreneurs, local authorities, and OTOP customers. In order to ensure its success, it is essential to examine the relationships among these groups, identify any obstacles, and understand their individual needs.
- **Value co-creation still lacks practical methods and tools to achieve mutual value as the outcomes:** The first and second sections of this chapter delved into the topics

of value co-creation and co-design. The building blocks of value co-creation and the associated interactions were analysed in order to gain a better understanding of their practical implementation. However, the study mainly focuses on the concept and provides factors rather than a discussion of the practical process. Further development of methods and tools is necessary in order to serve the purpose of value co-creation in the OTOP context, which is achieving mutual value collectively among stakeholders.

- **Lack of application of a co-design lens in OTOP programme development:** The study of supporting the development of OTOP can be observed in various areas, such as marketing, branding, logistics, and product development. However, there is still a lack of application using the co-design lens, particularly regarding strategic approaches. This presents an opportunity to apply the notion of co-design to provide greater ownership and commitment for all stakeholders.
- **Value drivers for local enterprises in the OTOP context have not been explored:** As noted in the definition of value, it is impossible to objectively identify potential value because it is perceived subjectively. Therefore, in order to provide a practical approach to value co-creation in the OTOP context, identifying the broad categories of value drivers can be helpful. In a literature review on value co-creation, a similar context from the Cooperative and Mutual Enterprises (CMEs) programme has outlined the value drivers. However, value drivers still need to be customised in order to fit the OTOP context.

In conclusion, in order to investigate further and to implement the proposed solution, additional primary research is needed. The purpose of primary research is to gain a better understanding of how mutual values can be created through the value co-creation process, how co-design can support it, and how design devices can be used in real-world scenarios. Importantly, primary research can incorporate the voices of OTOP stakeholders in order to reflect the actual situations and circumstances that could shape a relevant and practical framework. Thus, the following chapter outlines the research methodology employed in this research and how it aims to address the identified knowledge gaps.

Chapter 3 – Research methodology

Research methodology	3.1 Introduction of research methodology	
	3.2 Research paradigm	
	3.3 Research approach	
	3.4 Research purpose	
	3.5 Research strategy	
	3.6 Research methodology	
	3.7 Research design	
	3.8 Research methods	3.8.1 Research clarification stage 3.8.2 Descriptive Study I stage 3.8.3 Prescriptive Study I stage 3.8.4 Descriptive Study II stage 3.8.5 Prescriptive Study II stage 3.8.6 Descriptive Study III stage 3.8.7 Prescriptive Study III stage 3.8.8 Descriptive Study IV stage
	3.9 Reliability and validity	
	3.10 Research ethics and integrity	3.10.1 Data management

Table 3.1 Overall structure of Chapter 3

This chapter presents the research framework, including an explanation of the rationale for choosing the research approach, purpose, strategy, methodology, and methods. The research design in this thesis follows the Design Research Methodology (DRM), with research activities specified for each DRM phase. The chapter also highlights research reliability and validity, as well as ethics and integrity.

3.1 Introduction of the research methodology

The purpose of this chapter is to present the elements of the research utilised in this study. This is done by reviewing approaches and providing rationales for the choice of methodologies and methods employed. In the development of research methodology, the Research Onion (Saunders, Lewis and Thornhill, 2019) provides a comprehensive framework that outlines the research design process. It starts with the research assumption, philosophy, theoretical perspective, approach, strategy, and methods. Accordingly, the chapter follows the following structure: (1) review of the research assumptions and philosophies that define the theoretical perspective for identifying the research paradigm; (2) the decision on the research approach and purpose; (3) the methodological choice that could be used to meet different research objectives; and (4) selection of the data collection methods used for this research.

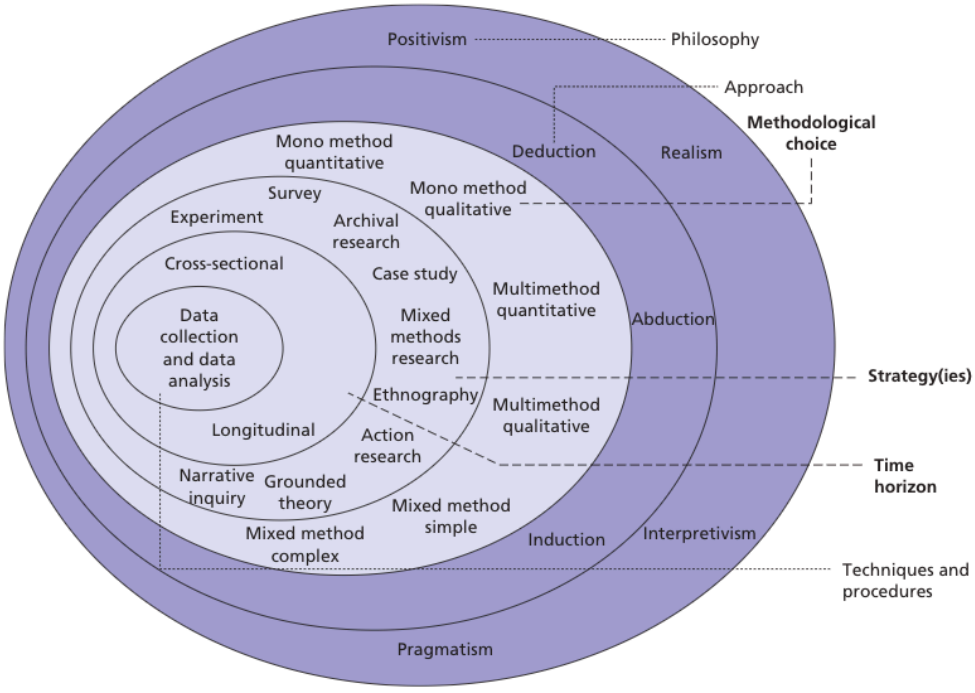


Figure 3.1 The Research Onion (Saunders, Lewis and Thornhill, 2019)

3.2 Research paradigm

At the beginning of a research, the research assumption and philosophy help the researcher to understand the research questions (Crotty, 1998) and form the theoretical perspectives. Applying a theoretical perspective (or a set of beliefs) is necessary to help guide the research's actions (Creswell, 2013). In social science research, two main stances of philosophy have

been adopted widely: ontology and epistemology (see Table 3.2 for comparison). The former is about embracing the ideas and views of various realities from what exist in the human world that can be leanrt to acquire knowledge. The latter, on the other hand, is about recognising how people create knowledge (Moon and Blackman, 2014) based on subjective evidence from their personal views (Creswell, 2013). This research aims to find solutions for the OTOP programme through participant interaction. To achieve this, an epistemological philosophy is deemed most appropriate. Further study of epistemological philosophy, as described by Easterby-Smith, Thorpe and Lowe (1991), can guide how research is conducted. It helps clarify research objectives, determine what needs to be gathered, and interpret findings and evidence. Additionally, it aids in the selection of research methodology and methods that align with the research objectives.

Table 3.2 Philosophical assumption and meanings between ontology and epistemology (Creswell, 2013, p.36)

	Ontological stance ("Nature of reality")	***Epistemological Stance ("How reality is known")***
Meaning	Multiple realities; Subjectivity of reality; Socially constructed reality	Close interaction between the knower and phenomenon to be studied

In the epistemology philosophy, three main stances, namely objectivism, constructivism and subjectivism, are widely adopted in order to gain a theoretical perspective. Beginning with objectivism, it highlights *"what it means to know"*; it aims to study and discover the truth and value of the objects (Crotty, 1998, p.8), which exist in reality and are distinct from consciousness (Gray, 2004). A theoretical perspective that mainly links with objectivism is positivism (Gray, 2004). Contrary to constructivism, this stance aims to construct the meaning, not to discover it; it cannot be done without one's interpretation (Crotty, 1998). The subject and object are related, and the truth can be constructed with an interaction between them (Crotty, 1998; Gray, 2004). A theoretical perspective that links with constructivism is interpretivism (Gray, 2004). Another stance is subjectivism. The meaning does not come when the subject and object interact, but the meaning of the object is imported from somewhere else and apart from the subject's interpretation (Crotty, 1998), and the subject constructs it (Gray, 2004). This stance of epistemology is mostly linked with the post-modernist theoretical perspective (Gray, 2004).

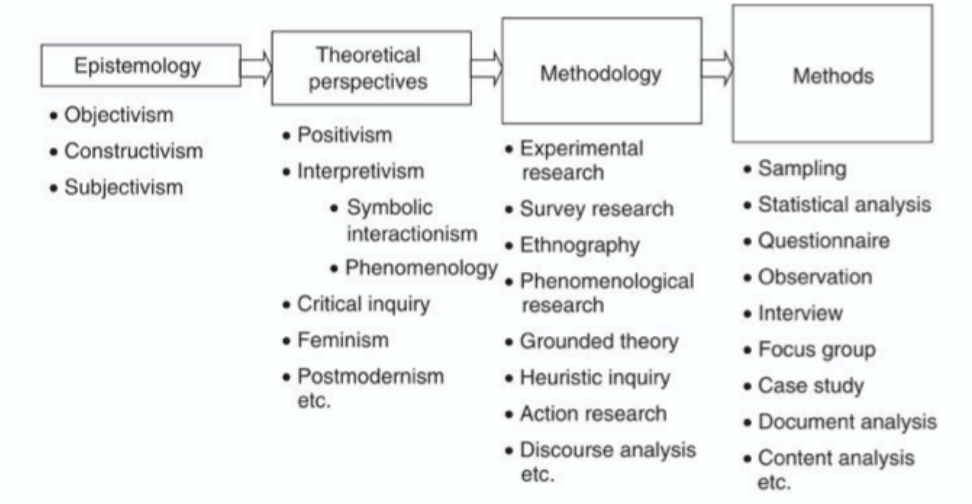


Figure 3.2 Relations among epistemology, theoretical perspectives, methodologies and methods (Gray, 2004)

By looking at theoretical perspectives, positivism and interpretivism are the most used by researchers in the social science field among the other stances (i.e., critical inquiry, feminism, postmodernism). Positivism's essence is to study the existing world using measurements from scientific observation (Gray, 2004). In this regard, the researcher deals with facts and is not involved in interpreting data. On the other hand, interpretivism emphasises how social influences an individual. Here the researcher plays an active role in the research activity. Interpretivism underpins people's thoughts and ideas and makes sense of the world around us (Saunders, Lewis and Thornhill, 2019).

Having reviewed the assumptions, philosophies and theoretical perspectives in accordance with the research question, and the aims and objectives, this research employed the constructivism epistemological paradigm with an interpretivism theoretical perspective in order to tackle the research question and objectives. This paradigm is appropriate because, first, in order to understand the barriers and opportunities for the OTOP programme, the researcher needs to interact with the participants in order to obtain information from them. Then, the data through interactions (e.g., barriers from the current situation) need to be interpreted to find the solutions. Developing the value co-creation framework also requires an understanding of value co-creation, co-design and public service design, combined with the OTOP context to form the framework and implementation guidelines as the outcomes of this research. Therefore, the constructivist epistemology with interpretivism as a theoretical approach is relevant to the research objectives and the methods used in the data collection.

3.3 Research approach

The approach of research can follow two movements of systematic reflection, which are deductive and inductive reasoning (Dewey, 1933). The deductive process begins from abstract concepts and theoretical relationships (Neuman, 2014); or the theory of the universal view of the situation (Gray, 2004); or the conclusion of promises from building statements or assumptions (Leedy and Ormrod, 2005); all of which aim to test those aspects toward concrete empirical evidence (Neuman, 2014). This is useful when it comes to the generation of the research hypothesis and testing theories (Leedy and Ormrod, 2005). On the other hand, the inductive process begins with concrete empirical evidence (Neuman, 2014) and focuses on analysing collecting data and realising the patterns that emerged between variables, discovering a connecting principle, and multiplying data from multiple sources in order to construct relationships, conclusions, and theories (Gray, 2004) from specific instants or occurrences (Leedy and Ormrod, 2005) that aim to generate concepts and theoretical relationships (Neuman, 2014).

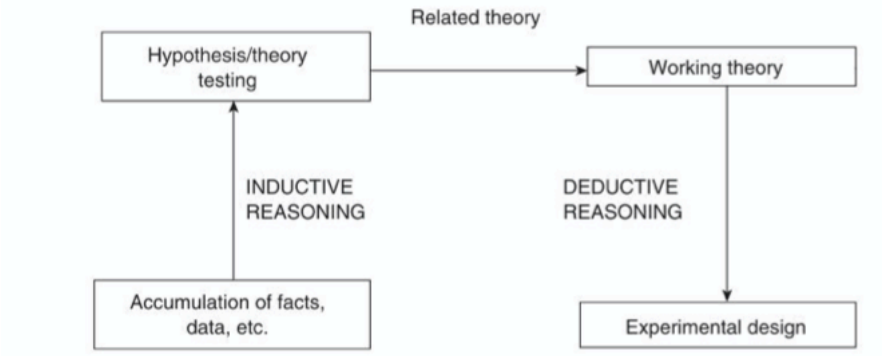


Figure 3.3 The combination of the inductive and deductive approach (Gray, 2004)

By reviewing the research approaches, this research adopted both inductive and deductive reasonings to serve the understandings and findings for the different research objectives. At the beginning, Objectives 1 to 6 used inductive reasoning to investigate the research areas and current barriers of the OTOP programme in order to form an initial value co-creation framework. Then, the evaluation of the framework (Objective 7 and 8) adopted deductive reasoning to test it with empirical studies.

3.4 Research purpose

In research, identifying the purpose is critical in ensuring that the study is focused and relevant; having a clear research purpose can guide the research design, methodology, and data

analysis. According to Gray (2004) and Robson (2011), there are three possible purposes for the study: exploratory, descriptive, and explanatory. First, exploratory studies, this purpose means to explore by asking open questions to discover what is happening and to gain insight into it (Gray, 2004; Saunders, Lewis and Thornhill, 2019). Exploratory studies can begin with a broad focus, and then, after discovering and exploring, it can be narrowed (Saunders, Lewis and Thornhill, 2019). Second, descriptive studies focus on describing the accurate profile of events, persons (Saunders, Lewis and Thornhill, 2019), situations, social settings, or relationships (Neuman, 2014). The data collection in descriptive studies mostly use surveys, field research, and content analysis. Third, explanatory studies can be used when emphasising a relationship that occurs among variables (Gray, 2004). It can be built upon exploratory and descriptive studies in order to explain the cause and reason for something that occurs (Neuman, 2014).

After reviewing the research purposes, this study mainly adopted exploratory studies to seek and explore the value co-creation that utilises the co-design principles towards creating the framework for local authorities to use as an approach with local entrepreneurs. In some stages of the research, descriptive studies were used to describe the situation (e.g., information gained from the questionnaire surveys to describe the attitude of the OTOP customers towards the OTOP products or how often they buy OTOP products) and explanatory studies when focusing on unfolding the complex relationships among OTOP stakeholders.

3.5 Research strategy

Considering the research question and objectives through a philosophical lens, as outlined in the previous section, helps to inform the decisions regarding methodological choices. This section discusses the research strategy adopted to collect data and fulfil the research question and objectives. Social research has traditionally used two strategies: quantitative and qualitative (Robson, 2011). Leedy and Ormrod (2005) state that qualitative research involves a better understanding of complex situations from patterns and context-bound information, characterised as holistic and emergent. In comparison, quantitative research seeks explanation and prediction in order to validate or confirm relationships and generalisations.

Regarding the different objectives of the research, this research utilised both qualitative and quantitative approaches in order to enhance understanding and to provide a deeper understanding of the research problem. Applying mixed methods allows a researcher to apply multiple data sources and methods and to gain information from different focus groups.

Particularly, the qualitative strategy with the inductive approach was used to investigate the current relationships, barriers and pain points among the OTOP entrepreneurs and local authorities that will provide information in discovering solutions for the OTOP stakeholders to achieve mutual value and to create partner-like relationships. As opposed to qualitative research methods, quantitative strategy was used to gather the OTOP customers' perspectives of the OTOP products. The quantitative approach allowed the researcher to reach a large number of participants by using a survey research strategy. The overall methodological choices and research methods used in this research are illustrated in section 3.7.

3.6 Research methodology

After clarifying the research strategy, a research framework should be developed to categorise the complexity and to define the stages of the research process. In design research, the Design Research Methodology (DRM) (Blessing and Chakrabarti, 2009) has been widely adopted. The DRM consists of four main stages: Research Clarification, Descriptive Study I (DS-I), Prescriptive Study (PS), and Descriptive Study II (DS-II). The following section explains the objectives and deliverables for each stage of the DRM, and its iteration process, as concluded by Blessing and Chakrabarti (2009).

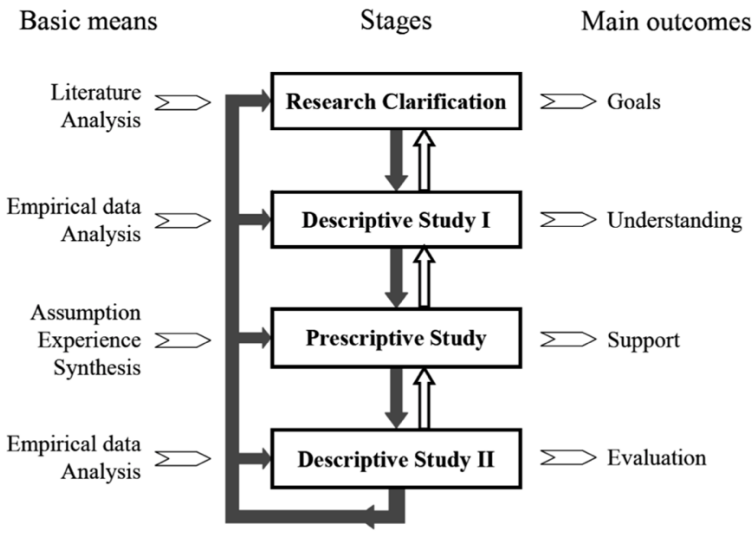


Figure 3.4 Design Research Methodology (DRM) (Blessing and Chakrabarti, 2009, p.15)

- *The Research Clarification* aims to formulate the research goal and to gather evidence to support the initial assumptions. In this stage, the overall plan can be clarified, including the research focus, goals, problems, questions, and hypotheses. The relevant areas of research and expected contributions can also be outlined.

- *Descriptive Study I (DS-I)* aims to obtain a deeper understanding of the existing situation clarified in the research clarification stage. Literature can be reviewed in order to ascertain the influencing factors (later developed into key factors) that can improve the current situation. The deliverables at this stage can be key factors, the reference model, success criteria, and the implications of findings for support development.

- *Prescriptive Study (PS)* aims to increase understanding of DS-I in order to elaborate on the initial description. With the objectives of the PS, researchers can use their critical reflection to improve the problem definition systematically. Intended support can be formed at this stage in order to encourage and support the problem definition. The evaluation of support should also be planned at this stage.

- *Descriptive Study II (DS-II)* focuses on evaluating and validating the assumptions and findings, which will result in implications and suggestions for improvement. The evaluation can be categorised into two types: application evaluation and success evaluation. The former type highlights usability and applicability in order to see how it affects the key factors, while the latter evaluates usefulness to see whether it supports and contributes to success.

According to Blessing and Chakrabarti (2009), when applying the DRM, the execution does not have to be rigid or linear. Iteration within stages and between stages is common, as it helps to increase understanding. After coming to a conclusion and making improvements, researchers can go back and revisit earlier stages. Conducting stages in parallel can also increase the effectiveness of the procedure and reduce the chance of unexpected iterations. With the stages provided, this research can implement research strategies and determine actions systematically.

Hence, in order to illustrate all of the research activities with the DRM framework, the next section provides the overall research design with the chosen research methods in accordance with the research objectives.

3.7 Research design

The figure on the following page is an overview of the research design according to the DRM; that is, the areas/scope of the study, sampling size, outcomes, and research objectives for each research method.

Stages		Research methods	Areas of study / sampling size	Outcomes	Research objectives
EXPLORATION	Research Clarification	Literature review OTOP programme and the original OVOP	• OVOP in Japan and other countries • OTOP's implementation in Thailand	• Contextual review on the OTOP programme • Research goals • Research methodology	Objective 1,2
EXPLORATION / INVESTIGATION	Descriptive Study I	Literature review on research themes	• Value co-creation • Co-design • Service design • Opportunity for sustainable development	Understanding • Theoretical perspectives from each research themes	Objective 3,4,5
INVESTIGATION		Case studies	4 cases	• Lesson learnt from previous practices	Objective 4,5
INVESTIGATION		In-depth Interviews with the OTOP stakeholders	28 participants	• Current barriers • Stakeholders' views and their relationships • Opportunity for new development	Objective 1,2,3,5
INVESTIGATION		Questionnaire surveys	113 participants		Objective 1,2,3,5
INVESTIGATION	Prescriptive Study I	Literature review on co-creation/ co-design activities and tools	• co-creation/co-design process and tools • Framework synthesis (version 1.0)	Support Design initial framework as a potential solution to overcome current barriers	Objective 6
DEVELOPMENT AND EVALUATION	Descriptive Study II	Workshops	Expert evaluation workshops 12 participants	Evaluation • Flow of activities • Co-design and select appropriate tools	Objective 3,4,7,8
DEVELOPMENT AND EVALUATION	Prescriptive Study II		• Framework development (version 2.0)	Support Improvement of the framework phases and activities	Objective 6
DEVELOPMENT AND EVALUATION	Descriptive Study III	Workshops, observation and questionnaires surveys	User evaluation workshops 1) a community-based 16 participants 2) a community-based 12 participants 3) Local entrepreneurs 14 participants	Evaluation • Ease of use • Practicality and usefulness • Level of engagement	Objective 4,7,8
DEVELOPMENT AND EVALUATION	Prescriptive Study III		• Framework development (version 3.0) with facilitator guidelines	Support Improvement of the framework with facilitator guidelines	Objective 6,8
DEVELOPMENT AND EVALUATION	Descriptive Study IV	In-depth interviews with local authorities and questionnaire surveys	Stakeholders evaluation 5 participants	Evaluation • Ease of use • Practicality and usefulness • Applicability and feasibility	Objective 4,7,8
CONCLUSION	Final outcome		• Final framework with facilitator guidelines + implementation guidelines	Support Improvement of the framework and facilitator guidelines + implementation guideline	Objective 8

ITERATION FOR FRAMEWORK DEVELOPMENT

Figure 3.5 Research methodology: stages, methods, scope, and outcomes

3.8 Research methods

This section provides more detailed information about the methods used and how they were carried out in each research phase following the DRM. Both qualitative and quantitative data collection methods were considered, along with their respective advantages and disadvantages (as seen in Table 3.3). The methods were then selected to serve the specific objectives of the research at different stages.

Table 3.3 Comparison among the data collection methods (Queirós, Faria and Almeida, 2017)

Method	Advantages	Disadvantages
Qualitative methods		
Observation	- Collect data simultaneously with the event occurrence - Unobtrusive way, which is not dependent on upon someone's response - Flexible and oriented to knowledge discovery	- Very time consuming - Dependent on the observer's impartiality - Requires significant preparation - Difficult to collect data in real time
Ethnography	- Based on observation and interviews with the direct involved authors - Provide in-depth findings - Suitable to explore new lines of research	- Very time consuming - Difficult to get concise and precise conclusions - Researcher needs to have a deep knowledge of the problem domain
Field research	- Adequate to get very detailed data - Emphasises the role and relevance of social context	- Difficult to generalise and get data from a very large number of people or groups - Dependent on the observer's impartiality - Documenting observations may become a challenging process
Focus groups	- Adequate to get detailed information about personal and group - Offer opportunity to seek clarification - Lower costs and time when compared to individual interviews	- Hard to control and manage - Difficult to get the participation of people - Can be no representative of all population
Case studies	- Provide detailed information about individuals - Offer a good opportunity for innovation and change current theoretical assumptions - Can be a good alternative or complement to focus groups	- Difficult to establish cause-effect connections - Hard to generalise from a small number of case studies - Ethical issues, especially of confidentiality, may appear - Difficult to create a case study that suits all subjects
Structured interviews	- Well-structured and easy to compare respondent's answers - Can reach a large sample - Easy to replicate - Conducting an interview is fairly quick to conduct	- Very rigid - Low flexibility in the response's choice - Difficult to obtain detailed data - Preparing an interview can become time consuming
In-depth interviews	- Adjusted to get detailed and insightful information on a given domain - Need only fewer participants to provide useful and relevant insights - Can be performed in informal environments	- Time consuming and relatively high costly - Longer verification process to extract compared information - Participants should be carefully chosen to avoid bias - Not generalizable

Quantitative methods		
Field experiments	- Works in natural setting - Larger scale research - Subjects are not influenced by the observations of the experiments	- Difficult to control variables - Difficult to replicate the same conditions of the study - Ethical problems can arise
Simulation	- Used to study complex systems - Compress a time frame, which allows to study the behavior of the system more quickly - "What-if" questions can be tested and answered	- Model building requires deep knowledge of the field - Time consuming and expensive - May require specialized hardware and software tools
Surveys	- Low development time - Cost-effective - Easy data collection and analysis using statistical methods - Can reach high audiences - High representativeness - Not affected by the subjectivity of the researcher	- Reliability of data is very dependent on the quality of answers and on the survey' structure - Rigidity of the structure - Do not capture emotions, behavior and changes of emotions of respondents
Correlational study	- A lot of information and different domains can be explored - Degree of association between two variables can be easily calculated - No manipulation of behavior is required	- No direct cause and effect can be inferred - May lacks internal/external validity - Does not provide a conclusive reason for the existence of a correlation between two variables
Multivariate analysis	- Several statistical tests and techniques can be used - A lot of information and different domains can be explored - Technical rigor of the process	- Complex of the employed techniques - Requires the use of specialised statistical software

After considering the research objectives and the advantages and disadvantages of different research methods, both qualitative and quantitative methods were selected to serve the purpose of this study. To explore bottom-up practices in other countries, case studies can be useful for learning from different nations and providing theoretical assumptions before conducting primary research. In investigating the OTOP implementation in Thailand, in-depth interviews can provide detailed and insightful information from OTOP stakeholders. On the other hand, when reaching out to OTOP customers, quantitative online surveys are suitable for reaching a large audience, and statistical analysis can provide conclusions from respondents' perspectives towards OTOP products and programme. During the development and investigation stages, workshops with focus groups were chosen to collectively gather data regarding framework development from participants. The following section provides further details on the research methods used in each study stage, categorised by the DRM framework.

3.8.1 Research clarification stage

The aim of this research stage was to gain a deeper understanding of the OTOP programme and an opportunity for development to formulate the research goals, aims and objectives initially.

- **Literature review on the OTOP programme and the original OVOP**

At the beginning of this research, a literature review was used to gain an understanding of the problem situation related to the research topic. After reviewing how a literature review should be conducted to serve the research objectives (as shown in Table 3.4), a contextual review was carried out to expand the overall knowledge. The researcher examined the background of the programme and compared it with the original OVOP from Japan in order to identify opportunities for development, and in order to gain a better understanding of similar implementations in other countries. A context review was also used to better understand the OTOP system, including the management hierarchy, the roles of governmental bodies, and problems caused by top-down execution. Since the OTOP has been implemented in Thailand for over a decade, a historical review of the programme's main activities over the past years was also conducted. An integrative review was also carried out in order to identify areas of agreement and disagreement on the programme's implementation. Positive and negative impacts were identified, and problem mapping was carried out by critically gathering information from the literature to identify and analyse the root causes of the problem.

Table 3.4 Six types of literature review adapted from Neuman (2014)

Context review	A common type of review in which the author links a specific study to a larger body of knowledge. It often appears at the beginning of a research report and introduces the study by situating it within a broader framework and showing how it continues or builds on a developing line of thought or study.
Historical review	A specialised review in which the author traces an issue over time. It can be merged with a theoretical or methodological review to show how a concept, theory, or research method developed over time.
Integrative review	A common type of review in which the author presents and summarises the current state of knowledge on a topic, highlighting agreements and disagreements within it. This review is often combined with a context review or may be published as an independent article as a service to other researchers.
Methodological review	A specialised type of integrative review in which the author compares and evaluates the relative methodological strength of various studies and shows how different methodologies (e.g., research designs, measures, samples) account for different results. Self-study review. A review in which an author demonstrates his or her familiarity with a subject area. It is often part of an educational programme or course requirement.
Theoretical review	A specialised review in which the author presents several theories or concepts focused on the same topic and compares them on the basis of assumptions, logical consistency, and scope of explanation.

By reviewing the existing literature, the researcher gained a deeper understanding of the research topic. This deeper understanding then led to the formation of a research question, which informed the aims and objectives of the study and provided direction for the next stage.

3.8.2 Descriptive Study I stage

The aim of this research stage was to explore and to investigate. The exploration involved identifying the factors that can influence the current situation through a literature review. The investigation involved data collection and examining previous practices and the circumstances of the current implementation. Case studies, in-depth interviews with OTOP stakeholders, and questionnaire surveys were used as investigation methods.

- **Literature review on research themes**

The literature review technique employed at this stage involves a theoretical review aimed at gaining an in-depth understanding of the research context to generate theoretical perspectives from previous research findings (Leedy and Ormrod, 2005). The research themes investigated include value co-creation, co-design, public service design, and opportunities for sustainable development. The literature review summary provides theoretical perspectives that consequently affect the interpretation and understanding of the research findings and that support the primary research preparation.

- **Case studies**

The case study method is useful for revealing the relationship between a phenomenon and its context and is ideal for addressing the 'how' and 'why' types of research questions (Gray, 2004). Data collection for case studies is typically gathered from multiple sources (Yin, 2009; Creswell, 2013), including documented information, interviews, and observations (Yin, 2009). Conclusions can be drawn from cross-case comparisons and analysis (Yin, 2009). This method emphasises detailed contextual analysis in order to understand the complex issues learned from previous research (Dooley, 2002).

The case study employed in this research generated theoretical perspectives using an exploratory approach from community studies (e.g., community development, community-based enterprise development). It helps to comprehend the context of their situations in order to determine the drivers and barriers that affect community development. This phase aims to study various cross-national community developments to tackle matters such as: how the programme or project was executed, what strategy was applied, how the design can be involved or influenced, what the impact or solution was, and how a self-reliance mechanism

was built through the process. The sample comprises four community cases that were chosen using a purposeful sampling strategy based on the criteria. The selection criteria included: (1) the programme works towards local community development; (2) the use of design-led strategies or activities; (3) the involvement of local participants; and (4) concern about sustainable social value as the outcomes. In order to contextualise its practice, each case was studied from multiple sources (e.g., journal papers, research reports).

For the analysis, grounded theory analysis was employed with three steps: (1) open coding – to segment and categorise the data into a structured table; (2) axial coding – to put the codes into the new paradigm model; and (3) selective coding – to tell a story that focuses on the core concept and core variables. The grounded theory used here was not aimed at creating a theory but rather at employing a systematic approach to help identify key factors for developing potential strategies for the OTOP enterprises and services. Finally, the key findings of all the cases were concluded as a list of strategies/actions and their impacts to be later adapted with framework formation.

Table 3.5 Example of an opening coding process using tabulation

Propose	
Programme's aim	
Problem/pain point	
Participation	
Initiated by whom?	
How does the government provide support?	
How do the locals participate?	
Any external support?	
Process	
What strategy is applied?	
How does design become involved or influence?	

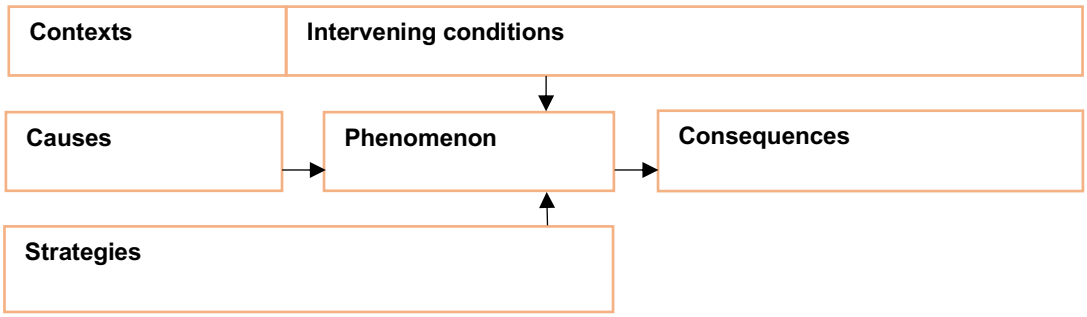


Figure 3.6 Example of a paradigm model of the relationships in an axial coding process

Selective coding:

The approach is based on socio-economic development. In this case, a level of **trust** was built through **discussion to find common desires** with stakeholders that allowed people to have **a collective mindset** and **build a strong commitment** from the beginning. The government provides funding but also facilitates connections with international organisations to build a strong foundation. Connecting with the company from outside as a **business partner** (not as a supplier) gives a **sense of equality**, resulting in a boost in local people's **self-esteem**. Real business experience was passed on to locals. Furthermore, having a clear picture helps to communicate community's strength to outsiders straightforwardly. The key to development is the **community's networks,** which **enable self-reliance**. The structure can be divided into **inside-community networks** and **outside-community networks**. The former network had a local association (to initiate new plans) and a local shop (to learn new skills) to sustain the community development mechanism. The latter connects with **business partners** to create new opportunities.

Figure 3.7 Example of selective coding

Strategies / actions	⇒	**Impact**
• Concern all parties to benefit from the project	⇒	• Mutual benefit
• Co-create with stakeholders	⇒	• Strong commitment

Figure 3.8 Example of the conclusion of the key findings

- **Semi-structured in-depth interviews with the OTOP stakeholders**

In social research, the interview technique is widely used among researchers (Robson, 2011). A well-conducted interview provides researchers with data on participants' views, attitudes, and the meaning behind situations and behaviours (Gray, 2004). This research conducted semi-structured interviews with key OTOP stakeholders, including local OTOP entrepreneurs and OTOP authorities at the district and regional levels. In addition to the OTOP stakeholders, this research interviewed experts and organisations that work with the community, including community leaders, design academics, design agencies, public sectors, and non-governmental organisations. The interviews aimed to understand the current situation and relationship between the service provider (local authorities) sphere and the local entrepreneur sphere. The same grounded theory analysis was applied to the data collected from the interviews using the same structure as with the case study (see Figure 3.6). This was done in order to compare and identify any patterns that may have emerged in the data. A sample size of 20-30 participants was aimed at for using these methods, as it is appropriate to develop a well-saturated assumption when using grounded theory analysis (Creswell, 2013). The purposive sampling strategy employed a heterogeneous sampling method to select a diverse range of perspectives from representatives of different stakeholder population groups. The purpose of this approach was to capture a maximum variation of different experiences and expertise among the groups. This would help gather views from those who have a direct relationship (between OTOP entrepreneurs and local authorities) and people who work with

them. Table 3.6 shows the sub-groups and sample size of participants in each stakeholder group. The total number of participants is 28.

Table 3.6 List of interviewees categorised by subdivision groups

Subdivision groups	Sample size (total 28)	Interviewee background
1. OTOP entrepreneurs	8	Entrepreneur #1 Type of products: herb and non-food product (massage oil and personal care products) Based in: Bang Cho Cha, Ang Thong province Type of business: CBE (community-based enterprise)
		Entrepreneur #2 Type of products: food, instant food, processed food Based in: Sam Roi Yod, Prachuap Khiri Khan province Type of business: SME
		Entrepreneur #3 Type of products: handmade glass ornaments, handmade glass home decoration Based in: Bang Kra Boa, Phra Nakhon Si Ayutthaya province Type of business: CBE
		Entrepreneur #4 Type of products: handmade clothes with Batik technique Based in: Suan Khan, Chang Klang, Nakhon Si Thammarat province Type of business: CBE
		Entrepreneur #5 Type of products: woven fabric, handmade bags and home decoration Based in: Bang Moung, Takuapa, Pang-nga province Type of business: CBE and community leader
		Entrepreneur 6 Type of products: Thai silk fabric and clothes Based in: Baan Don Kha, Chonnabot, Khon Kean province Type of business: CBE
		Entrepreneur #7 Type of products: healthy snacks from beans, processed food from garlic Based in: Baan Goong Mai Sak, Pang Mu, Mae Hong Son province Type of business: SME
2. Local officers	2	Local officer #1 Head of Community Development Department at the district level Authority: Lampang
		Local officer #2 Community Developer at sub-district level Authority: Kho Kha, Lampang
3. Policy analyst / OTOP programme consultants	4	Policy analyst #1 Plan and Policy Analyst, Ministry of Science and Technology
		Policy analyst #2 Head of Plan and Policy Analyst, Ministry of Science and Technology
		OTOP programme consultant #3 Young OTOP 4.0 Programme's Strategy Managing Director
		OTOP programme consultant #4 Strategic Programme Consultant for OTOP Creative Village and OTOP Nawatvithi
4. Community leaders	4	Community leader #1 Owner of a coffee beans brand and agricultural products Based in: Baan Nong Tao, Chiang Mai province
		Community leader #2 Head of Community Enterprise Community Based in: Klong Mahasawat, Nakhonpathom province
		Community leader #3 Head of OTOP entrepreneurs in the district the owner of a chilli paste brand Based in: Nong Kae, Saraburi province

		Community leader #4 Agricultural entrepreneur and Head of Baan Don Jiang Co-op Based in: Baan Don Jiang, Chiang Mai province
5. Design academics	3	Design academic #1 Retired and work for product development for the Department of Industrial Promotion, Ministry of Industry
		Design academic #2 Associate Professor at King Mongkut's University of Technology Thonburi School of Architecture and Design, Head of Visionary Design Lab, SOA+D, KMUTT Head of Design Service Society
		Design academic #3 Lecturer and researcher at Rajamangala University of Technology Rattanakosin Faculty of Architecture and Design
6. Design agencies	4	Design agency #1 Founder, product design service Service co-design facilitator
		Design agency #2 Co-founder, product design service and the owner of a creative souvenir brand inspired by a Thai national epic
		Design agency #3 Founder, product design service
		Design agency #4 Founder, product design service Founder, creative art book fair Founder, educational platform
7. Public sectors	2	Public sector #1 Product design consultant for ISMED (Institute for Small and Medium Enterprises Development)
		Public sector #2 Product design consultant at DIP (Department of Industrial Promotion) Ministry of Industry
8. Non-governmental organisations	1	NGO #1 Managing Director at Pracharath Rak Samakkee Centre Phitsanulok province

This method uses semi-structured interview questions, which can be found in Appendix A01. The questions for each group of interviewees were tailored to their respective backgrounds; however, some questions overlapped across groups in order to identify emerging patterns (see Table 3.7).

Table 3.7 Areas of study of the interviews according to each group of participants

Areas of study / Groups	The specific areas of study	The common areas of study
OTOP entrepreneur	• Experience from receiving support • Current problem and expectation • Nature of OTOP business • Challenge as OTOP entrepreneurs	• Strength and weakness of the programme • Suggestion for development • Vision for sustainable development
Local authorities	• Current focus • Work procedure and limitation • Challenge when working with locals	
Community leaders	• Leadership skill • Experience working with the local community • Challenge as leader	

OTOP programme consultant	• Programme implementation • How initiated thought turn into policy • Challenge as policy analysts/programme consultants
Design agencies and design academic	• Design role for supporting local business • Experience working with the local community • Challenge as outsider experts
Public sector	• Coordination from governmental bodies • Programme implementation • Work procedure • Challenge when working with locals
NGOs	• Work procedure • Approach/method used for providing support • Challenge when working with locals

The key areas of discussion in each group were summarised and presented with some significant quotes from the interviewees. The interviews used grounded theory analysis to study the phenomena in the relationship between the local authority and the OTOP entrepreneurs. The interviews were transcribed and coded using grounded theory coding methods: open and axial coding. The former extracts raw information, recognises small incidents, groups similar ones, labels them, and organises them into discovered categories. The latter organises the information in a new way in order to see the relations and connections among categories as a new paradigm model with six factors: causal conditions, contexts, intervening conditions, phenomenon, actions/interaction strategies, and consequences (see Figure 3.9). After analysing each sphere, they were connected to see the relationship between the two spheres (see Figure 3.10).

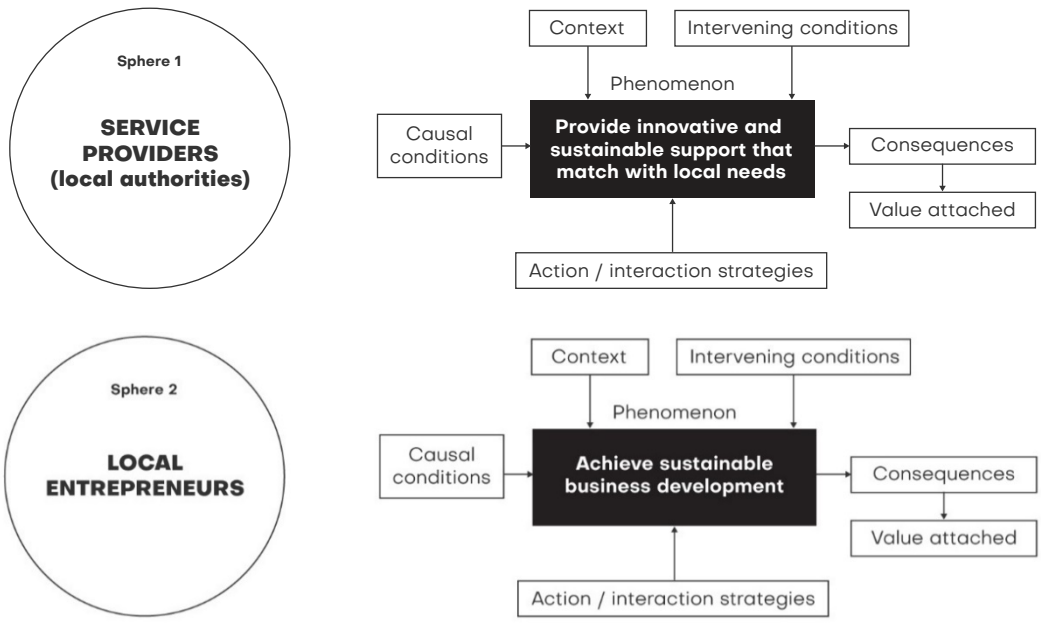


Figure 3.9 Axial coding paradigm model

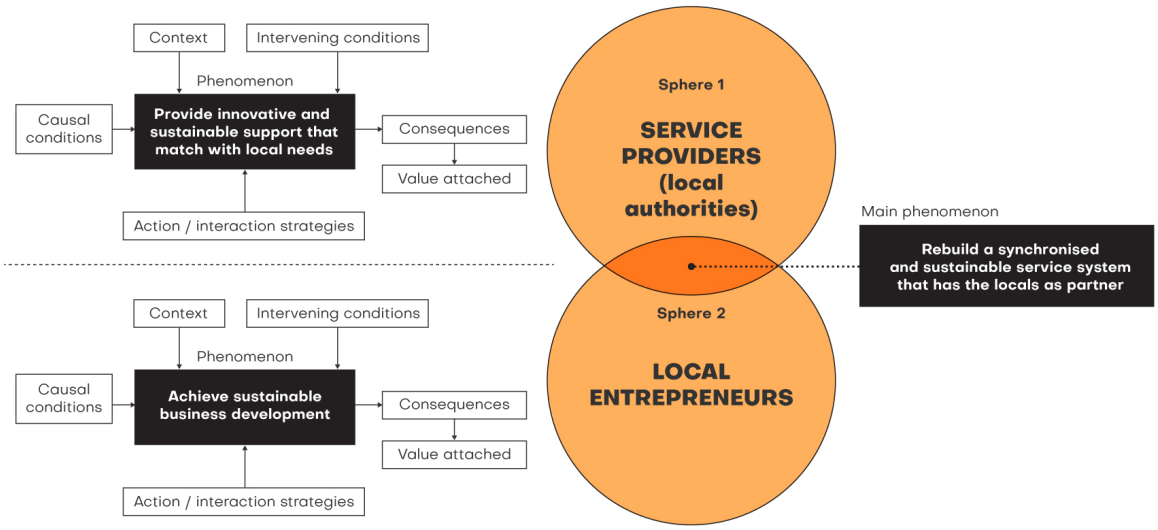


Figure 3.10 Relationship of connected spheres

In the axial coding process, the small incidents also were labelled with the group's name and colour (see Figure 3.11). This application helped the researcher to spot the small incidents when they were arranged in the axial coding (see Table 3.8).

Figure 3.11 Example of colour of coding categories

Table 3.8 Example of small incidents within the axial coding process

▪ **LIMITATION AS MEDIATOR** **Local officer's efficiency** ○ Local staff's duty, ability and behaviour ○ Insufficient amount of local officers ○ Relocated local officers ○ Follow up process seem to be hard as a limited number of staffs ○ Unresponsive action	▪ **LIMITATION OF PROGRAMME EXECUTION** **Nature of governance** ○ Discontinuity after one's governance (4-year period) ○ Layout the plan from the central authority **Project restriction** ○ Structure, budget and KPI are very restricted ○ Limited timeframe and budget **Budget allocation** ○ Budget allocated accord to the proportion of entrepreneur type
▪ **CHALLENGES** **Challenges as officer** ○ People not willing to work as a group ○ Local people concern only about their benefit ○ Insufficient budget to provide on product development ○ People are not willing to join the support activities ○ Community-based enterprises often seem to have struggled with mutual benefit management ○ The online platform has to be run by governmental staff	

The results of the interviews were tabulated and summarised into barriers, negative impacts, potential solutions, and themes.

- **Questionnaire surveys with the OTOP customers**

According to Leedy and Ormrod (2005), a questionnaire survey can help a researcher draw inferences from a sample's responses. In this research, a questionnaire survey was used to investigate the perception of numerous OTOP customers towards OTOP products. The purpose was descriptive, aiming to help the researcher contextualise the customers' perspectives and reflect on the value of the OTOP programme. The sample size was 113, and it was selected using cluster random and snowball sampling strategies. The sample was subdivided by geographical area and included a heterogeneous mix of individuals. The researcher distributed an online questionnaire to representatives of various regional areas and asked them to recruit participants from their respective regions. Out of the 118 forms collected, 113 were valid, while 5 were incomplete and therefore invalid, representing a valid response rate of 95.8%. The questionnaire survey was conducted online and covered nine areas, which are summarised in the following table.

Table 3.9 Questionnaire survey's areas of study

Area to investigate		Sub-areas to investigate
A1	Customer's attitudes towards OTOP products	a1: Quality and reliability a2: Distribution of local resources and wisdom a3: Originality a4: Newness and innovation a5: Difference between OTOP products and other local products
A2	Customer's perception towards the OTOP programme	n/a
A3	OTOP product's accessibility	n/a
A4	Customer perspective on the OTOP standard mark	b1: The noticeability of OTOP mark b2: How does the customer perceive the OTOP mark, and how does it influence their buying? b3: Do customers pick OTOP products over other non-OTOP products?
A5	Buying decisions towards local products	c1: Buying decisions for locally initiated products c2: Customer awareness of product origins
A6	Customer expectation for OTOP products	n/a
A7	Brand value perception and the effectiveness of brand touchpoints	d1: Effectiveness of different brand touchpoints for communicating brand value, brand philosophy, and brand story d2: The use of social media as a brand communication channel d3: Brand value perception (comparison with two cases)
A8	OTOP customer opinion and feedback for the OTOP brand and product	n/a
A9	Opinion on co-design process between OTOP producer and the local government and how to increase transparency in providing support	n/a

The questionnaire survey was analysed using quantitative methods, and the results were interpreted using descriptive statistics. Cross-tabulation tables and bar charts were used to visualise the outcomes, which showed a relationship between the OTOP customers and local enterprises, as well as between the OTOP customers and service providers (local authorities). The results were summarised as key findings, strategies, and development themes using tabulation.

3.8.3 Prescriptive Study I stage

The aim of this stage was to integrate the findings from Descriptive Study I and to establish an initial value co-creation framework. The research clarification phase was also reviewed for relevant information.

- **Content analysis**

Content analysis is a method of drawing conclusions from data, typically from written material, by systematically and objectively identifying and categorising specific characteristics (classes or categories) (Gray, 2004). Content analysis was employed in the study in order to identify the dominant themes. The issues mentioned by the participants were grouped, arranged, and addressed as dominant themes with the roots of the problem. The dominant themes acted as top priorities that should be addressed and supported in the framework procedure.

- **Literature review on co-creation/co-design activities and tools**

Once the dominant themes were identified, the next step was to create a framework, and in order to accomplish this, a literature review was conducted to examine previous co-creation and co-design practices. This involved analysing the techniques, activities, and tools used in past research and practices. The framework's foundation is made up of its components: (1) phases and their outcomes, and (2) generative tools, techniques, and canvas. The initial version of the framework (1.0) was later co-designed and reviewed by design experts for further refinement.

3.8.4 Descriptive Study II stage

- **Co-design workshops with focus groups (expert evaluation workshops)**

This research employed focus group workshops in order to achieve the research objectives based on the co-design principles. The workshop at this stage, WS-1-DE, was an expert evaluation workshop aimed at designing and evaluating tools with design experts in order to facilitate the value co-creation framework. This was done to generate opinions and

recommendations collectively, as well as to encourage debate and implications. The participants were selected using purposive sampling strategies. The experts involved in the workshops had experience working with local communities; they included designers, facilitators, design academics, and design consultants. This phase of the workshops was conducted online using Miro, an online collaboration platform (see Appendix C for the collaborative boards). The participants were divided into three groups of four, for a total of 12 participants. The evaluation criteria for the workshop were to (1) test the flow of activities, (2) co-design and tailor the tools, and (3) select the tools to be used in the framework. The duration of the workshop was between 3-3.5 hours. The workshops were recorded both as screen captures and audio recordings. The analysis procedure used coding techniques to gather suggestions from the discussions within and between the groups.

Table 3.10 Overview of the expert evaluation workshops

Research stage	Participants	Evaluation criteria
Descriptive Study II	**Workshop (WS-1-DE)** **Design experts:** designers, facilitators, design academics, design consultants **Sampling size:** 4 x 3 groups, total = 12	- Test the flow of activities - Co-design and select appropriate tools

3.8.5 Prescriptive Study II stage

Framework version 2.0 was evaluated by combining all of the suggestions gathered from the design experts' evaluation workshop (WS-1-DE) and incorporating their critical comments.

3.8.6 Descriptive Study III stage

- **Focus group workshops (user evaluation workshops)**

During this stage, three value co-creation workshops were carried out with the users: WS-2-LC, WS-3-LC, and WS-4-LE. The first two workshops were conducted with community-based enterprises, while WS-4-LE was conducted with single-owner entrepreneurs. WS-2-LC and WS-3-LC were organised in collaboration with academics from the Faculty of Business Administration at the Rajamangala University of Technology Isan (RMUTI). This was done under the U2T (University to Tambon) programme – run by the Ministry of Higher Education, Science, Research, and Innovation – with an assistance from academic administrators of the programme. The PhD research and U2T programme share a common objective of promoting local enterprise with the help of local support bodies. This enabled the researcher to test and evaluate the value co-creation framework in a situation that meets the requirements of this evaluation stage, where local support bodies collaborate with local enterprises. In addition, in

the first two workshops (WS-2-LC and WS-3-LC), researcher participated in the follow-up channel and observed the execution of the workshops' outcomes to see the end results of the executions. Sample size, duration, follow-up periods can be found in Table 3.11. All of the user evaluation workshops used a snowball sampling strategy to recruit participants through local partners based on guidelines from the researcher. In addition to selecting participants, the last workshop (WS-4-LE) included representatives from four main OTOP product categories: food and beverage, fabric and fashion accessories, home decoration and souvenirs, and non-food herbal products. These categories are presented in Table 3.12.

Table 3.11 Overview of user evaluation workshops

Research stage	Participants	Evaluation criteria
Descriptive Study III	**Workshop (WS-2-LC)** **Local community:** a community-based enterprise: coconut crispy rolls producers **Sampling size:** 16 **Duration:** 1 day **Follow-up period:** 3 weeks	- Ease of use - Practicality and usefulness - Level of engagement
	Workshop (WS-3-LC) **Local community:** a community-based enterprise: hand-woven fabric producers **Sampling size:** 12 **Duration:** 1 day **Follow-up period:** 6 weeks	
	Workshop (WS-4-LE) **Local entrepreneurs** from Nakhon Pathom province **Sampling size:** 14 **Duration:** Half day	

Table 3.12 Participants for workshop WS-4-LE: single-owner enterprises grouped by product type

No.	Group	Product
LE-01	Food and beverage	Rice producer and farm products
LE-02		Homemade Thai dessert
LE-03		Traditional Thai snacks
LE-04		Cannabis drink
LE-05	Fabric and fashion accessories	Hand embroidered t-shirts
LE-06		Leather products
LE-07		Batik fabric
LE-08		Thai fabric-covered jewellery boxes
LE-09	Home decoration and souvenirs	Thai porcelain products
LE-10		Models of the Thai Khon mask from the Ramakien epic
LE-11		Carved Buddha wooden frame
LE-12	Non-food herbal products	Herbal insect killer
LE-13		Herbal insect repellent product for pets
LE-14		Herbal toothpaste

The workshops were conducted face-to-face in the participants' local areas. The workshops' evaluation criteria were (1) ease of use, (2) practicality and usefulness, and (3) level of engagement. The workshop utilised materials for co-creation, such as sticky notes, large blank paper, pens, markers, printout pictograms, and fill-in-the-blank cards.

- **Observation**

In preparation for the two community-based enterprise workshops, the researcher conducted a site visit in order to observe the surroundings and took notes that would be beneficial during the workshop sessions. The site visit lasted 40-45 minutes for each enterprise. During the workshops, the participants were observed using observation techniques. Based on the evaluation criteria, it was important for the researcher to observe how the participants reacted to the task being facilitated. This enabled the researcher to evaluate the activities effectively. A participant's level of engagement can be determined by his or her willingness to complete the task. Additionally, the participants' ease of use could be observed through any signs of hesitation or reluctance. Field notes were taken throughout the process and later used to create a set of guidelines for the facilitators based on the collected information.

- **Follow-up questionnaire surveys and informal interviews**

Another way to evaluate the activities of the framework was by directly engaging with the participants' feedback. Conducting surveys and informal interviews is a useful method for gathering this information. Questionnaire surveys provided quantitative data on participant satisfaction and the practicality of the framework, while interviews offered greater qualitative insights into the participants' experiences and perceptions. Additionally, analysing this feedback helped to identify areas for improvement and guide the framework's future development. The quesionnaire can be found in Appendix D.

3.8.7 Prescriptive Study III stage

During the previous stage, an iterative approach was used to test, evaluate, and revise the framework elements and flow of activities. User evaluation workshops were conducted, and evaluations took place between each workshop in order to assess and revise the framework for the next iteration. At this stage, version 3.0 of the framework was developed using the data collected from the previous stage, and facilitator guidelines were also created. The data analysis was based on the workshop outcomes, field notes from observations, interview results, and questionnaire survey findings.

3.8.8 Descriptive Study IV stage

- **In-depth interviews with local authorities and follow-up questionnaire surveys**

During this stage, in-depth interviews were conducted with local authorities, who are important stakeholders in the OTOP programme and implementers of the proposed framework. The aim was to evaluate the framework and guidelines further. The study recruited five interviewees from the Community Development Department in two different provinces using the purposive sampling strategy. The evaluation criteria included (1) ease of use, (2) practicality and usefulness, and (3) applicability and feasibility.

One-to-one semi-structured interviews were used for the data collection *via* Zoom, an online meeting platform (see Appendix E for list of questions). In the early stages of the interview, the participants were guided through the process of value co-creation, and the results from the user evaluation workshops were presented. The interview data were then coded using thematic analysis in order to identify the themes that led to solutions added to framework development. Table 3.13 shows examples of the significant statements from the interviews and the researcher's observations.

At the end of each interview, a questionnaire survey was also applied to collect data quantitively in order to confirm the results. The questionnaire can be found in Appendix E.

Table 3.13 Example of the thematic coding from the stakeholder evaluation interviews' results

Significant statement and observation from the interviews	Themes	Solutions for framework development
"The process is easy to understand, but I am unsure if I have enough people to run the activity confidently."	Unsure of carrying the whole procedure	Collaborate with external actors
"Some phases require a specific skill to conduct. Specifically, exploring new value in different key development areas, I think it could be an advantage for entrepreneurs if we invite experts to collaborate with us."		
"As a facilitator, maybe I need to see a clear example of how the canvas is used to be able to facilitate it with local entrepreneurs."	An example makes the procedures easier to follow	Provide more examples of how the canvas can be used and present it while in use
"In the last two phases, the structures of the mutual value and collective agreement are really good for constructing complex ideas. It would be easy to follow if you could add the real data from the previous workshop as you presented to me."		

3.9 Reliability and validity

The concepts of reliability and validity are essential for understanding the ideas of 'error' and 'measurement' (Brink, 1991). These concepts are typically associated with quantitative research (Noble and Smith, 2015), where reliability refers to the consistency and stability of measurements under various conditions (Drost, 2011). Validity, on the other hand, refers to the accuracy of the research instruments in measuring what the researchers intend to measure (Gray, 2004; Gomm, 2008; Drost, 2011). Qualitative researchers debate whether reliability and validity are appropriate for evaluating qualitative research (Long and Johnson, 2000; Noble and Smith, 2015). As a result, they suggest other terms for assessing the credibility of the research, such as stability, consistency, and equivalence (Selltiz *et al.*, 1976; Brink, 1991; Long and Johnson, 2000). According to Noble and Smith (2015), the term 'truth value' can be used as an alternative to validity. Reliability can be assessed through the measurement of 'consistency' and 'neutrality', and generalisability can be associated with 'applicability'. In order to enhance the credibility of the research, this PhD study focused on both reliability and validity, following the strategies proposed by Noble and Smith (2015) in both quantitative and qualitative approaches. These aspects were assessed and evaluated throughout the research process.

In order to ensure reliability, a research protocol was developed to mitigate errors during the data collection. A clear plan for the research process was outlined in accordance with the research aim and objectives. According to Noble and Smith (2015), achieving audibility can enhance research reliability. Therefore, this research adopted their strategies, making a clear description throughout the research process and documenting the research diary in order to maintain cohesion among the research aims, design, and method. The reflective journal was used to record and reflect on the researcher's viewpoints that could potentially influence methodological bias and findings, thus improving the study's internal validity.

During the exploration stage, when the case studies were conducted, the bias of selecting case studies was mitigated by establishing criteria to determine the appropriate case to study that could produce results in line with the study's purpose. Grounded theory analysis is used to structure the analysis and to allow researchers to compare and control the consistency of data interpretation. For the in-depth interviews in the investigation stage, semi-structured questions were initially formulated. The supervisory team then reviewed them, and subsequently, they were tested with other doctoral researchers and volunteers. Finally, the questions were finalised for use with the participants. In terms of recruitment, the study included not only participants that had a stake in the OTOP programme but also experts that

had previously worked in the programme. This was done in order to gather different perspectives and to avoid biased comments from insiders. Local entrepreneurs that participated in the study used heterogeneous sampling in order to maximise variation from different regions. Data were recorded in audio and transcribed. Recording data allows researchers to review and reinterpret the results, remaining true to the participants' responses, which can increase internal validity (Noble and Smith, 2015) and minimise the risk of human error in recalling events, which can reduce unreliability (Gray, 2004). When analysing data, audit trails can be used to increase reliability (Long and Johnson, 2000; Noble and Smith, 2015), which can be applied to decision-making and assumption-making. Therefore, this research involved analysing the data, extracting codes, and rearranging them in order to identify emerging themes influenced by the participants' responses. In the questionnaire survey study, questions were reviewed by the supervisory team and tested with volunteers before the actual survey was conducted. In some areas of questioning, Cronbach's alpha was used to measure the internal consistency of a set of questions (Gray, 2004; Ahmed *et al.*, 2022), such as measuring the attitudes of OTOP customers towards OTOP products.

During the framework development, the framework was created using co-design workshops with experts in order to establish a set of activities for each phase of the framework. This approach can be seen as peer debriefing, which can help reduce researcher bias and improve internal validity (Long and Johnson, 2000; Noble and Smith, 2015).

During the evaluation stage, the criteria for framework evaluation with users and stakeholders were established at the outset. The reliability of the framework evaluation, particularly its stability, was tested during iteration practices with various local enterprises and communities. Workshops were held with academics to assist in the workshop activities and to ensure data equivalence (Brink, 1991). Observations and feedback were discussed after the workshops in order to address any issues that arose. Respondent validation was carried out by surveying locals through follow-up questionnaires and informal interviews. After conducting a workshop with the users, the researcher participated in a follow-up channel to remain involved in the participants' environment for a prolonged period. Observing the continuous actions that emerged after the workshop ended allowed the workshop's results to be observed and reflected in the study's outcome, thus increasing its validity (Long and Johnson, 2000).

This PhD research is concerned with generalisation, or applicability (Noble and Smith, 2015), in order to provide outcomes that can be used in the real world. To this end, the selective focus groups comprised community-based and single-owner enterprises with a wide range of products, including food, beverages, fabric, fashion accessories, home decoration, souvenirs,

and non-food herbal products. The participants were selected with the aim of being representative of the real population and reflected in the generalisation and external validation of the research outcomes (Gray, 2004). In addition, the value co-creation procedure proposed in this research was evaluated by stakeholders, such as local authorities, in order to ensure its applicability and feasibility in their current practice.

Furthermore, in terms of external validity, the research outcomes can be applied to similar contexts, allowing for generalisation. These outcomes can be implemented in grassroots enterprise assistance schemes in Thailand or other nations that have comparable features, such as developing countries or initiatives that foster bottom-up approaches. Providers and recipients, whether in the public or private sectors, can establish mutual values and agreements through the value co-creation framework.

Moreover, researchers suggest that triangulation can increase the reliability of a study (Bryman, 1988; Long and Johnson, 2000; Gray, 2004; Noble and Smith, 2015). Triangulation can take several approaches, but it mostly refers to (1) using multiple data sources, (2) employing multiple data collection methods, and (3) involving multiple observers or investigators (Bryman, 1988; Long and Johnson, 2000). In conclusion, this research used mixed methods in order to overcome the deficiencies that arise from using a single method. The research findings were cross-validated using multiple data sources, such as interviews, through a heterogeneous sampling strategy. Finally, during the face-to-face workshop with local communities, multiple observers were involved in shared discussions in order to avoid researcher bias.

3.10 Research ethics and integrity

The research procedure in relation to human participants followed the regulations from the Code of Research Ethics (Brunel University London Research Ethics Committee, 2013) and was compliant with the General Data Protection Regulation (GDPR). A participant information sheet was provided to the participants during recruitment in order to help them understand the study and to inform them that they could withdraw from the research at any time. Before they participated, a consent form was presented explaining the use of the data and asking for their agreement before conducting the study. The data collection involving the participants in this research was approved by the Brunel Research Ethics Committee (see Appendix H for the approval letters).

Due to the sensitive nature of the business information and political viewpoints involved with governmental services, this research topic required careful consideration of research ethics and integrity. Therefore, the researcher was committed to keeping personal data confidential at all times. The purpose of this research was to collaborate with the participants in order to find a better solution to the OTOP programme, without any intention of involving political issues.

3.10.1 Data management

No personal, sensitive or confidential information was included in the research instruments or reports of the results, and all of the collected data were used for academic purposes only. The participants' personal data were kept confidential, and the participants remained anonymous throughout the study. The confidential digital data has been saved on a computer or hard drive that is password-protected and will be permanently deleted once the doctoral study concludes. Any paper-based records, including workshop canvases and exercise cards, will be disposed of through the university's document shredding facility once the doctoral study is completed.

Chapter 4 – Findings and discussion from exploration and investigation

Findings and discussion from exploration and investigation	4.1 Exploration and lessons learnt from cross-national case studies	4.1.1 Oyama town, Japan: The primary model for the OVOP programme 4.1.2 OVOP execution in Issyk-Kul, Kyrgyz Republic 4.1.3 Design Harvest: Chongming Sustainable Community Project, Shanghai 4.1.4 Feeding Milano: Energy for Change, Italy 4.1.5 Case studies summary
	4.2 Investigation of current barriers and new potential of the OTOP programme	4.2.1 Introducing the overall area of studies 4.2.2 In-depth interviews with OTOP stakeholders 4.2.3 Questionnaire surveys with OTOP customers
	4.3 Summary of findings from investigation	

Table 4.1 Overall structure of Chapter 4

This chapter describes the exploration and investigation involved in this research, which involved exploring case studies to learn from practices in other countries. The second stage involved an investigation with OTOP stakeholders. The main research activities included in-depth interviews and questionnaires. The former were conducted with OTOP entrepreneurs, local authorities, and experts who have experience working in the OTOP programme, while the latter were conducted with OTOP customers. The key findings from this chapter were used to develop potential strategies for development.

4.1 Exploration and lessons learnt from cross-national case studies

This phase is aimed at studying various cross-nation community developments to address questions such as how has the programme been executed; what strategy was applied; how can design be involved or influenced; and what are the impact and solution? The selection criteria for case studies are as follows: (1) the programme focuses on local community development, (2) design-led strategies or activities are employed, (3) local participants are involved, and (4) there is a concern for sustainable social value as an outcome. The lessons learnt in this section allowed the researchers to gain practical implementation that can be applied in the OTOP context. Grounded theory analysis was used as the analysing method to help systematically arrange data and extract key findings. There are four case studies in total; the first two cases emphasise the OVOP implementation, and the latter two cases are other community development programmes.

4.1.1 Oyama town, Japan: The primary model for the OVOP programme

Oyama town is a rural community located in Oita Prefecture, Japan. It became well-known as the primary model for the OVOP programme due to its successful community development. Previously, people were facing poverty, and Oyama town was viewed as the most impoverished town in Oita Prefecture (Kurokawa, Tembo and Te Velde, 2010). In 1961, the town strategies were initiated by the local government, agricultural cooperative and local participation. The New Plum and Chestnut (NPC) movement was initiated by Harumi Yahata, the Head of Cooperative, which aimed to draw local producers' attention to producing plums and chestnuts instead of rice.

The three phases of NPC execution share common elements with the design thinking model proposed by IDEO (2015): **desirability** (working with/for people in the community), **viability** (overcoming poverty), and **feasibility** (using the suitable touchpoints to connect people).

The first phase of NPC focused on *'hataraku'*, which means *work* in Japanese. It aimed to address problems and limitations associated with rice production. By working collaboratively with the farmers and motivating them with the cheerful slogan *'Let's plant plums and chestnuts and go to Hawaii!'*, NPC I successfully engaged people in the community. Local residents decided to stay in the area and continue working in agricultural production rather than move out to find work in the urban areas. Evidently, **desirability and viability** were taken into consideration when planning the strategy. The second phase, or NPC II, focused on *'manabu'*, which means *learning*. The Oyama administration established the learning programmes that

placed Oyama Agricultural Cooperative at the centre of learning. The learning experiences were not limited to within the town. In 1969, the first group of young innovators were sent to learn agricultural techniques from a communal farm in Megiddo, Israel. By sending them to learn about good practices from another country, innovative ideas were brought back to the town, for example, the idea of harvesting all year round and the initiation of mushroom production. Subsequently, more than 150 households earned from this as the primary source of income (Stenning and Miyoshi, 2008).

Figure 4.1 Mushrooms from Oyama (Ministry of Cooperatives and SMEs, 2014)

The third phase, or NPC III, focused on '*aishiau'*, which means *love*. It aimed to encourage a sense of belonging in the legacy culture for the young generation. The network strategies in this phase have shown that **feasibility** was taken into consideration when designing suitable touchpoints. First, cultural centres were set up in eight cultural zones across the town to provide enjoyable activities (such as lifestyle school, tea ceremony, kimono wearing, flower arranging, and judo). Second, Oyama Yuusen Housou (or Oyama priority cable radio) was strategically utilised to announce community reports, news, events, activities, festivals, meetings or workshops. As a result, people were well-informed about all the crucial information, which helped to generate active members for future activities. Harumi Yahata, the Head of Cooperative, gave a speech lasting three to five minutes on the radio every evening to communicate his values and vision to the community, which led to the shared values and visions (Stenning and Miyoshi, 2008). Third, sport (Ohayou Softball) was utilised to promote a healthy and enjoyable activity that could help to bridge the generation gap and build a strong sense of community.

The programme's outcomes highlighted the strong network that ties community members. Stenning and Miyoshi (2008), researchers in the JICA training programme for rural development, described Oyama network strategies as bonding social capital (built from radio and softball activities) and bridging social capital (built from the connection among neighbours

during the softball tournament and the overseas training programme). This produces a flow of knowledge creation and knowledge sharing, which are the essential foundation of endogenous initiative development.

From the study, the main lesson learnt is how the programme implemented interdependently with the grassroots can generate beneficial solutions and how the locals perceive the mutual value through participation in community activities. The strategies were well aligned with design thinking. For example, the programme put people at the heart of the development, which is similar to the human-centred design approach. The small details were taken into consideration. The acts of innovative leaders (e.g., talking with random households) helped in gaining insights, resulting in a well-served solution. Moreover, by investing in human resource development, members of the community can initiate the intrinsic knowledge and transfer it to one another in both a formal and an informal way.

Table 4.2 Open coding – Oyama town

Case study 01: Oyama town	
Programme's aim	- The New Plum and Chestnut (NPC) movement aimed to encourage local people to produce plums and chestnuts instead of rice (identify problems with a clear solution)
Problem/pain point	- Poverty - Unsuitable area for current agricultural production
Participation	
Initiated by whom?	Local agricultural cooperative and local government
How does the government provide support?	Infrastructure (e.g., learning centres)
How do the locals participate?	The programme strategy involves local voices/concerns at problem identifying stage
Any external support?	Collaborating and exchanging knowledge with another town, Megiddo, Israel
Process	
What strategy is applied?	- Design the programme with and for the community - Invest in human resources (send potential innovator to learn from others) and practise with local people with cultural know-how - Create a sense of belonging in the legacy culture for the young generation - Engage in informal activities to promote social capital (bonding and bridging) through peer learning and knowledge sharing - The leader plays an important role (e.g., sharing vision, looking for problem's insight)
How does design become involved or influence?	- Human-centred approach - The three phases of NPC execution share common elements with the design thinking model proposed by IDEO (2015): **desirability** (working with/for people in the community), **viability** (overcoming poverty), and **feasibility** (using suitable touchpoints to connect people)

Impact	
What is the significant change/solution?	- Producing substitute agriculture products that are suitable for the area - Increasing income for the community - Promoting learning culture, especially for the young generation - Well-connecting among people within the community and also reaching out to the communities nearby for knowledge exchange

Axial coding:

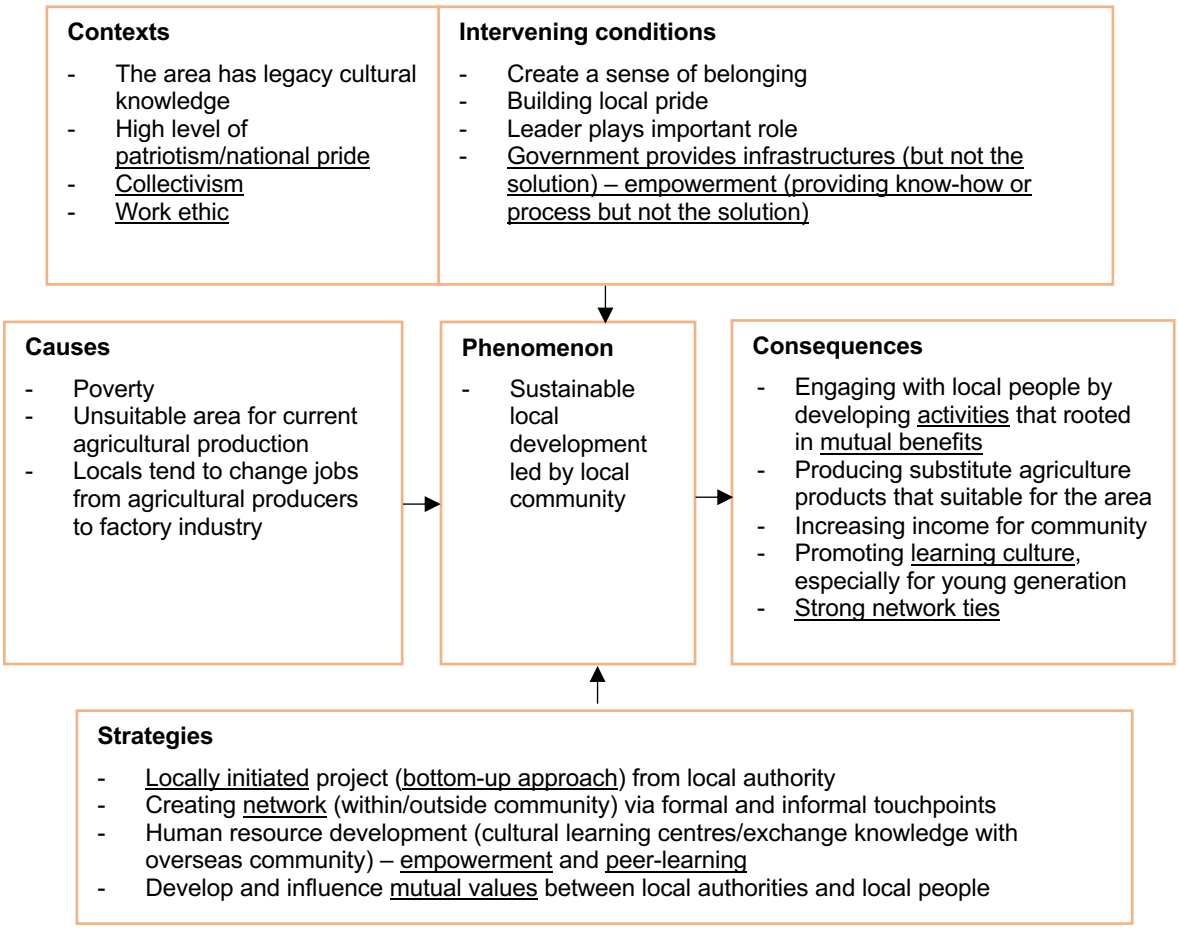


Figure 4.2 Axial coding – Oyama town

Selective coding:

Strong evidence of **empowerment** exists in the approach. The government provided support in terms of **human resource development** (e.g., learning centre and infrastructure), but not quick-fix answers. The approach encouraged people to develop with their own solutions based on the **mutual benefits** of everyone in the community. Since people were required to **work together** to propose and implement solutions, **social networks** and a sense of **ownership** were strengthened. The act of developing and implementing solutions showed strong evidence of **design thinking** and **co-creation**. This also promoted a **learning culture**, which

is a crucial factor in **sustainable development**. This participatory approach suits the characteristics of Japanese people, including a strong sense of national/local pride, patriotism, work ethic, and collectivism.

4.1.2 OVOP execution in Issyk-Kul, Kyrgyz Republic

Kyrgyz Republic is one of the countries that has implemented the OVOP model from Japan. The project started in 2006 with cooperation with the Japan International Cooperation Agency (JICA). The local community that JICA started to work with was Karakol in Issyk-Kul Region; this community has become a successful OVOP case outside of Japan in terms of sustainability (Mukai and Fujikura, 2015). The outstanding implementation here has been applied to the **socio-economic development and collaborative approaches** (Mukai and Fujikura, 2015), with the primary targets being community empowerment (Schumann, 2016) and economically independent communities (ODA, 2018).

At the early stage of implementation, a number of challenges must be addressed, particularly **the level of trust** between government, citizens, communities, and businesses, which in this case was reported to be low. This problem occurs due to information not being equally shared (Mukai and Fujikura, 2015). To address this challenge, JICA worked closely with **all stakeholders to find common desires** to connect and cooperate under the OVOP project (ibid).

The JICA's slogan, "Let's work together on what we can do today" (UNDP, 2014), allows people to **look into their assets and resources carefully and critically** with a **collective mindset** and maximize their potential based upon pre-existing attributes. As a result, one potential resource, wool and local wisdom in making felt products, has become a **valuable asset that can be turned into an economic opportunity**. When the strength of the community was revealed, it represented **a clear picture** of the community's potential and capacity, which helps **communicate with outsiders**. The achievement at this stage led to **external connection**, it was intentionally made through the **collaborative project**. In 2011, the company, called Ryohin Keikaku, which ran the Muji brand, began outsourcing for Christmas gift producers. With assistance from JICA, the community became a **mutually beneficial partnership** with MUJI in producing felt products (Schuman, 2016). The products, such as phone cases and cardholders, were made with **on-the-job training** from the company, in which the local producer's opinions were integrated into the training improvement, which benefits both company and community. The advantage of the collaboration was not only economic growth but also providing **real business experience** to the locals, which

resulted in human resource development and empowering local people, especially among women (Mukai and Fujikura, 2015).

Over time, the community's social capital grows stronger, as evidenced by the growth of participation in various communes. For example, the Kyrgyz One Village, One Product Association was established with members from local citizens, local businesses, and local organisations, which became the essential element in initiating new local projects, even after JICA staff returned to Japan. Products such as carpet, dried fruit, jam, and white honey, which are produced and expected to be sustainably sold, were initiated by this association. Another commune is the local shop. The objectives for establishing a local shop are not only to study sales trends and monitor sales revenue but also to provide business training for the local people (Mukai and Fujikura, 2015). Moreover, the Issyk-Kul OVOP Brand Committee, another commune that showed interest in creating network connections, was established to select the products from local pride to sell in the local shop and worldwide. Overall, the number of participants in the Issyk-Kul OVOP is growing, from approximately 500 in 2015 (Mukai and Fujikura, 2015) to 2,300 in 2018 (ODA, 2018)

According to the three principles of the original OVOP, which are (1) local yet global, (2) self-reliance and creativity, and (3) human resource development, the Issyk-Kul community checked every box in its execution. First, the community has become well known for producing high-quality felt products at a global level, as well as developing other potential products as another strategy to sustain the community economically. Second, the community has a showroom to sell their products to locals and tourists, which supports principle two – creating a **self-reliance mechanism** in the community (Mukai and Fujikura, 2015). Third, on-the-job training has also integrated traditional experience to make it fit better with the local context. Local people acquire **problem-solving skills** through the project, resulting in their preparation to address future challenges. The leader also plays a key role in conducting new projects initially and encouraging human resource development in the community (Mukai and Fujikura, 2015).

Table 4.3 Open coding – OVOP execution in the Kyrgyz Republic

Case study 02: Issyk-Kul, Kyrgyz Republic	
Programme's aim	- Replicated the OVOP programme from Japan aiming at socio-economic development with a goal to empower the community to be an economically independent community
Problem/pain point	- The level of trust is low - People living a nomadic life and not used to working with others
Participation	
Initiated by whom?	Local government collaborative with JICA
How does the government provide support?	- Cooperating with JICA, the organisation that work with many countries worldwide, to use the lessons from them - Provide funding
How do the locals participate?	- Find the potential assets with assistance from JICA - Produce the products and be a part of a collaboration - Integrate traditional knowledge and experience into the on-the-job training
Any external support?	JICA aid in the connection making (e.g., with Muji company) to expand the distribution channel
Process	

What strategy is applied?	- Trust building by involving stakeholders to discuss and find common desires
	- Three OVOP principles: (1) local yet global; (2) self-reliance and creativity; (3) human resources development
	  ○ (1) Focus only on the felt products at the beginning, to have a clear direction and a clear picture to communicate community's strength with the outsiders
	  ○ (2) The shop in the community supports the self-reliance principle as being a field for local people to learn
	  ○ (3) On-the-job training is the activity that directly supports human resource development
	- Connect with the company from outside as a business partner (not as a supplier) and give a sense of equality that can raise local people's self-esteem

How does design become involved or influence?	- No clear evidence, but the programme execution seemed to use a human-centred approach in the early stage of the programme to find potential assets and also while implementing on-the-job training
Impact	
What is the significant change/solution?	- Empowering people - Community networks were built to create a self-reliance structure - Local pride - Significantly increased income

Axial coding:

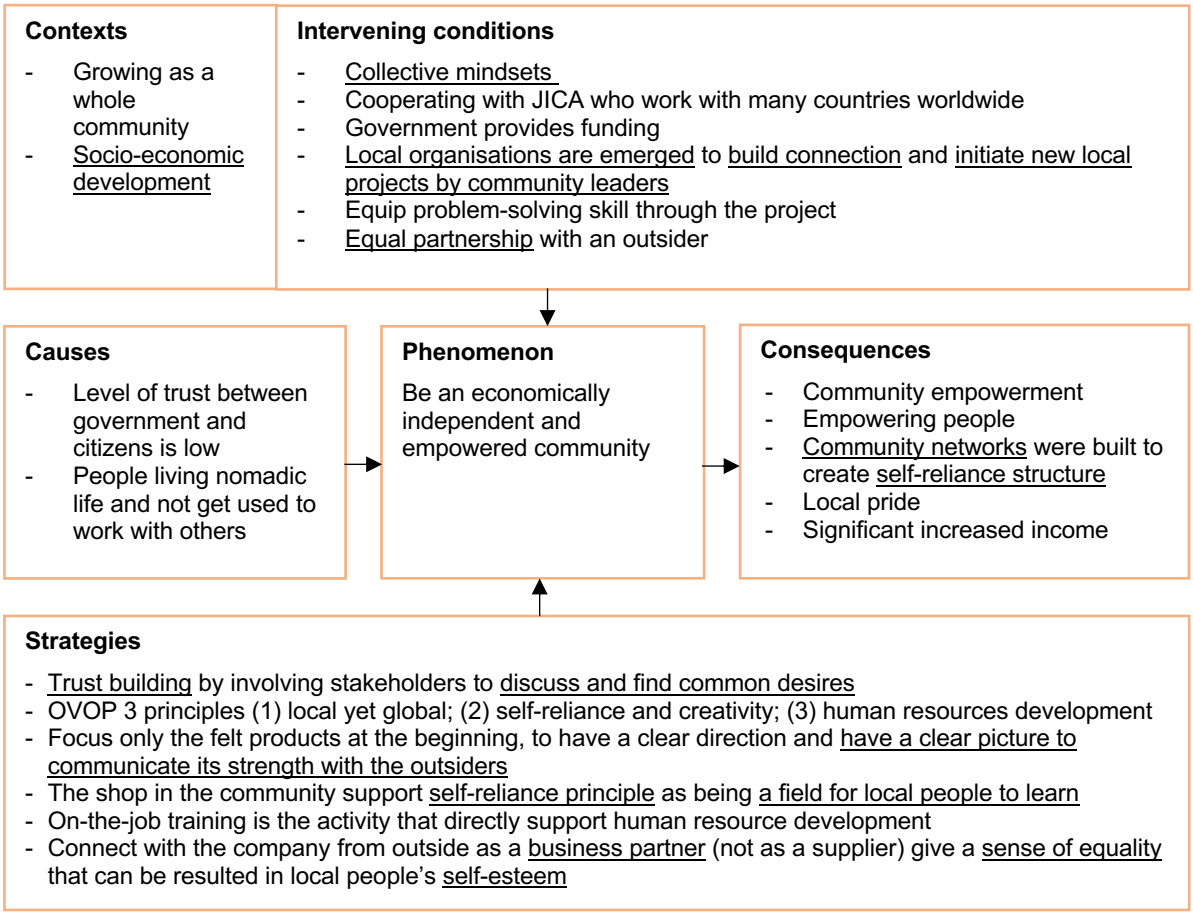


Figure 4.3 Axial coding – OVOP execution in the Kyrgyz Republic

Selective coding:

The approach is based on socio-economic development. In this case, a level of **trust** was built through **discussion to find common desires** with stakeholders that allowed people to have **a collective mindset** and **build a strong commitment** from the beginning. The government provides funding but also facilitates connections with international organisations to build a strong foundation. Connecting with the company from outside as a **business partner** (not as a supplier) gives a **sense of equality**, resulting in a boost in local people's **self-esteem**. Real business experience was passed on to locals. Furthermore, having a clear picture helps to communicate community's strength to outsiders straightforwardly. The key to development is the **community's networks,** which **enable self-reliance**. The structure can be divided into **inside-community networks** and **outside-community networks**. The former network had a local association (to initiate new plans) and a local shop (to learn new skills) to sustain the community development mechanism. The latter connects with **business partners** to create new opportunities.

4.1.3 Design Harvest: Chongming Sustainable Community Project, Shanghai

Chongming Island is farmland located close to the metropolis Shanghai. Due to the growth of urbanism, Chongming was facing the rapid transformation of the community. Subsequently, the Chongming sustainable community project was initiated in 2007 by the College of Design and Innovation, Tongji University and Studio Tao as a joint venture with the local government, local communities, business partners, and international universities. The goal was to create a balanced relationship between rural-urban interaction and find mutual advantage by using a strategic design approach with the use of local resources and strengths. The project's methodology replicated the IDEO processes **(inspiration, ideation and implementation),** which were split into five minor stages: (1) seek potential; (2) identify strengths; (3) refine and synergise; (4) bridge and connect; and (5) branding.

The first phase, *the potential-seeking stage*, used the ethnographic approach, which has been widely adopted within the design discipline, to find hidden inherent potential. The design mindset makes a deeper understanding of the surrounding context that put the users at the heart of consideration (Valsecchi and Pollastri, 2013). In this stage, observations and interviews were employed, followed by the creation of village services storyboards to depict current situations and new opportunities.

In the second and the third stages – *identifying strengths and refining and synergising,* various design activities were conducted through three thematic co-design workshops, which included researchers, international students, the local government, and local villagers. The first workshop was *'the rural kitchen workshop', which* emphasised cultural food and the value connected to the kitchen. Five groups of international students worked together alongside local villagers to identify local strengths and develop them into feasible proposals. Although it started from a small topic such as *'kitchen'*, the outcome emerged on a macro scale, including craftsmanship, lifestyle, economy, service, environment, architecture, energy, and waste management.

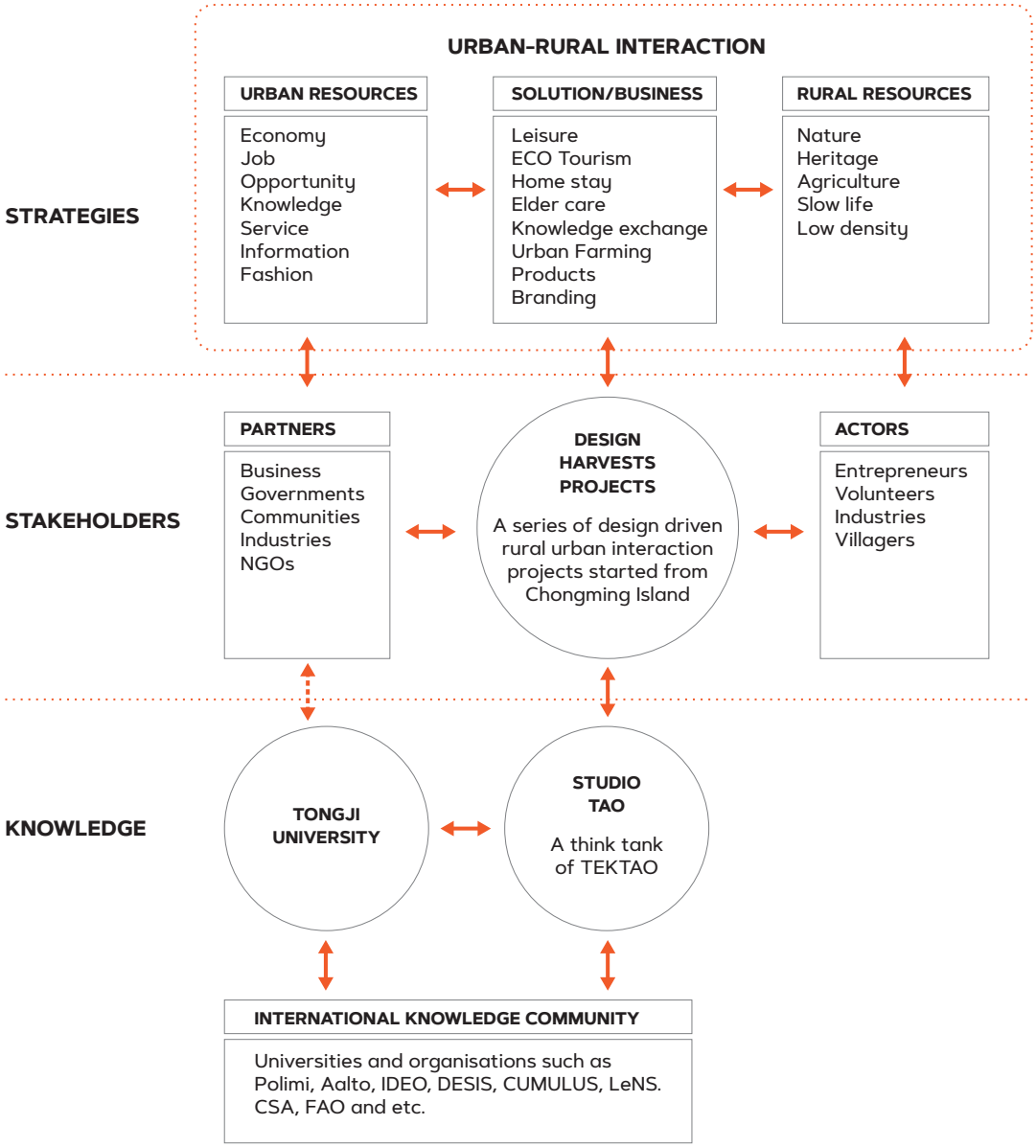


Figure 4.4 Synthesis map showing all project stakeholders: from the inception of the concept to the implementation of each step, adapted from Yongqi, Valsecchi, and Diaz (2013)

In the second and the third stages – *identifying strengths and refining and synergising*, various design activities were conducted through three thematic co-design workshops, which included researchers, international students, the local government, and local villagers. The first workshop was *'the rural kitchen workshop', which* emphasised cultural food and the value connected to the kitchen. Five groups of international students worked together alongside local villagers to identify local strengths and develop them into feasible proposals. Although it started from a small topic such as *'kitchen'*, the outcome emerged on a macro scale, including craftsmanship, lifestyle, economy, service, environment, architecture, energy, and waste management.

The second workshop was *'creative economy*, which aimed to develop the strategic approach to **creative business networking** by building **an entrepreneurial community** with an emphasis on environmental, social and ethical issues. The **design activities**, such as **resource/asset mapping** and **user scenario**, were mainly used in this stage, aiming to generate a consistent scenario among the network of services and facilitate synergy among them. As a result, five village services of future rural development were created in different fields, namely food, agriculture, hospitality, mobility, and health. In the network cluster, each organisation reciprocates with others to maximise its service to go beyond its efficiency. **A network, therefore, can be seen as a driver towards co-developing and discovering new assets by sharing operations and infrastructure** (Meroni, 2013).

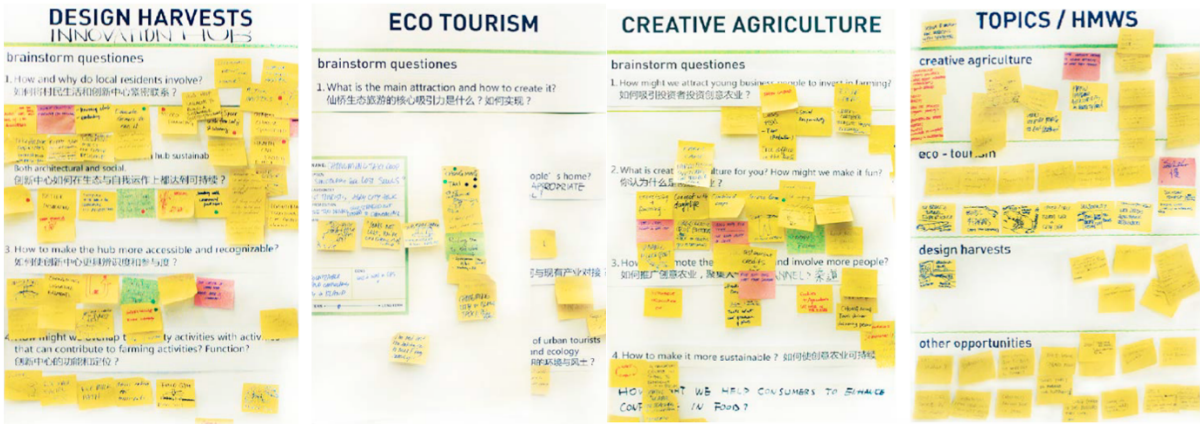


Figure 4.5 Business service design brainstorming workshop (Yongqi, Valsecchi and Diaz, 2013)

The third workshop focused on the *'rural public space'* theme. This was a collaboration with the International Product Design School of Rotterdam University as well as other strategic partners. The main focus of the workshop was to make good use of public space for the local business, agricultural activities, tourism, market and community hub to promote social interaction. The outcomes were the modular-based market space (which can be transformed for various uses) and the reorganised farmlands (which resulted in providing better production and income).

In the fourth stage, *'bridge and connect'*, the project placed emphasis on innovative ideas that arise from dominant collaboration. The connection, throughout the project, appeared to be both within the community and interdisciplinary with outsiders. One of the networks is called DESIS, which has local sub-networks and is interested in promoting design for social innovation and sustainability. The local networks share the same goals and interests but operate in different cities and contexts. Learning and sharing knowledge among different

groups helped to facilitate efficient innovation that can be applied and used in various cities within the networks.

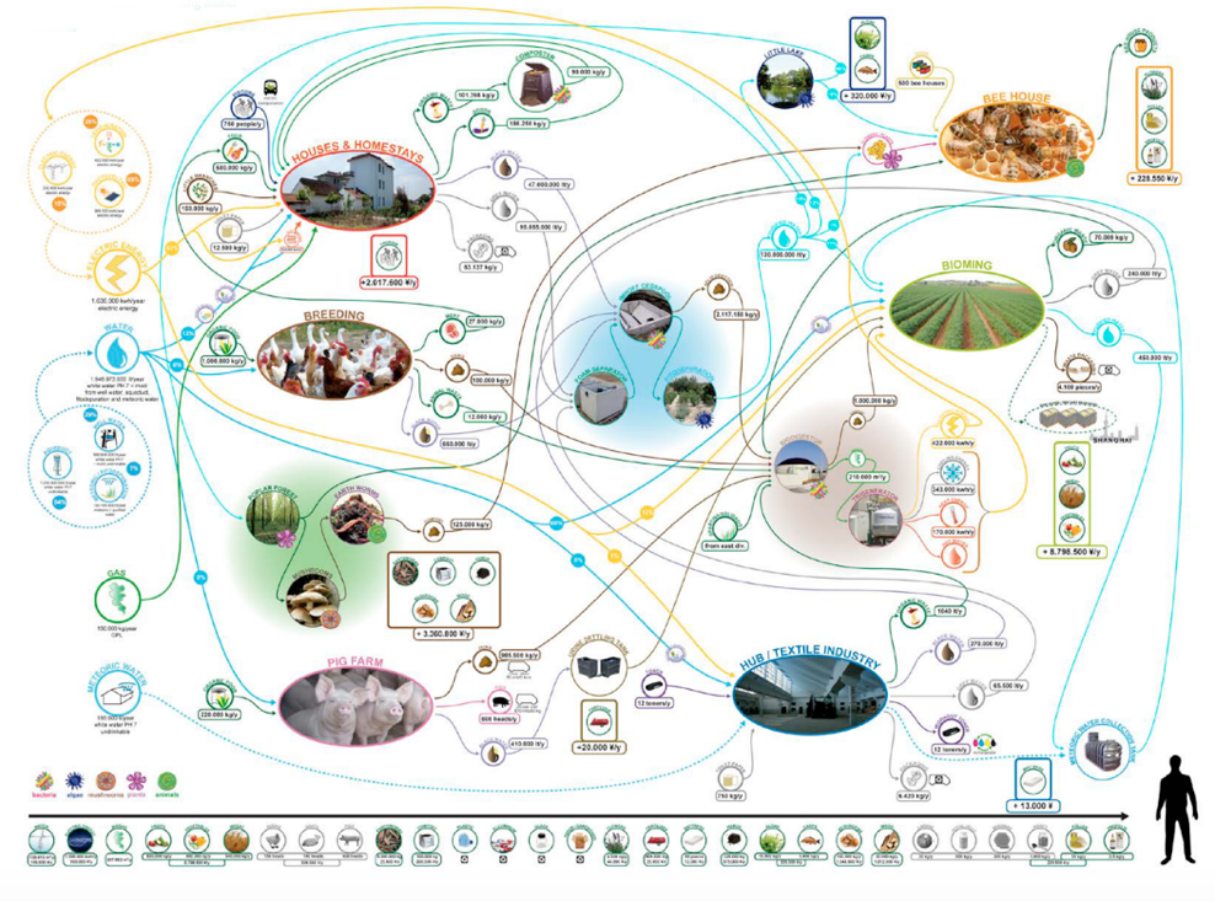


Figure 4.6 General overview map and details of natural resource systems on Chongming Island (Yongqi, Valsecchi and Diaz, 2013)

The last stage, *'branding'*, aimed to create a better relationship between the local area and the outside world. The Chongming brand naturally started with agricultural goods and expanded to other products and services, such as ecotourism, community event, and summer school. **Creating a brand** has helped to engage residents and **develop their pride as well as a sense of belonging in their community**. It also provides a **fresh outlook of local heritage** for the young generation (Staël von Holstein, 2013).

Learning from Chongming's strategy and methodology, the co-creation process, and the interdisciplinary approach in social collaboration are the fundamental principles of the project. They helped to find the proper solution and trigger new opportunities from the local context. Design can be perceived as a tool that aids in social collaboration and contributes to social innovation. It helps in overcoming difficulties (such as communicating beyond language barriers and unequal educational levels among local people and connecting interdisciplinary

stakeholders). The co-creation in micro-scale projects can enhance macro-scale change, as seen in the systematic network that was built up from the small co-design workshops.

Table 4.4 Open coding – Chongming Sustainable Community Project

Case study 02: Design Harvest, Chongming Sustainable Community Project, Shanghai	
Programme's aim	- To create a balanced relationship between rural–urban interaction and find mutual advantage
Problem/pain point	- The rapid transformation of the community
Participation	
Initiated by whom?	- College of Design and Innovation, Tongji University - Studio Tao - Local government
How does the government provide support?	- Collaborate with initiator and provide information from the government side - Maintain programme implementation after the project is finished
How do the locals participate?	Local people participate in the co-design process as well as an evaluation process
Any external support?	Other business partners and international universities
Process	
What strategy is applied?	- Finding hidden inherent potential, local resources, and strengths by using an ethnographic approach - Emphasising value that comes with a cultural resource (e.g., food and kitchen) - Creating a network cluster can be seen as a driver towards co-developing and discovering new assets by sharing operations and infrastructure - Make good use of public space to promote social interaction - Branding the place, engaging residents, and developing local pride - Bridging with multidisciplinary outsiders, learning and sharing knowledge
How does design become involved or influence?	- Using a strategic design approach - The project's methodology replicated the IDEO processes **(inspiration, ideation, and implementation)**, in five minor stages: (1) seek potential; (2) identify strengths; (3) refine and synergise; (4) bridge and connect; and (5) branding. - Human-centred approach - Using service design tools and techniques to depict current situations and new opportunities (e.g., resource/asset mapping, user scenario, service storyboard) - Thematic co-design workshops
Impact	
What is the significant change/solution?	- The balance between rural and urban areas was created by preserving and enhancing local resources and creating a reciprocal network with an urban area - The place was branded with value embedded from their agricultural goods and ecotourism - The co-creation in micro-scale projects can enhance macro-scale change, as seen in the systematic network built from small co-design workshops

Axial coding:

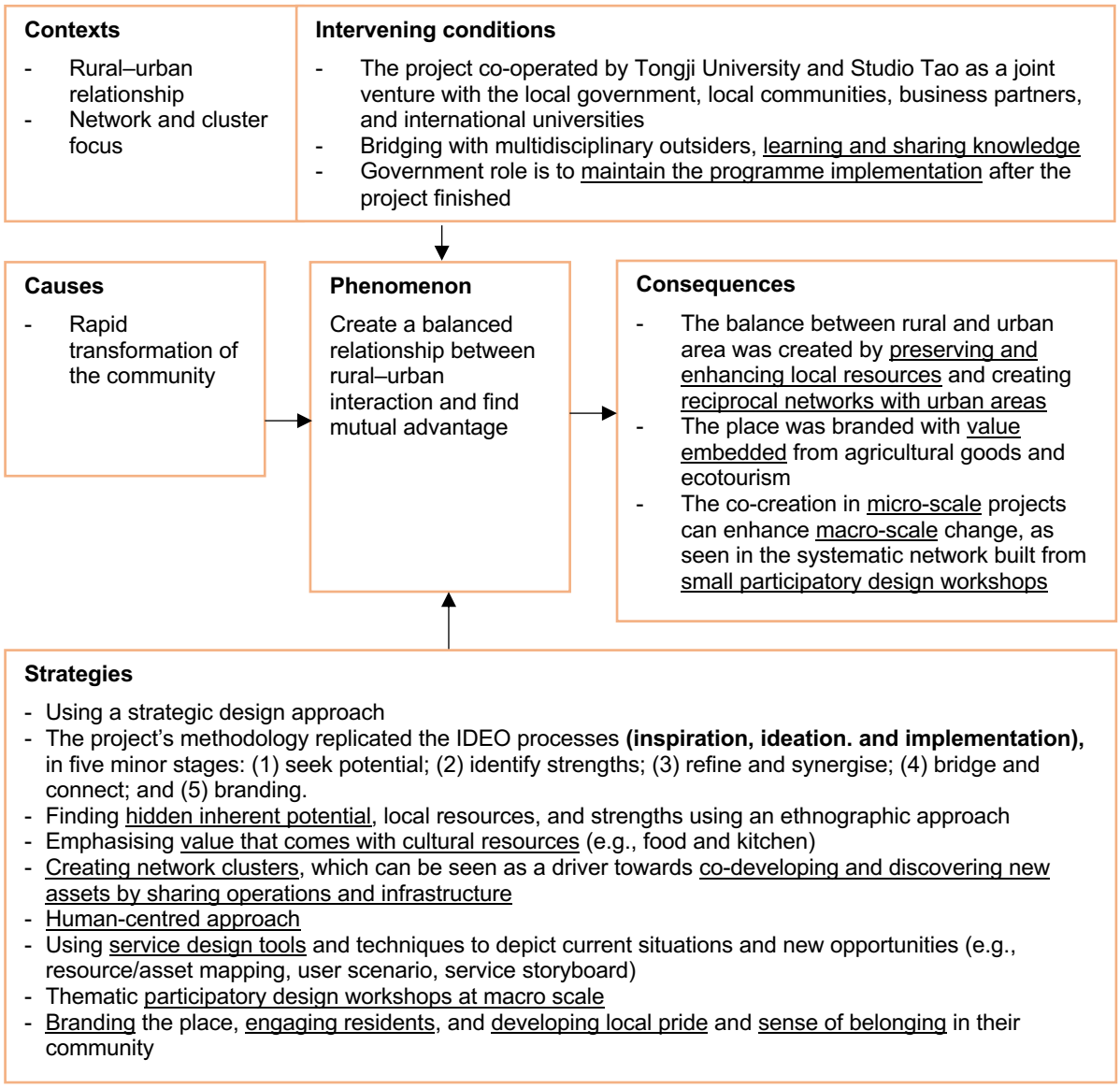


Figure 4.7 Axial coding – Chongming Sustainable Community Project

Selective coding:

The **balanced relationship** between rural and urban areas focuses on two areas: seeking potential in rural areas and exploring opportunities in urban areas. The relation has been **synergised from two places** through **the network cluster**. With the application of **design tools and activities,** local context can be formed. Design can be perceived as a tool that aids in social collaboration and helps in overcoming difficulties (such as communicating beyond language barriers and unequal educational levels among local people and connecting interdisciplinary stakeholders). **Branding** the place helps to engage the

residence and create a **sense of belonging** in the community. Government roles are to co-operate with organisations and maintain the development by monitoring and supporting. By bridging with multidisciplinary with outsiders, learning and sharing knowledge have been created. **The systematic network** can help to scale up the impact by expanding the opportunity interdependently.

4.1.4 Feeding Milano: Energy for Change, Italy

Feeding Milano is an action research project initiated by collaboration from INDACO Department of the Politecnico di Milano, University of Gastronomic Sciences, and Slow Food Italy. The project aimed to use design for social innovation by creating a sustainable food network to address the shortage of food in the Milanese urban area through collaborative practice (Manzini and Meroni, 2013). Designers from INDACO Department worked with the community to investigate and understand the city's context. Several design approaches (e.g., service design, co-design, scenario, contextual design, and co-design workshops) were used in the project as a **strategic tool to find mutual advantage between the city and the food provider**.

The project employed three main actions – **supporting existing good practices and resources, activating unvalued resources, and creating new service** – to promote a service scenario as an outcome (Manzini and Rizzo, 2011). The service scenario aimed at improving quality of life by **building a relationship between the city and food producers**. As a result, **the city contexts are intertwined together** leading to **the new service available** in the area.

The outcome of the project is a **cluster of platforms** that are **linked into a service network** to provide a better living standard for the community (Manzini and Meroni, 2013). For instance, the Earth Market farmer's market is one platform that optimises the logistics of connecting rural food producers and the urban area. It provides diverse activities that allow people to discover and share the value of food and gastronomy culture convivially. One distinctive features in the market is the Ideas Sharing Stall, where co-design was used with the community-centred design approach **to discuss ideas for new services with customers and farmers** (Manzini and Meroni, 2013). Another platform is Farmer Food Box – an agriculture products **weekly delivery service**. Local fruits and vegetables were collected from farms and sorted at county hubs. Although retaining the same standard posed a problem due to diversity in production, the service design mindset was applied to solve the problem using **peer-to-peer communication** and **design ad hoc cultivation to create mutual understanding**. Moreover, the project also restores the local bread chain in the area by

rethinking how people consume bread in the Milanese context to find new opportunities to **ensure traditional bread producing techniques survive** (Manzini and Meroni, 2013).

Figure 4.8 The design experiment in co-design process: Ideas Sharing Stall (DESIS Network, no date)

As seen in the platforms created, **scenarios have been used as the main strategic tool** throughout the process, which helps facilitate discussion among stakeholders (Manzini and Rizzo, 2011). By using **scenarios**, designers and researchers can see the holistic picture and activities and **how they are interconnected,** as well as get feedback and suggestions from locals. The outcome of the scenario technique is **a systematic solution** built upon human relationships as an ultimate context that has **a network of trust and sympathy** as its foundation (Manzini and Meroni, 2013). All services in the city-supported agriculture network are **synergistic and share infrastructure**. The connection between services provides an active and dynamic pathway and also promotes high-quality products and interactions, rational welfare, and intrinsic social and aesthetic value, facilitated by the scenario of change (Manzini and Meroni, 2013).

Table 4.5 Open coding – Feeding Milano, Italy

Case study 04: Feeding Milano, Italy	
Programme's aim	- To promote a sustainable food network (a scenario of change) for the metro-agricultural model
Problem/pain point	- The demand for high-quality and huge amount of food in the Milanese urban area, more than what food providers can produce and supply
Participation	
Initiated by whom?	- Designers from the INDACO Department of the Politecnico di Milano - University of Gastronomic Sciences - Slow Food Italy

How does the government provide support?	- Provide funding
How do the locals participate?	- Local people participate in most design-led research activities - Local design students, design academic and farmers were involved, resulting in a practising capacity as a society
Any external support?	Funded by local institutions (Fondazione Cariplo, a bank foundation with the Commune di Milano and Provincia di Milano)
Process	
What strategy is applied?	- Apply strategic vision to find mutual advantage between city and food suppliers - Create a city-supported agriculture service network to support each other
How does design become involved or influence?	- A scenario is a tool for facilitating discussion with stakeholders - Co-design with design experiment - Designers investigate and understand the city context and mapping resources, collect and analyse best practices, and build project scenarios - The designer plays a major role in triggering, promoting, and facilitating a co-design process by involving local communities - Mock-ups, videos, and storyboards to make visible ideas - Contextual design workshops were created by design researchers with the on-demand design tools - Service design aids peer-to-peer communication among stakeholders
Impact	
What is the significant change/solution?	- All services in a city-supported agriculture network are synergistically and reciprocally sharing infrastructure - The project promotes high-quality products and interactions, rational welfare, and intrinsic social and aesthetic value

Axial coding

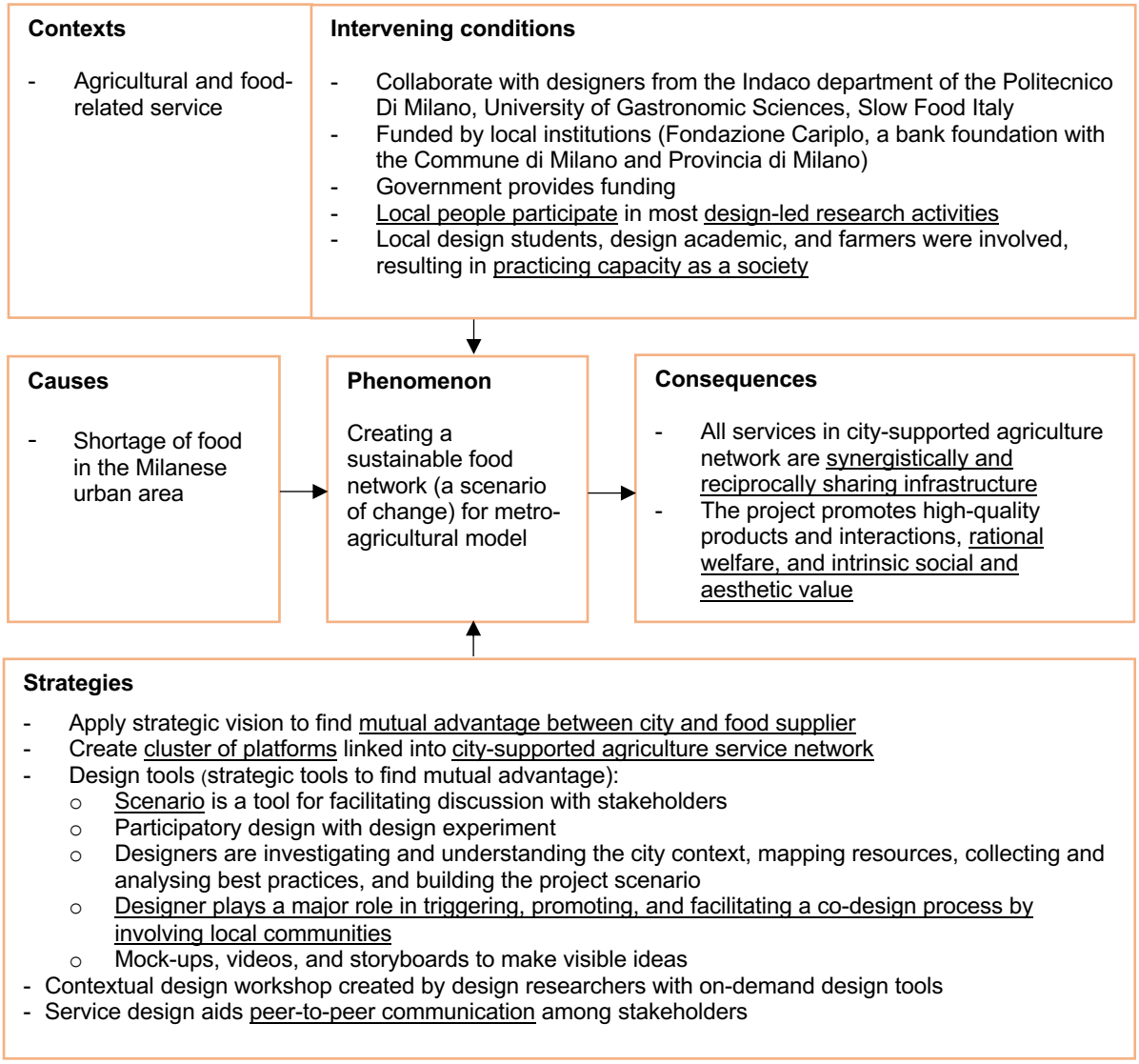


Figure 4.9 Axial coding – Feeding Milano, Italy

Selective coding:

The project creates **a cluster of platforms** that build a city-supported agriculture service network. The **services in the network are synergised** and **reciprocally share infrastructure**. The **reciprocal service network creates a holistic experience** that optimises opportunities for the community. Community capacity is practised by involving local people through **design-led activities**. **The mutual advantage** between city and supplier provides a vision for development; accordingly, **design tools can be used as strategic tools** to extract mutual advantages that benefit all stakeholders. The use of design tools, such as scenarios, provides a holistic picture, and can be used at the early (discover unvalued assets),

middle (explore new opportunities), and evaluation (create the flow of discussion with stakeholders) stages. Co-design with design experiments helps participants see the picture clearly and better express their opinions.

4.1.5 Case studies summary

To analyse the findings from the case studies, the researcher examined the case context and description, followed by grounded theory analysis. After the axial coding process, the integration of all cases was concluded (see Table 4.6), highlighting the strategies that create different impacts. This summary could be useful to apply in the OTOP context of this research.

Table 4.6 Key findings from case studies

Strategies/actions	Impact
- Concern all parties to benefit from the project - Locals initiate project - Co-create with stakeholders	➡ **Mutual benefit** **Mutual value** **Strong commitment**
- Discuss to find common desires	➡ **Rebuild trust**
- Create network inside and outside community and share infrastructure with the network	➡ **Synergistic network enables self-reliant structure**
- Partnership for new business opportunity - Underpin the concept of equality in partnership	➡ **Sense of ownership** **Sense of belongings** **Self-esteem**
- Brand the place	➡ **Local pride**
- Create a “place” in the communal area where people can exchange and express themselves - Informal learning through community activities	➡ **Human resource development and sustainable learning culture**
- Local participation from various social units	➡ **Inclusiveness and the practice of community capacity**
- Apply IDEO’s human-centred design processes **(inspiration, ideation and implementation) with five stages:** (1) seek potential; (2) identify strengths; (3) refine and synergise; (4) bridge and connect; and (5) branding - Systematic network	➡ **Micro implementation to macro-scale impact**

- Design-led activities:
  - Co-design workshop
  - Brand the place
  - Peer-to-peer communication with ad hoc design
- Design tools as strategic tools:
  - Scenarios
  - Mock-up, videos, storyboard
  - Resource mapping

➡ **Better communication**

- Monitor the outcome and maintain a good practice
- Provide infrastructure and funds
- Scale up the impact

➡ **Support from public sector**

The conclusion of the case study analysis can be outlined as follows. Firstly, every case has strong evidence of putting mutual benefits at the heart of implementation, which leads to a more substantial commitment that motivates all stakeholders to work toward it. Secondly, the self-reliance mechanism can be created through synergistic networks, both inside and outside the community. The network could reciprocally exchange resources and infrastructure. Thirdly, a sense of ownership can be encouraged by partnering with other businesses. However, the partnership must underpin the concept of equality, not just be connected passively as a supplier. Local pride can emerge from place branding, as it provides a fresh outlook on local heritage and creates a sense of belonging to the community. Fourthly, the learning culture and human resource development can be encouraged by informal learning. A communal space where people can exchange and express themselves is necessary; there, people from various social units can share knowledge and perspectives. This aspect can also be seen as practising community capacity. Fifthly, the implementation using IDEO's human-centred design processes proves that starting from a micro-initiation can systematically lead to macro-scale impact. Moreover, design can be used in activities and as a strategic tool in the process. Finally, support from the public sector could provide infrastructure and funds, with the help of monitoring and maintaining good practices. By learning from previous practices, the key findings gathered here can be used before conducting primary research in the investigation phase. Additionally, they can be applied to the formation and development of a value co-creation framework.

4.2 Investigation of current barriers and new potential of the OTOP programme

4.2.1 Introducing the overall area of studies

The purpose of this stage of the study is to understand the current issues and barriers faced by stakeholders who are directly involved in the OTOP programme (such as local authorities, OTOP entrepreneurs, experts from design agencies, and academics) as well as those who are indirectly involved (such as OTOP customers) in seeking the new potential for service development. The methods used in this phase include: (1) conducting in-depth interviews with stakeholders and (2) distributing online questionnaire surveys to OTOP customers. Each method is designed to gain a distinct understanding from three spheres: service providers, local entrepreneurs, and OTOP customers. However, as the focus is on the service, the investigation could undeniably encompass all three spheres since they are interconnected and have relationships with each other. The picture below summarises the overall areas of study.

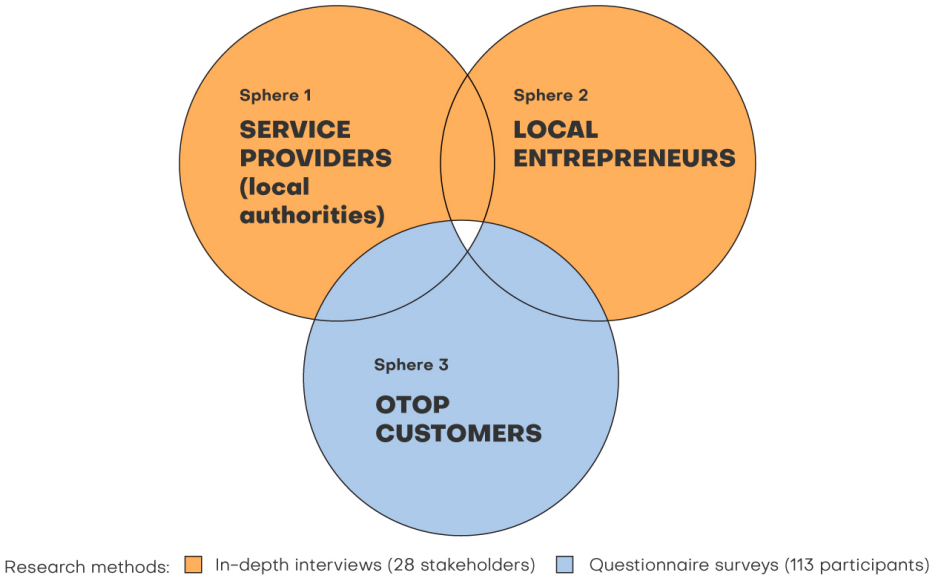


Figure 4.10 The areas of study with three spheres indicated, along with the methods used

4.2.2 In-depth interviews with OTOP stakeholders

The semi-structured interviews with OTOP stakeholders were conducted to understand the current situation and relationship between the service provider sphere and the local entrepreneur sphere. The group of participants included key stakeholders such as OTOP entrepreneurs and local authorities, as well as experts who have been involved in and experienced with the OTOP programme, such as consultants, policy analysts, community

leaders, design academics, design agencies, the public sectors, and non-governmental organisations. The total number of participants is 28 (as shown in section 3.8.2, p.84).

The analysis of the interviews used grounded theory to study phenomena in both spheres and understand the circumstances that OTOP stakeholders face. The interviews were transcribed and coded using grounded theory coding methods, namely: *open coding* and *axial coding*. The former is used to extract raw information, recognise small incidents, group similar ones, label them, and organise them into discovered categories. The latter is used to put the information in a new way to see relations and connections between categories as a new paradigm model which has six factors: causal condition, context, intervening conditions, phenomenon, actions and interaction strategies, and consequences.

4.2.2.1 Open coding analysis

In this process, open coding was performed group by group. The aim was to extract raw information, identify small incidents, group and label them, and organise them into discovered categories (see Appendix A02). The key findings and significant statements of each group (see Appendix A03 for labels of incidents categorised by a group of participants) can be summarised as follows.

- **Group 1: OTOP entrepreneurs**

This group of participants consists of various types of enterprises: CBEs, SMEs, and single-owners. Most of the coding in this group highlight the ineffective support from the local government. The high-density codes in this category were about:

> Local staff's duty, ability, and behaviour: Small incidents within this group show that entrepreneurs feel they are being treated unequally. Statements such as *"Another problem I faced is the inequality in giving support. It shows partiality and favouritism towards the choice of selecting which business to get support"* or *"The service happens unfairly. Some people receive more support than others"* indicate that local entrepreneurs are concerned about favouritism in the provision of support. The unclear criteria for the support given to specific entrepreneurs are also seen as biased. This affects the relationship between OTOP entrepreneurs and the local authority, resulting in entrepreneurs losing trust and feeling reluctant to participate in activities.
>
> The support is mismatched with actual needs: Without truly integrating local needs, the provided supports are not fulfilled with local's requirements. For instance, the packaging provided by the local officers for new products is often unsuitable (e.g.,

wrong size, misspelling, inconsistency in design). This can be evidenced by statements such as: *"The new packaging design they gave us didn't really consider the protection of our product. They can't use a general standard for specific products that need more protection."* Additionally, providing support in a mass approach is often seen as perfunctory.

Inadequate skill set to survive as a strong and independent entrepreneur: This is because the types of support are not highlighted in human resource development. The answers from participants also show that they heavily relied on support. For instance, one participant stated, *"We used to ask for new packaging designs for our new products, but the local staff told us to wait until they had a seminar, workshop, or training."* The inconsistency of training activities is also seen as a problem, as well as the inadequate frequency of follow-ups.

Nature of OTOP business: Entrepreneurs provided insights into how they run their businesses. For many entrepreneurs, the OTOP business is a secondary job. Due to a limited workforce, outsourcing becomes necessary when higher-volume production is needed. The role of the entrepreneur also covers multiple responsibilities, from generating ideas to selling products.

Mindsets: During the investigation, some negative mindsets were identified based on participants' attitudes when answering questions. The 'rely on external support' mindset can be reflected in participants' responses such as, *"I wish the government could take our products and sell them for us"* or *"We used to ask for a new packaging design for our new products, but the local staff told us to wait"*.

- **Group 2: Local authorities (service providers)**

This group of individuals comprises the regional and Tambon (township) authorities within the CDD who are accountable for executing the OTOP programme. The main areas of discussion are:

Work procedure: The main focus of this group is to understand their work procedures. One significant issue is the limitations caused by insufficient local officers per unit area. For example, in some districts, only one person is responsible for the entire area and has to handle other jobs apart from monitoring and supporting OTOP enterprises. This situation explains why entrepreneurs have mentioned an inconsistent follow-up process. Staff relocation is also common, which affects the continuity of providing and

following up processes. A further limitation is funding, the funds allocated by the central government are sometimes insufficient, and there is no system in place to request additional funding for their region.

Challenges in work procedures: As a local officer working with community members, the main challenges they have mentioned are people's reluctance to work collaboratively and their lack of interest in participating in support activities.

Evaluation: To report back to the central government, the key performance indicators (KPIs) still rely on numerical metrics, such as the number of people who participate in the activities or the amount by which entrepreneurs increase their earnings after receiving support.

Communication: The study also examined the current communication medium used for interacting with OTOP entrepreneurs. An informal platform like the Line application (similar to WhatsApp) has been widely used for announcements. While this medium enables entrepreneurs to receive information quickly, it may not reach every entrepreneur, particularly those who lack digital literacy skills.

Obstacle mindsets: From local officers' perspective, entrepreneurs' obstacle mindsets include a focus on individual benefit over community benefit, excessive reliance on external support, and a lack of awareness about the importance of growing together as a community.

- **Group 3: Community leaders**

The members of this group possess valuable community leadership skills that offer a unique perspective on the programme's execution. With these skills, they can see the broader impact of changes within their community, including how government programmes may disrupt community structure. For instance, the government's provision of market channels outside the community has had a negative impact on locals, causing them to lose interest in selling their goods in their hometown. Such activities often overlook the consequences and can lead to a diminished sense of community, resulting in deserted local markets.

Reflection on OTOP programme execution: The high density of discussion on programme execution highlights issues with transparency. Political patronage and corruption have been mentioned. Regarding support activities, the project's limited timeframe and budget have resulted in perfunctory efforts. Local needs and readiness were not well-observed before allocating support and budget.

The connection between governmental bodies: There is a lack of clear communication and coordination between various governmental bodies supporting the OTOP programme. While many public bodies are in support of the initiative, the process of handing over OTOP entrepreneurs for further support from different organisations appears to be weak. The unclear connection between different support bodies makes it difficult to facilitate a smooth transition of support.

Challenges as a leader: As a leader, there are several challenges that can be grouped into three categories: connecting people, working with different generations, and improving members' attitudes.

Leader mindsets: After analysing the responses from this group, the skills that can benefit the local enterprise and community can be categorised into seven categories: vision for development, responsibility, network and connection building, inclusiveness, team building, inspiring people, and empowering people.

- **Group 4: Policy analysts / OTOP programme consultants**

During the discussion, participants talked about how their initial thoughts led to the development and implementation of a programme. They also discussed the programme's limitations and the lessons learnt from ineffective strategies. The main topics of conversation included:

Execution problem: There seems to be an issue with the programme's focus on the product rather than community orientation, which affects how success is defined. The use of KPIs as a standard of evaluation highlights this problem, as they continue to prioritise economic value over social impact.

Limitation: In a top-down execution approach, governmental organisations must carefully analyse and plan projects in coordination with the central government, which can lead to a restricted hierarchy and organisational structure. This can make cooperation between different government bodies challenging as it may affect their current work paradigm. To effectively implement a new programme, it is important to find a way that aligns with the central government's goals without going against them. Otherwise, the programme may not be viable in practice.

Lesson from ineffective strategy: A participant who works closely with the central government discussed unsuccessful strategies. Firstly, including SMEs in the OTOP

scheme creates a huge gap between small-scale enterprises and larger enterprises like SMEs. Competition is high when selecting an OTOP business to sell at an event or when competing for the OTOP Champion award. Small-scale enterprises have minimal chances of winning. Secondly, while exporting is a desirable achievement, it is not easy considering the nature of OTOP businesses, which are often second jobs. Very few businesses can reach that goal, leaving small businesses behind. Thirdly, the OTOP Nawatvithi movement started in 2018 and introduced tourism to bring people to local areas and improve local pride, emphasising social value. While this movement is rooted in social values, not many communities survive this scheme. The main reasons for this include:

(1) The underdeveloped infrastructure is hindering movement: As the transportation network is poorly connected. It is difficult to reach local areas, making it challenging to achieve the tourism goal. As a result, construction sites for OTOP Nawaivithi are left abandoned.

Figure 4.11 Abandoned construction in OTOP Nawatvithi market area (Thai PBS, 2019)

(2) Readiness: Assessing the entire country's implementation and measuring the community's readiness is not a simple task. The timeframe for a project proposal to project assessment is limited, and the time for area research should be treated as equally important as project implementation.

Obstacle mindsets of locals: During the interviews, the participants addressed the challenges that arise when collaborating with local individuals. One of the main challenges identified is the mindset of the community. For a community to thrive, it needs to be self-motivated. However, there seems to be a lack of motivation within the local community.

- **Group 5: Design academic**

With this group of participants, the main topics raised from the interviews are:

The role of local authorities as mediators: In this regard, the government should establish a seamless connection to benefit OTOP entrepreneurs the most by grouping similar products/businesses and exploring potential connections with different clusters. Additionally, to act as a mediator, they should be trained to have the skills and resources necessary to pass them on to the locals.

Unequal accessibility: The current support scheme only benefits OTOP entrepreneurs who are registered, which means that it cannot reach out to underprivileged groups. Inclusiveness is necessary to boost community capacity.

Basic infrastructure: It is *e*ssential for the government to establish fundamental infrastructure to support OTOP entrepreneurs. This includes building a strong foundation that can enhance their livelihoods and offer job security, ensuring that their OTOP business can serve as their primary source of income.

Network with the local university: Consider networking with the local university, as they currently aid the OTOP programme, by collaborating with the local community on projects. These projects are often financed by various public organisations. Academics can commence the project, conduct research on the community's needs, develop a plan, execute it, and assess its success. This could be a chance to collaborate with local organisations and adopt a new bottom-up approach.

- **Group 6: Design agencies**

This group is composed of designers and workshop facilitators from design agencies who previously collaborated with local authorities on training and development programmes. The group's focus is on two aspects: how design can be utilised in product development and how it can aid in training. The main discussion can be concluded as follow:

Challenges: During the interviews, participants shared their difficulties in working with the locals, specifically the challenge of finding common ground. To overcome these challenges, participants suggested that design can aid in activities and facilitation. Communication and the visualisation of clear goals at each step can also help build strong and tangible commitment from the beginning. Focusing on the contribution of each stage can bring more engagement. To illustrate new achievements with the

locals, the designer can show successful case studies related to the locals, providing tangible examples for them.

Engaging with the locals: Participants mentioned engaging with the local community through various activities. Informal activities, such as having dinner together, allow designers to gain insights from the free-flowing dialogue. These informal activities should be applied when researching or observing the local community. When it comes to facilitation, shared value plays a key role in allowing individuals to work together towards a mutually beneficial outcomes. One way to uncover the potential value of a goal or achievement is by asking the question, "Why?" along with their associated needs.

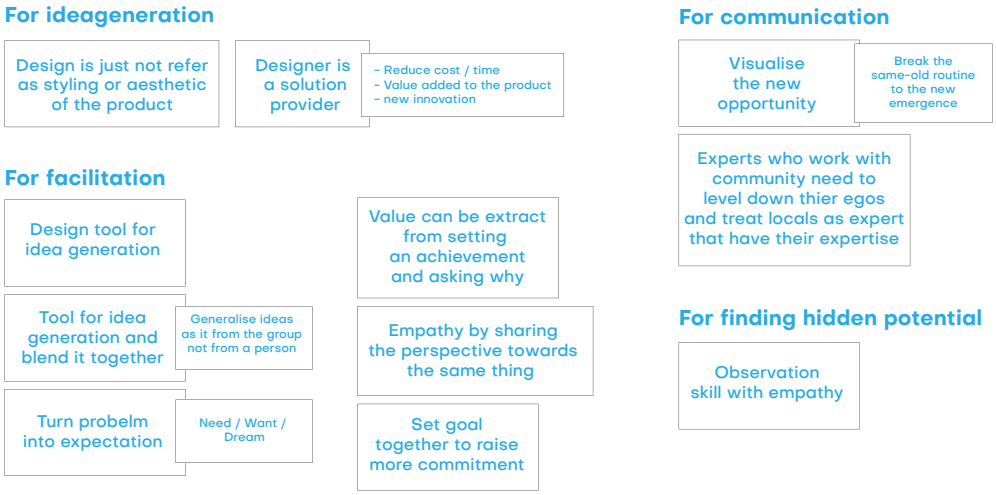


Figure 4.12 Design roles when working with the community, labels from interviews' responds

In summary, according to the interview responses, Figure 4.12 displays the labels of design roles that could benefit the development programme.

- **Group 7: Public sectors**

This group includes additional public agencies that contribute to and support the OTOP programme. The main topics of discussion among this group of participants are:

Coordination between governmental bodies: According to the interviews, there is strong evidence that public bodies do not consolidate their efforts. One participant mentioned that *"OTOP enterprises are sometimes targeted as a place to hunt for the KPI"*. Government projects from different parties often overlap and are repetitive.

Approach to entrepreneurs: To recruit local entrepreneurs for projects or training, a door-knocking approach is utilised. However, the list of OTOP entrepreneurs has been

shared exclusively among government parties, resulting in support for only a particular group.

Challenges from working with the locals: Approaching OTOP entrepreneurs can sometimes be challenging due to a judgmental attitude towards local officers. To overcome this, officers should demonstrate sincerity and regularity, provide clear communication, and co-create with entrepreneurs instead of just holding perfunctory meetings or training sessions.

- **Group 8: NGOs**

The purpose of conducting interviews with NGOs is to gain a better understanding of how their support systems function. Key areas that have been mentioned include:

Working towards shared social benefits: To promote communal welfare, it is crucial to adopt a mindset that serves society's interests. The OTOP business could potentially thrive by promoting social enterprise as a new development strategy.

Relationship: Establishing a family-like connection is essential in building a seamless workflow and gaining commitment when working with locals. This helps to win their hearts and foster long-lasting relationships.

After summarising the key areas mentioned by each group of participants, it can be concluded that they have varying perspectives on the OTOP programme. While conversing with local entrepreneurs, the researcher gained insight into their challenges and expectations, thus gaining an understanding of the nature of business operations. The community leader group discussions were focused on the role of leadership in community development, while local officers examined limitations in their working process. Programme consultants discussed OTOP's strategy and lessons learnt from past experiences. The design academic group emphasised the key factors for improving the programme, while the design agency group studied design roles that could help in different stages of support providing. The public sector group provided a better understanding of the limitations in the linkage between governmental bodies. Experts also pointed out the mindset obstacles observed as challenges when working with locals. In addition to extracting the key areas of discussion for each group, the researcher also investigated the common areas of study. These included suggestions for the development of the OTOP service, as well as the strengths and weaknesses of the programme.

4.2.2.2 Axial coding analysis

This section presents the procedure for the axial coding process after summarising the key findings from the interview results through open coding in previous section. The purpose of the axial coding process was to reorganise codes and comprehend the relationships and connections between categories, generating a new paradigm model. This process also utilised colour codes for categories (see Figure 4.13 for categories' name) to facilitate the identification of where small incidents were placed during the axial coding procedure.

Figure 4.13 Colour of coding categories

During the axial coding process, two spheres were analysed separately: service providers and local entrepreneurs. The resulting findings were combined to form the main phenomenon of *'establishing a synchronised and sustainable service system that partners with locals*'. Figure 4.14 shows how two spheres were analysed in the axial coding process.

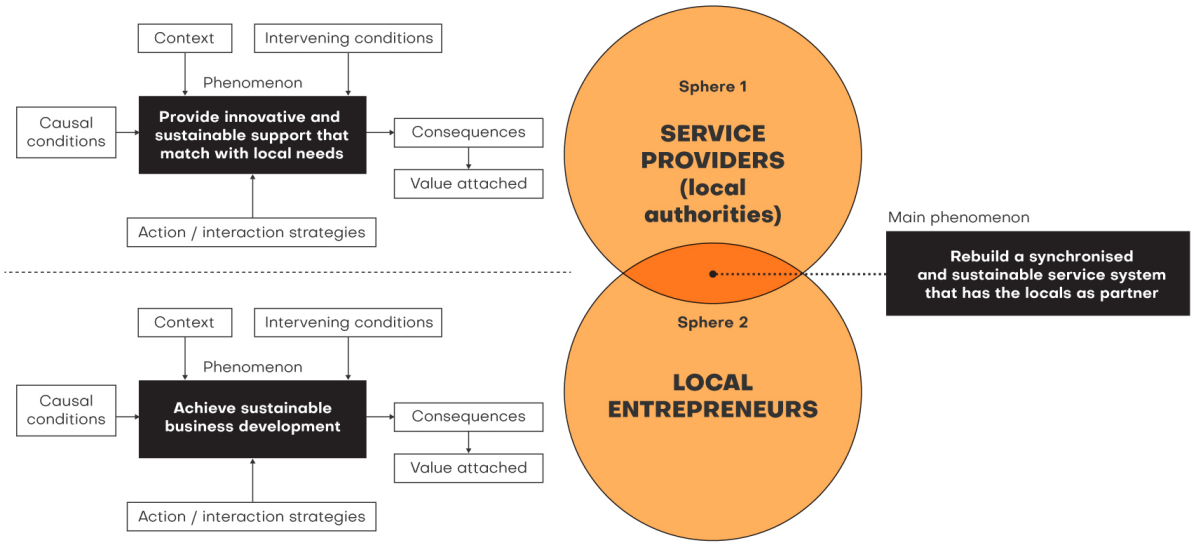


Figure 4.14 Axial coding paradigm model between two spheres

4.2.2.3 Axial coding analysis in service provider sphere

Starting with the service provider sphere, the phenomenon of this sphere is '*to provide innovative and sustainable support that match with local needs',* the codes were organised in a new paradigm model which has six factors: causal condition, context, intervening conditions, phenomenon, action/interaction strategies, consequences. This section shows how all the codes were filled into each factor, respectively.

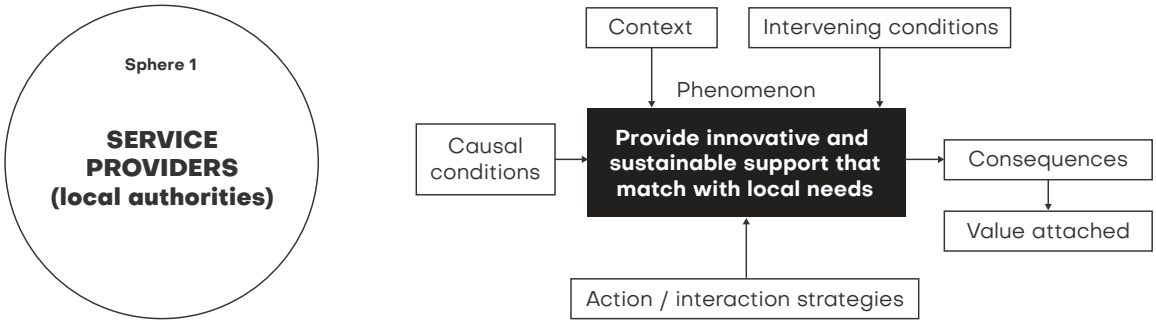


Figure 4.15 New paradigm model with the phenomenon from service provider sphere

- **Causal conditions**

Table 4.7 Causal conditions in axial coding in the service provider sphere

▪ **DOMINATION** **Exclusion of local perspective** ○ Exclusion of local context and identity ○ Exclusion of local perspective and feedback **Top-down execution with no space for local creativity** ○ Top-down action with no consideration for locals' creativity ○ Lack of local involvement at the strategic level ○ No opportunity for locals to contribute their creativity	▪ **TRANSPARENCY** **Problem with transparency** ○ Unclear criteria for supporting specific entrepreneurs ○ Lack of transparency regarding the allocated budget ○ Favouritism ○ Unequal support ○ Unclear management system
▪ **STRATEGIES** **Product-oriented rather than community-oriented** ○ The knowledge base is unsustainable because entrepreneurs cannot adapt it for further use in problem-solving in development. ○ Having an export target for local products seems almost impossible.	▪ **IMPLEMENTATION SCALE** **Mass approaches are perfunctory** ○ Mass approach training ○ No separation between different levels of entrepreneurs
▪ **COMMUNICATION** **Ineffective communication** ○ Between OTOP entrepreneurs and local officers ○ Between OTOP entrepreneurs and experts	▪ **RECRUITMENT** **Approach to specific entrepreneurs** ○ Knock-door approach ○ Stick with successful entrepreneurs ○ Lack of research on locals' needs and readiness before giving support
▪ **PARTICIPATION'S ACCESSIBILITY** **Inaccessible support for newcomer and impoverished people** ○ No support before owning a business ○ Limited financial accessibility	▪ **TYPE OF SUPPORTS** ○ Lack of new innovative support ○ Lack of human resource development ○ Training cannot build all entrepreneurship skills ○ Lack of continuation of support ○ Repetition of training and support
▪ **EVALUATION** **Relies on numerical KPIs to report back to the central government** ○ Concern regarding obtaining KPIs as a result or report ○ Economic impact is often evaluated rather than social impact.	▪ **NETWORK & CONNECTION** **Lack of integration between governmental bodies** ○ The connection between governmental bodies is weak.

- **Context**

Table 4.8 Context in axial coding in the service provider sphere

▪ **CDD WORKING PROCEDURE** **Work priority** o The OTOP programme remains one of the top three priorities for the CDD. **Support frequency** o Training is conducted 3-4 times per year **Current focus** o Online market **Communication medium and process** o Advertise news in local meetings where possible o Use the "Line" application as an online platform for communication o Use direct messaging for new training and activities **Evaluation** **At the joining process** o Use a star grading system and quadrants A/B/C/D **Follow-up process** o On how locals have improved their businesses o On new product development o On measurement of higher profits	▪ **TYPE OF SUPPORT** **Entrepreneurial skills** o Developing a business plan o Accounting o Training for online selling **Distribution channels** o Marketing o OTOP sale events o Distribution channels **Product standardisation** o Product improvement to meet national standards o Improving products to meet OTOP standards **Value added by design** o Packaging and branding design **Connection** o Building connections with governmental agencies o Matching with potential buyers

- **Intervening conditions**

Table 4.9 Intervening conditions in axial coding in the service provider sphere

▪ **CHALLENGES** **Challenges as officer** o People not willing to work as a group o Local people concerned only about their benefit o Insufficient budget for product development o Lack of participation in support activities o Struggle with mutual benefit management o Government staff needed to operate online platform **Challenges as leader** o Connecting people o Difficulties from different generations o Tuning members' attitude **Challenges as an expert working with the locals** o Finding a middle ground of agreement o Judgmental attitude	▪ **LIMITATION OF PROGRAMME EXECUTION** **Nature of governance** o Discontinuity after a four-year period of staff governance o Plans are laid out by the central authority **Project restriction** o Project's structure, budget, and KPIs are highly restricted. o Limited timeframe and budget o Project must have measurable outcomes for approval. **Budget allocation** o Budget is allocated according to the proportion of entrepreneur type. **Co-operation between governmental bodies** o Projects are hard to co-operate between ministries as it would affect the current work paradigm. **Involvement of local organisation** o Colleges, universities o Local foundations
▪ **LIMITATION AS MEDIATOR** **Efficiency of local officers** o Local staff's duties, abilities, and behaviour o Insufficient number of local officers o Overburdened officers o Knowledge background of officers	o Relocated local officers o Follow-up process seems difficult due to a limited number of staff. o Unresponsive action

- **Actions and interaction strategies**

The suggestions of all participants were sorted into three categories based on the management level: strategic, tactical, and operational. Tables 4.10–4.12 present these categories.

Table 4.10 Actions and interaction strategies (at the strategic level) in axial coding in the service provider sphere

AT STRATEGIC LEVEL	
▪ **INCLUSIVENESS** **Involvement of local voices** o Programme development should involve an expert in different expertise to shape the strategy together. o Observing the real need before allocating the budget **Involvement of young generation** o Focus on the involvement of the young generation o Encouraging young generation to involve in the scheme o Develop a new scheme as the experiencing of the sign of less participation in OTOP scheme **Building collective ideas together for stronger commitment** o Co-creation can provide valuable perspectives and knowledge-sharing opportunities. o For a successful collaboration, it is essential that all stakeholders are profitable. o Working with the locals to establish a shared vision and commitment o Setting goals together to raise more commitment o Driving with mutual value (for both local authorities and local entrepreneurs) **Partnership** o Avoid commanding; instead, ask questions and initiate conversations o Conclude possible solutions together with OTOP entrepreneurs o Create an "OTOP buddy" programme to link new workers and community scholars with local business owners, focusing on mutual values and strong commitment	▪ **BUILD A CANVAS OF CONNECTION** **Integration between governmental bodies** o Governmental bodies should integrate based on their expertise. o CDD should act as a middleman and provide seamless connections. o To ensure well-rounded community development, local authorities should collaborate with individuals from various areas of expertise. **Expanding opportunities through matchmaking with new buyers** o Connect with buyers or private sector entities to understand their demand for new opportunities. **The resource hub** o Establish a central service hub for specific requirements such as packaging design, business model building, and financial services o Create a co-production platform for direct support between outsiders and the community (not via the government) **Reciprocal exchange networks both within and outside the community** o Local products can be used to serve both the people and local businesses in the same area and nearby.
▪ **STRUCTURE OF AUTHORITIES** o A versatile headquarters for local development is essential, such as a merged Ministry of Higher Education, Science, Research and Innovation.	▪ **PROVIDE FACILITIES & INFRASTRUCTURE** o Improve livelihood and ensure job security o Build basis infrastructure (e.g. health, financial) o Public funds should provide practical solutions for the public as a whole, rather than just benefiting a specific group.
▪ **NEW APPROACHES FOR CHANGE** o Reorganise a new distribution place for products. o Introduce the new OTOP strategy by implementing the OTOP Sustainable Brands scheme o Encourage the development of new product types to meet customers' demands o Social enterprise can be a solution for sustainable local businesses.	▪ **ASSESSMENT & EVALUATION** o Building capacity o Empowering self-reliance o Combining economic and social value

Table 4.11 Actions and interaction strategies (at the tactical level) in axial coding in the service provider sphere

AT TACTICAL LEVEL	
▪ **INCLUSIVENESS** **Learn from the community holistically** o Understand the nature of both entrepreneurs and customers o Frequently visit the local community during the project o Consider the local circumstances while implementing a development project o The advocacy system should be driven from the bottom up. **Collaborate with local organisations** o Colleges, universities, local foundations	▪ **THE USE OF DIGITAL PLATFORM** **Digital platforms can enable digital transformation in:** **Management assistance** o A platform for backend business management **Marketing assistance** o Online ordering platforms o Encourage the use of digital commerce and develop the central platform for OTOP entrepreneurs

▪ **TIME AND SCALE** **Approach a small group of entrepreneurs at a time** o Each case requires individual analysis o Incorporate the incubator concept into a 3-year project with long-term validation and evaluation o The goal is to prioritise long-term growth and instil determination among the community members. o Start by implementing the programme on a small scale and then gradually increase its scope	▪ **ASSESSMENT & EVALUATION** **Evaluations should prioritise measuring social impact** o Implement a new grading system that considers the success of social impact development
▪ **TRAINING PEOPLE** o Train the trainers and local officers o Build the institute/school for grassroots business from local level to national level o Building strong community leaders according to their expertise	▪ **FUTURE TYPES OF SUPPORT** o Provide tools that enable individuals to earn money rather than provide them with money o Build a strong foundation as self-reliant entrepreneurs o Prioritise sustainability throughout our value chains o Recognise local uniqueness to find a distinctive perspective to build upon as a core value for the enterprise o Equip the locals with essential entrepreneurial skills (e.g., marketing, financial literacy, management

Table 4.12 Actions and interaction strategies (at the operational level) in axial coding in the service provider sphere

AT OPERATIONAL LEVEL	
▪ **COMMUNICATION** **Visualise the potential goals in each step of support for a strong sense of commitment** o Set up the key success for the project, and visualise potential outcomes to guide the project o Have a clear focus and vision for the contribution made in each stage o Effective training should involve practical steps that can be easily implemented, focusing on monitoring how individuals apply that knowledge in real-life situations.	▪ **DEVELOP TOOLS FOR OPERATIONAL STAFFS** **Provide tools for local officers to work efficiently, including better communication, easy feedback tracking, and follow-up with entrepreneurs** o Use of digital platform (e.g., enterprise resource management) to track progress and growth) **Tool for extracting the real needs and hidden potentials** o Adopt a new business development methodology to support activity, such as Google Design Sprint o Utilise a design tool for idea generation o Visualise the new opportunity and break the same old routine with new ideas o Use a tool to generate and blend ideas together o Generalise ideas as coming from the group rather than from any one person o Reframe problems as new expectations, such as needs, wants, or dreams **Knowledge transfer platform** o Create a role model entrepreneur to pass on business know-how o Encourage people to learn from successful cases **Project evaluation** o Develop an analytical tool for local authorities to use with local businesses
▪ **ENCOURAGE NEW MINDSET FOR NEW CHANGE** **Refocus on the perception of 'benefit'** o Encourage locals to see the benefits of other value dimensions besides monetary gain **Building a strong sense of patriotism** o Translate valuable culture into product or brand advantage	
▪ **CONTINUITY** **Continuity throughout the entire development process while also constantly iterating for new developments** o Focus on the entire process and consider the consequences o Allocate a budget to support product development o Focus on sustainability throughout the value chains o Provide foundational knowledge that locals can build upon	
▪ **TRANSPARENCY** **Communicate to avoid misunderstanding** o Communicating the results of the evaluation can lead to transparency o Communicate the benefits of joining the training to avoid reluctance among locals	**Show allocated budget and clear criteria when providing support** o Building trust between OTOP producers and the public **Provide equality** o Equal distribution of support for newcomers
▪ **CHECK BACK FOR FEEDBACK AND NEEDS** **Expectations of OTOP entrepreneurs before joining the programme** o Increase income o Expand market channels o Acquire new knowledge o Learn from other businesses o Develop products o Receive funding o Build connections o Sell products in government-arranged places	**Expectations of OTOP entrepreneurs after joining the programme** o One-stop service o Broader connections o Funding allocated based on actual needs o Prompt communication and swift action to address issues o Seamless linkage between support bodies o Self-development as an entrepreneur and leader

- **Consequences**

Table 4.13 Consequences in axial coding in the service provider sphere

- Offer services that address real needs by incorporating input from the local community
- Transparency is key to rebuilding trust and promoting genuine partnership.
- Creating a network of connections can lead to more opportunities. The government should be a matchmaker to help establish a broader and smoother connection. It could cover the following:
  - The connection of governing parties that share responsibilities according to their expertise
  - The connection with the public and private sectors
  - The connection between a reciprocal network within and across the community
  - The knowledge-sharing resources
- Regarding support type, it is important to prioritise human resource development to establish a solid foundation as an entrepreneur and cultivate leadership skills. The project's duration and scale should be extended to focus on the entire value chain, emphasising iteration for innovation rather than a quick-fix solution.
- Assessment should prioritise social impact as key performance indicators rather than solely focusing on economic output.
- With the limited number of local officers in one district, digital platforms and tools could help officers work efficiently with better communication, ease up with cases, and simply track feedback.
- Communicating and visualising opportunities and potential goals in each support step can foster a stronger sense of commitment.

4.2.2.4 Conclusion for service provider sphere

The investigations uncovered several factors that are hindering the sustainable development of the programme. It is crucial to tackle the problem of dominance to offer effective and lasting assistance that aligns with the specific needs of the relevant community. Ignoring local input and relying solely on a top-down approach can lead to inaction. Transparency also affects every group of stakeholders. The criteria for choosing entrepreneurs that will receive support need to be clarified to avoid assumptions of favouritism and political patronage, as this affects the relationship between local officers and entrepreneurs and erodes trust. Rebuilding transparency is key to restoring trust. In addition, mass training should be replaced by individual or small group training. The recruitment process should include individuals who are new to the field and those with potential who have yet to establish a product or brand. Additionally, the programme should shift from being product-oriented to community-oriented, focusing on investing in human resource development and building the necessary skills to survive as an entrepreneur. These aspects align with two fundamental principles of the OVOP model: 'Self-reliance and Creativity' and 'Human Resource Development'. The programme could gradually encourage a shift in perception from monetary value to social value, further strengthening the community's self-reliance mechanism. The frequency and continuation of the support provided should also be emphasised, with assessments focusing on social impact and well-being rather than just economic output. Moreover, effective communication is crucial for visualising opportunities and potential goals and building a stronger sense of commitment and engagement. If the programme can communicate tangible benefits, it could encourage locals to participate willingly. Furthermore, the number of local officers in each area appears insufficient. Employing digital tools for better communication, feedback tracking, and

entrepreneur follow-ups can significantly reduce workloads and improve efficiency. One of the key roles of service providers is to act as a mediator by connecting people. The government can help by facilitating connections in various ways, such as (1) connecting with governing parties based on their areas of expertise; (2) connecting with public sectors to identify new demands and opportunities for local products; (3) connecting reciprocal networks within and across communities for mutual benefit; and (4) sharing knowledge and resources, both formally and informally. These connections could enhance growth opportunities at both national and global levels, aligning with the first principle of the OVOP model – 'Local Yet Global'.

4.2.2.5 Axial coding analysis in the OTOP entrepreneur sphere

In the local entrepreneurial sphere, the phenomenon is to achieve sustainable business development. Codes have been organised into a new paradigm model. This section demonstrates how all the codes were filled into each factor, as was done in the service provider sphere.

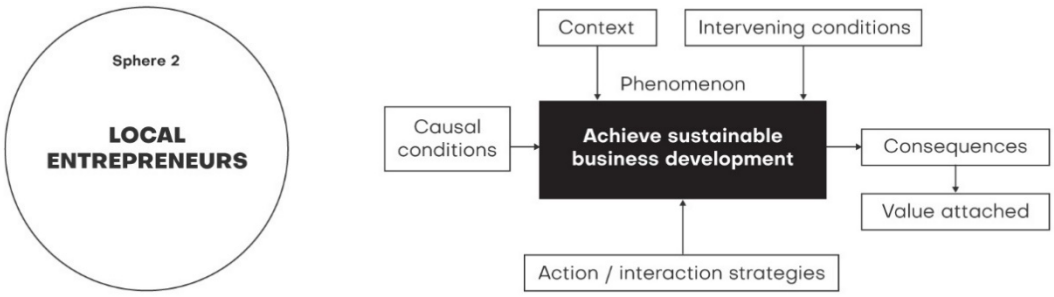


Figure 4.16 New paradigm model with the phenomenon from the OTOP entrepreneur sphere

- **Causal conditions**

Table 4.14 Causal conditions in axial coding in the OTOP entrepreneur sphere

▪ **LACK OF HUMAN RESOURCE DEVELOPMENT** ○ No space for local creativity ○ Entrepreneurial skills cannot be fully developed through training. ○ Lack of investment in human resource development ○ Lack of support for new and innovative products	▪ **ENTREPRENEUR'S CHALLENGES** ○ Staying updated on government-provided sales events ○ Losing track of development progression ○ Ability to adapt to unexpected incidents ○ Challenges associated with selling through a third-party online platform ○ Responsibility for people and the entire business ○ Team building	
▪ **UNAWARE TO GROW AS A COMMUNITY** ○ Unawareness of the importance of growing together as a whole community ○ Lack of support for local enterprises by locals ○ Unwillingness to work as a group among people	▪ **LESS COMMITMENT** ○ Passively act without taking control of their development ○ Rely on external support	▪ **ACCESSIBILITY** **Inaccessible service's facilities** ○ No support before owning a business ○ Limited financial accessibility

- **Context**

Table 4.15 Context in axial coding in the service provider sphere

▪ **NATURE OF OTOP BUSINESS** **Livelihood** o Treating OTOP business as a second job may result in less commitment and priority given to it. o Prioritising a secure job that can make ends meet o Time is a valuable asset. **Workforce** o Limited workforce o Outsourcing for extra job **Management** o Workload and income management o The leader has multiple responsibilities for the entire business. **Network** o Reciprocal networking within the community o Informal knowledge and information sharing through a network o Utilising social media platforms for expanding the network o Organising informal meetings in the local area

- **Intervening conditions**

Table 4.16 Intervening conditions in axial coding in the OTOP entrepreneur sphere

▪ **OBSTACLE MINDSET** **Less commitment** o Passively act without taking control of their development o Rely on external support **Lack of motivation from within** Lack of internal motivation **Concern only taking advantage of the provided support** o Benefit comes first	▪ **CULTURAL NORMS** **Imitative culture** o A lack of creativity in idea generation and adaptation can lead to a "me-too" approach where ideas are copied from the nearby community. o Patriotism cannot be translated to the product or brand value as Thais welcome and absorb different cultures into their own.
▪ **CHANGE IN COMMUNITY** o Young people move away from their hometowns and fail to appreciate the significance of the OTOP local businesses. o Disruption of community structure caused by the OTOP programme (e.g., change in agricultural production, change in a local market system)	

- **Actions and interaction strategies**

Table 4.17 Actions and interaction strategies in axial coding in the OTOP entrepreneur sphere

▪ **LEADERSHIP SKILLS FOR INNOVATIVE CHANGE** **Vision** o Tuning mindset and attitude to see the holistic picture together by explaining with a clear and reasonable picture or example. o Having empathy with people and building trust with them o Encouraging a strong mutual commitment o Focusing on feasible solutions first and taking small steps at a time o Strengthening community ties o Embracing problems and shifting them into new opportunities **Responsibility** o Managing people's roles o Preparing for change and unprecedented event o Community holistic management by fully understanding community mechanisms and background o Minimising the chances of discord o Finding a balance between being competitive and reciprocal **Network & connection** o Connecting with the network from outside the community o Partnering with people who have different expertise o Building a reciprocal network from linking one business to another **Team building** o Building a team by equipping community members with essential skills to become future leaders **Inclusiveness** o Creating a safe and open space for individuals to share their voices o Connecting community members and strengthening relationships o Encouraging and empowering young people o Ensuring the inclusion of vulnerable populations **Inspiring people** o Driving people with mutual benefits o Seeking new opportunities and inspiring members to explore new territories o Encouraging people to learn from successful businesses **Empowering people** o Raising awareness to encourage community growth and encourage people to give back when possible o Empowering a self-reliant community by enabling local production, use, sale, and support of other local enterprises within the community

▪ **KNOWLEDGE AND INFORMATION SHARING** ○ Utilising online learning to learn from experts ○ Collaborating with organisations in the area ○ Informal meeting in the local area	▪ **DIGITAL PLATFORM TO CONNECT WITH CUSTOMERS** ○ Difficulties arise when selling through a third-party online platform (e.g., Shoppee, Lazada) ○ The OTOP online platform, run by governmental officers (e.g., otoptoday.com), is not updated frequently
▪ **RESOURCE NETWORKING** ○ Sourcing materials and workforce	▪ **EXPAND NETWORK FOR DISTRIBUTION** ○ Reciprocal network building

- **Consequences**

Table 4.18 Consequences in axial coding in the OTOP entrepreneur sphere

○ Leadership is key to fostering innovation in local businesses and can trigger other dimensions of community capacity building. ○ Instead of focusing solely on their own business, communities should prioritise community growth. Establishing reciprocal networks within and across communities can strengthen the sense of community and facilitate mutual exchange and benefit. ○ Grassroots groups often prioritise their livelihood and focus on what helps them make ends meet with a 'benefit comes first' mindset. If the programme can show a tangible communal benefit through its activities, it has the potential to change their perception of what qualifies as a 'benefit'. ○ Tool or digital platforms to help in business backend management could ease up the multitasking responsibilities that an entrepreneur has to face. ○ The obstacle mindset to grow as a successful business (e.g., less commitment and lack of motivation from within) that occurs from relying too much on government support can be mitigated by adopting a set of activities that allow them to take control from the beginning.

- **The value attached to the OTOP programme**

During the interviews, participants were asked to reflect on the strengths and weaknesses of the programme, as well as its overall value. The results were then coded and grouped into two main categories: (1) strengths and values to be encouraged; and (2) weaknesses and areas to be eliminated.

Table 4.19 Value attached in axial coding in the OTOP entrepreneur sphere

▪ **STRENGTHS AND VALUES TO BE ENCOURAGED**	▪ **WEAKNESSES AND AREAS TO BE ELIMINATED**
Economic value ○ Adding value to local enterprises ○ Accessing new market channels ○ Accessible funding ○ Allowing locals to access other facilities and benefits ○ Building new connections ○ Improving management ○ Reaching out to the grassroots level and providing opportunities ○ Micro-level development using local resources ○ Adding value to local products (with OTOP quality standards) ○ Improving local product image ○ Encouraging people to establish their own brand rather than selling to bigger companies at lower profit **Social value** ○ Promoting legacy products ○ Bringing people together and building community capacity ○ Preserving local traditions ○ Creating new roles and jobs for locals, such as instructors and guides ○ Instilling a sense of diligence in the local community ○ Supporting locals in making the most of their free time ○ Strengthening family and community bonds	○ Political favouritism and unequal distribution of assistance ○ Involvement of SMEs in the competition with grassroots scale enterprise ○ Weakening social structure (e.g., locals have become too reliant on external support) ○ Fast development without building the strong foundation ○ Lack of research on local's needs and readiness before giving support

4.2.2.6 Conclusion for the OTOP entrepreneur sphere

The factors obstructing sustainable business development are the entrepreneur's skills, mindsets, and cultural norms. The first aspect to consider is equipping entrepreneurs with entrepreneurial skills. Human resource development should prioritise various types of support to establish a strong foundation for entrepreneurs and foster leadership skills and mindsets for driving innovative change. Community leaders emphasised that developing entrepreneurial skills can help individuals become more resilient. Having this mindset can help anticipate potential outcomes and discover new opportunities. Leadership skills can also trigger other dimensions of community capacity building, leading to increased self-reliance within the community. Apart from acquiring skills, locals need to be equipped with the know-how that allows them to self-evaluate and take control of their personal growth.

Another critical factor to consider is how to overcome the obstacle mindset. Grassroots communities often prioritise having an income and their basic needs with a 'benefit comes first' mindset, as money and profit are tangible assets. However, if a programme can show that it has a real positive effect on society, people will understand the importance of its social benefits, which will encourage them to get involved in community activities. This can lead to a stronger sense of community awareness. Additionally, creating networks of mutual benefit within and between communities can strengthen these connections even more.

Other mindsets, such as 'lack of commitment', 'lack of internal motivation', and 'passively acting without taking control', could be mitigated if locals set goals for their business with local authorities from the beginning and developed a family-like partnership with local authorities.

Furthermore, entrepreneurs who treat their OTOP business as a secondary job may lack the necessary commitment. Providing tools or digital platforms to manage the business backend could alleviate their multitasking responsibilities and help them better manage their time.

4.2.2.7 In-depth interviews summary

The conclusion of this data collection method covers the understanding of both spheres. Grounded theory analysis helps manage information systematically in the new paradigm to identify causes, contexts, intervention conditions, actions, and consequences. In this way, it provides a clear and rational picture of current situations and their impact.

After coding with grounded theory analysis, content analysis was applied to see the frequency of the mentioned issues. The tables on the following pages show the summary of all interview data divided into categories, which are:

(1) Barriers, impacts, and potential solutions
(2) Characteristics of the local entrepreneur
(3) Characteristics of local authority
(4) OTOP programme's strengths and weaknesses

The underlined texts in Table 4.20-4.23 indicate the most frequently mentioned issues in the interviews. According to Table 4.20, the emerged themes were concluded from barriers, negative impacts, and potential solutions. The themes that emerged can be concluded as follows:

- Transparency to rebuild trust
- Inclusiveness for strong commitment building
- A new perception of benefit
- Enhancing self-reliance mechanisms and creativity
- Seamless connections and reciprocal networks
- Incorporating social value as KPIs
- Appropriate time and scale
- Tool for operational management
- Providing leadership skills to trainers

Table 4.20 Summary of interviews: Barriers, impacts, and potential solution

Barriers, impacts, and potential solutions			
Barriers	**Negative impacts**	**Potential solutions/strategies**	**Themes**
Transparency ○ Unclear criteria exist for selecting which enterprises will receive support ○ Lack of transparency about the allocated budget ○ Favouritism ○ Privilege for some enterprises ○ Unequal support ○ Unclear management system	○ Losing trust ○ Doubt in local staff's behaviour ○ Reluctance towards government-led activities or fear of losing benefits by not participating	**Communication to avoid misunderstanding** ○ Communicating the results of the evaluation can lead to transparency **Showing allocated budget and using clear criteria when providing support** ○ Building trust between OTOP producers and the public **Ensuring equality** ○ Equal distribution of support for newcomers	**Transparency to rebuild trust**
Less commitment ○ Acting passively without taking control of their development	○ Lack of motivation from within ○ Lack of sense of ownership	**Building collective ideas together to ensure a more substantial commitment** ○ Co-creation can provide valuable perspectives and knowledge-sharing opportunities. ○ For a successful collaboration, it is essential that all stakeholders are profitable ○ Working with the locals to establish a shared vision and commitment ○ Setting goals together to increase commitment ○ Driving actions with mutual values (for both local authorities and local entrepreneurs) **Partnership** ○ Avoid commanding; instead, ask questions and initiate conversations ○ Arrive at possible solutions together with OTOP entrepreneurs ○ Create an "OTOP buddy" programme to link new workers and community scholars with local business owners, focusing on mutual values and strong commitment **Communication: Visualising the potential goals in each support step for a strong sense of commitment** ○ Define the key success for the project, and visualise potential outcomes to guide the project ○ Have a clear focus and vision for the contributions made in each stage ○ Effective training should involve practical steps that can be easily implemented, focusing on monitoring how individuals apply that knowledge in real-life situations. ○ Communicating and visualising opportunities and potential goals in each support step can foster a stronger sense of commitment	**Inclusiveness for strong commitment building**
Domination and exclusion of local perspective ○ Top-down execution with no space for local creativity ○ Lack of research on locals' needs and readiness before providing support ○ Exclusion of local perspective and feedback	○ Exclusion of local context and identity ○ Locals lack creative skills ○ Mismatched support	**Involvement of local voices** ○ Observing the real need before allocating the budget ○ Programme development should involve an expert with different expertise to shape the strategy together. **Learning from the community holistically** ○ Understand the nature of entrepreneurs and customers ○ Frequently visit the local community during the project ○ Consider the local circumstances when implementing a development project ○ Ensure the advocacy system is driven from the bottom up	

		Involvement of the young generation ○ Focus on the involvement of the young generation ○ Encourage the young generation to get involved in the scheme	
<u>Unawareness of the importance of growing together as a community</u> ○ Locals do not support their local product	○ Unwillingness to work as a group	**Refocusing on the perception of "benefit"** ○ Encourage a new mindset to foster change ○ Communicate a tangible social benefit, which could shift the perception of what qualifies as a "benefit" **Building a strong sense of patriotism** Translate valuable culture into a product or brand advantage **Building a strong sense of community** ○ Instead of focusing solely on their own business, it is beneficial to prioritise community growth as a group effort. ○ Establishing reciprocal networks within and across communities to strengthen the sense of community and facilitate mutual exchanges and benefits	**A new perception of benefit**
Concern only with taking advantage of the provided support ○ Benefit comes first ○ Locals are not willing to join support activities if they do not receive any benefits.	○ Locals concerned only about the benefits to them ○ Money is being used to recruit people to join the support activity to meet the target participation rate.		
<u>Rely heavily on external support</u> ○ Mass approaches are perfunctory. ○ Training cannot build enough entrepreneurship skills. ○ Lack of continuity in the support ○ Repetition of support **Imitative culture** ○ Repetition in products	○ The knowledge base is unsustainable because entrepreneurs cannot adapt it for further use in problem-solving. ○ Lack of human resource development ○ A lack of creativity in idea generation and adaptation can lead to a "me-too" approach where ideas are copied from the nearby community.	**Future type of supports** ○ Provide tools that enable individuals to earn money rather than providing them directly with money ○ Build a strong foundation for self-reliant entrepreneurs ○ Prioritise sustainability throughout our value chains ○ Recognise local uniqueness to find a distinctive perspective to build upon as a core value for the enterprise ○ Equip the locals with essential entrepreneurial skills (e.g., marketing, financial literacy, management skills) **Knowledge transfer platform** ○ Identify a role model entrepreneur to pass on business know-how ○ Encourage people to learn from successful cases	**Enhancing self-reliance mechanisms and creativity**
Lack of integration between governmental bodies, local organisations, and informal networks ○ Weak connection between governmental bodies in practice ○ Projects are hard to co-ordinate between ministries as co-operation would affect the current work paradigm. ○ The local authority relies on external experts, but their contributions do not always result in a comprehensive and cohesive set of recommendations.	○ Entrepreneurs cannot make further progress. ○ Entrepreneurs experience a sense of frustration.	**Co-operating between governmental bodies** ○ Governmental bodies should contribute according to their expertise. ○ A versatile headquarters for local development is essential, such as a merged Ministry of Higher Education, Science, Research, and Innovation. **Collaborating with local organisations** ○ Colleges, universities, and local foundations **Expanding opportunities by connecting with new buyers** ○ Connect with buyers or private sector entities to understand their demand for new opportunities ○ Expand the distribution network **The resource hub / knowledge sharing resources** ○ Establish a central service hub for specific requirements such as packaging design, business model building, and financial services ○ Create a co-production platform to provide direct support between outsiders and the community (not via the government) **Reciprocal exchange networks both within and outside the community** ○ Local products can be used to serve the people and local businesses in the same and nearby areas.	**Seamless Connections and reciprocal networks**

Evaluation relies on numerical KPIs to report back to the central government ○ Project's structure, budget, and KPIs are highly restricted ○ Concern regarding achieving KPIs as a result or report	○ Focusing solely on economic outcomes, which are easily measurable, can overlook the improvement of social value ○ Stick with the successful entrepreneur to receive a good evaluation of the implementation	**Evaluations should prioritise measuring social impact** ○ Local authorities should focus on social impact for KPIs ○ A new grading system should be implemented that considers the success of social impact development. **Type of assessment** ○ Building capacity ○ Empowering self-reliance ○ Combining economic and social value	**Incorporating social value as KPIs**
Mass approach ○ Mass approaches are perfunctory. ○ No separation between different levels of entrepreneurs **Project restriction** ○ Limited timeframe and budget ○ Short-term/one-time support	Support can be seen as perfunctory and not effective.	**The support programme should approach a small number of entrepreneurs at a time.** ○ Each case requires individual analysis. ○ Incorporate the incubator concept into a 3-year project with long-term validation and evaluation. The goal is to prioritise long-term growth and instil determination among community members. ○ Start by implementing the programme on a small scale and then gradually increase its scope **Continuity throughout the entire development process while constantly iterating to provide new developments** ○ Focus on the entire process and consider the consequences ○ Allocate a budget to support product development ○ Focus on sustainability throughout the value chains ○ Provide foundational knowledge that locals can build upon	**Appropriate time and scale**
Supports from the service provider are not continuous and responsive ○ Relocated local officers ○ Insufficient number of local officers ○ Overburdened officers ○ Unresponsive action	○ Losing track of the development progress for both the service provider and local entrepreneur ○ Follow-up process seems difficult due to a limited number of staff ○ Hard to monitor	**Digital platforms can enable digital transformation in the following:** **Management assistance** ○ A platform for backend business management for entrepreneurs that local authorities can check for progression **Marketing assistance** ○ Online ordering platforms ○ Encourage the use of digital commerce and develop the central platform for OTOP entrepreneurs **Providing tools for local authorities to work efficiently** ○ Better communication, easy to track feedback, follow up with progression ○ Use of digital platform (e.g., enterprise resource management) to track progress, improvement, growth ○ Develop an analytical tool for local authorities to evaluate local businesses	**Tool for operational management**
Limitation as mediator ○ Officer's knowledge background	○ Doubt in local staff's ability	**Training people** ○ Training the trainers and local officers ○ Training strong community leaders according to their expertise ○ Teaching leadership skills to foster innovative change	**Providing leadership skills to trainers**

Table 4.21 Summary of interviews: Characteristics of local entrepreneurs

Characteristic of local entrepreneurs	
Livelihood ○ Treating the OTOP business as a second job may result in giving it less commitment and priority ○ Prioritising a secure job that can make ends meet ○ Time is a valuable asset **Workforce is limited** ○ OTOP jobs/tasks are mainly related to seasonal agricultural activities ○ Seasonal workforce may be required when receiving large orders ○ Outsourcing for extra job	**The owner/leader is occupied with too many tasks and responsibilities** ○ The leader has too many responsibilities and is not investing enough in team building **Obstacle mindsets** ○ Rely heavily on external support ○ Passively act without taking control ○ Less commitment to developing businesses with local governments ○ Lack of internal motivation ○ Benefit comes first

Table 4.22 Summary of interviews: Characteristics of the local authorities

Characteristic of the local authorities	
Nature of governance ○ Discontinuity after a four-year period of staff governance ○ Project's structure, budget, and KPIs are highly restricted ○ Project must have measurable outcomes for approval **Involvement of local organisation** ○ Colleges and universities ○ Local foundations **Support frequency** ○ Mass training is provided 3-4 times per year	**Current focus** ○ Online market **Evaluation:** **When joining** ○ Use a star grading system **For follow-up** ○ Evaluate how locals have improved their businesses ○ Assess new product development ○ Measure profits

Table 4.23 Summary of interviews: OTOP programme's strengths and weaknesses

OTOP programme's strengths and weaknesses	
Strength	**Weakness**
Economic value ○ Providing opportunities to expand business connections ○ Providing new market channels ○ Adding value to local products (with OTOP quality standards) ○ Encouraging people to establish their own brand rather than selling to bigger companies at lower profits ○ Reaching out at the grassroots level and providing opportunities ○ Fostering micro-level development using local resources **Social value** ○ Supporting locals in making the most of their free time ○ Strengthening family and community bonds ○ Promoting legacy products ○ Bringing people together and building community capacity ○ Creating new roles and jobs for locals, such as instructors and guides ○ Instilling a sense of diligence in the local community	○ Political favouritism and unequal distribution of assistance ○ Involvement of SMEs in the competition with grassroots scale enterprise ○ Weakening social structure (e.g., locals have become too reliant on external support) ○ Fast development without building a strong foundation ○ Lack of research on locals' needs and readiness before giving support

After grouping by themes, the rich and complex information is transformed into themes that are easy to consider in the next phase of the research.

4.2.3 Questionnaire surveys with OTOP customers

After investigating the service provider and local entrepreneurial spheres, the following research phase was conducting an online questionnaire with OTOP customers. The questionnaire aimed to contextualise the customer perspective. The total number of respondents is 113. The questions covered nine areas, shown in the table below; the list of questions is shown in Appendix B.

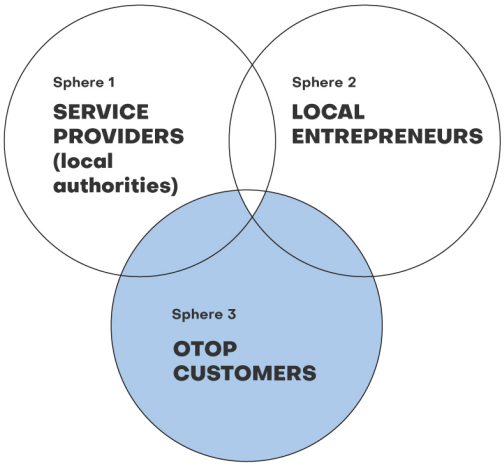


Figure 4.17 Focused area of research in the questionnaire surveys

Table 4.24 Area of overall studies in the questionnaire surveys

Area to investigate		Sub-areas to investigate
A1	Customer's attitudes towards OTOP products	a1: Quality and reliability a2: Distribution of local resources and wisdom a3: Originality a4: Newness and innovation a5: Difference between OTOP products and other local products
A2	Customer's perception towards the OTOP programme	n/a
A3	OTOP product's accessibility	n/a
A4	Customer perspective on the OTOP standard mark	b1: The noticeability of OTOP mark b2: How does the customer perceive the OTOP mark, and how does it influence their buying? b3: Do customers pick OTOP products over other non-OTOP products?
A5	Buying decisions towards local products	c1: Buying decisions for locally initiated products c2: Customer awareness of product origins
A6	Customer expectation for OTOP products	n/a
A7	Brand value perception and the effectiveness of brand touchpoints	d1: Effectiveness of different brand touchpoints for communicating brand value, brand philosophy, and brand story d2: The use of social media as a brand communication channel d3: Brand value perception (comparison with two cases)

A8	OTOP customer opinion and feedback for the OTOP brand and product	n/a
A9	Opinion on co-design process between OTOP producer and the local government and how to increase transparency in providing support	n/a

4.2.3.1 Analysis of questionnaire survey results

The questionnaire survey's results were analysed quantitatively using SPSS. This section provides a summary of each area.

- **Area A1: Customers' attitudes towards OTOP products**

Area A1 was divided into five sub-areas:

a1: Quality and reliability

a2: Distribution of local resources and wisdom

a3: Originality

a4: Newness and innovation

a5: Difference between OTOP products and other local products

Sub-areas a1-a4 were assessed using a 5-point Likert-scale, which ranged from 'strongly disagree' to 'strongly agree' for respondents to choose from. On the other hand, area a5 utilised dichotomous questions. For Likert-scale questions, numerical values ranging from 1 to 5 were assigned (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) to calculate the central tendency, which is the median. When interpreting the data, both the median and the most frequent response were taken into consideration.

a1: Quality and reliability

a1.1: OTOP products deliver good quality.

a1.2: OTOP products are reliable.

a1.3: OTOP products are appropriate and ready for export.

In statement a1.1 – see Table 4.25, most respondents agree that 'OTOP products deliver good quality' (N=60, 53.1%), while some strongly agree (N=20, 17.7%) and some are neutral (N=33, 29.2%).

In response to statement a1.2 – refer to Table 4.26, 'OTOP products are reliable', a plurality of those surveyed (49.6%) agreed with the statement (N=56), while 35.4% (N=40) could not decide.

Table 4.25 Descriptive statistics of statement a1.1: *OTOP products deliver good quality*

		Frequency	Percent	Cumulative Percent
Valid	Neutral	33	29.2	29.2
	Agree	60	53.1	82.3
	Strongly agree	20	17.7	100.0
	Total	113	100.0	

Table 4.26 Descriptive statistics of statement a1.2: *OTOP products are reliable*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	3	2.7	2.7
	Neutral	40	35.4	38.1
	Agree	56	49.6	87.6
	Strongly agree	14	12.4	100.0
	Total	113	100.0	

With statement a1.3 (see Table 4.27), 46% of respondents (N=52) reported that they agree with the statement 'OTOP products are appropriated for export', followed by 31% having neutral feelings on it (N=35).

Table 4.27 Descriptive statistics of statement a1.3: *OTOP products are appropriate and ready for export*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	2	1.8	1.8
	Neutral	35	31.0	32.7
	Agree	52	46.0	78.8
	Strongly agree	24	21.2	100.0
	Total	113	100.0	

Table 4.28 Descriptive statistics on customer attitudes towards the quality and reliability of OTOP products

a1 statements	N	Minimum	Maximum	Median	Interquartile Range
a1.1: OTOP products deliver good quality	113	3	5	4.00	1.00
a1.2: OTOP products are reliable	113	2	5	4.00	1.00
a1.3: OTOP products are appropriate and ready for export	113	2	5	4.00	1.00
Valid N (listwise)	113				

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

To determine the **quality and reliability (a1)** of OTOP products (see Table 4.28), the study combined the results from three statements: a1.1–3. The medians for all statements equalled 4.00 (IQR=1.00), which means that the majority of participants agree that OTOP products deliver good quality (N=60, 53.1%), that OTOP products are reliable (N=56, 49.6%), and that OTOP products are appropriate and ready for export (N=52, 46.0%).

a2: Distribution of local resources and wisdom

a2.1: OTOP products are locally initiated from folk wisdom.

a2.2: OTOP products make good use of local resources.

In the a2 area, two questions were asked to participants to indicate what they believed regarding the distribution of OTOP products in terms of local wisdom and resources. For statement a2.1 – see Table 4.29, 'OTOP products are locally initiated from folk wisdom', the overall response was positive, with 53 people agreeing (46.9%) and 48 people strongly agreeing (42.5%). With statement a2.2 – see Table 4.30, 'OTOP products make good use of local resources', 51 participants strongly agreed (45.1%), whereas 50 agreed (44.2%).

Table 4.29 Descriptive statistics of statement a2.1: *OTOP products are locally initiated from folk wisdom*

		Frequency	Percent	Cumulative Percent
Valid	Neutral	12	10.6	10.6
	Agree	53	46.9	57.5
	Strongly agree	48	42.5	100.0
	Total	113	100.0	

Table 4.30 Descriptive statistics of statement a2.2: *OTOP products make good use of local resources*

		Frequency	Percent	Cumulative Percent
Valid	Neutral	12	10.6	10.6
	Agree	50	44.2	54.9
	Strongly agree	51	45.1	100.0
	Total	113	100.0	

Table 4.31 Descriptive statistics on customer attitudes towards OTOP products' distribution of local resource and wisdom

a2 statements	N	Minimum	Maximum	Median	Interquartile Range
a2.1: OTOP products are locally initiated from folk wisdom	113	3	5	4.00	1.00
a2.2: OTOP products make good use of local resources	113	3	5	4.00	1.00
Valid N (listwise)	113				

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Combining two questions to contribute to the customers' attitude on whether they would say that OTOP products are well distributed from local resources and locally initiated from local wisdom, as seen in Table 4.31, shows a positive result, with the median for both statements being 4.00 (IQR=1.00).

a3: Originality

a3.1: OTOP products are repetitive from one product to another across communities.

As discussed in the literature review chapter, OTOP products are perceived negatively for product repetitiveness among local communities. As such, the questionnaire used a Likert-scale to gauge how customers responded to the statement that 'OTOP products are repetitive from one to another community' to investigate the current situation (see Table 4.32) . A plurality of participants (N=49) agreed with the statement (43.4%), followed by neutral and strongly agreeing, at 31% (N=35) and 23% (N=26), respectively. The median (see Table 4.33) was reported at 4 (IQR=1.00), which means that the respondents agreed with the statement.

Table 4.32 Descriptive statistics of statement a3.1: *OTOP products are repetitive from one product to another across communities*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	3	2.7	2.7
	Neutral	35	31.0	33.6
	Agree	49	43.4	77.0
	Strongly agree	26	23.0	100.0
	Total	113	100.0	

Table 4.33 Descriptive statistics of customer attitudes towards OTOP's originality

	N	Minimum	Maximum	Median	Interquartile Range
OTOP products are repetitive from one to another product across communities	113	2	5	4	1.00
Valid N (listwise)	113				

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

a4: Newness and innovation

a4.1: OTOP products are innovative.

a4.2: OTOP products are new and trendy.

This area aimed to investigate customer perceptions of the innovation and novelty of OTOP products. Two statements, a4.1 and a4.2, were asked to indicate whether they perceive OTOP products as innovative or trendy goods. The two questions show the same trend (see Table 4.34 and 4.35), as most of the respondents felt neutrally regarding both statements: 47.8% (N=54) for 'OTOP products are innovative' and 50.4% (N=57) for 'OTOP products are new and trendy'. The medians for both statements – as reported in Table 4.36 – were indicated at 3.00 (IQR=1.00), which indicates that when participants were asked about this aspect, they

were undecided. Therefore, this can be seen as room for improvement and a new opportunity for OTOP producers.

Table 4.34 Descriptive statistics of statement a4.1*: OTOP products are innovative*

		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	4	3.5	3.5
	Disagree	13	11.5	15.0
	Neutral	54	47.8	62.8
	Agree	36	31.9	94.7
	Strongly agree	6	5.3	100.0
	Total	113	100.0	

Table 4.35 Descriptive statistics of statement a4.2: *OTOP products are new and trendy*

		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	5	4.4	4.4
	Disagree	18	15.9	20.4
	Neutral	57	50.4	70.8
	Agree	27	23.9	94.7
	Strongly agree	6	5.3	100.0
	Total	113	100.0	

Table 4.36 Descriptive statistics of the summary of customer attitudes towards OTOP's newness and innovation

	N	Minimum	Maximum	Median	Interquartile Range
OTOP products are innovative	113	1	5	3.00	1.00
OTOP products are new and trendy	113	1	5	3.00	1.00
Valid N (listwise)	113				

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

To test the internal consistency of all statements within Areas a1–4, a Cronbach's alpha reliability test was conducted. Cronbach's alpha is a statistic that measures the average correlation among all items that comprise a scale. It ranges from 0 to 1, with higher values indicating greater reliability. This test examines if respondents answered similarly to questions of the same type. In this case, 8 Likert-scale questions were tested. The results can be found in Table 4.37. According to Pallant (2020), a Cronbach's alpha value higher than 0.70 (0.732 in this case) is considered acceptable. Therefore, it can be concluded that the internal consistency is sufficient.

Table 4.37 Cronbach's alpha reliability test result for Areas a1–4

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.732	.736	8

Item Statistics

	Mean	Median	Std. Deviation	N
OTOP products deliver good quality	3.88	4	.678	113
OTOP products are reliable	3.72	4	.713	113
OTOP products are appropriate and ready for export	3.87	4	.762	113
OTOP products are locally initiated from folk wisdom	4.32	4	.658	113
OTOP products make good use of local resources	4.35	4	.665	113
OTOP products are repetitive from one to another product across communities	3.87	2*	.796	113
OTOP products are innovative	3.24	3	.859	113
OTOP products are new and trendy	3.10	3	.886	113

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree
*Reverse the Likert-scale as it is a negative question.

a5: Difference between OTOP products and other local products

a5.1: Do you think OTOP products are different from other local products?

To conclude the A1 area, 'Customer attitudes towards OTOP products', this sub-area (a5) aimed to understand the overall perspective of how the customers observe OTOP products and how they differentiate between OTOP and non-OTOP products.

Table 4.38 Descriptive statistics of question a5.1: *Are OTOP products different from other local products?*

		Frequency	Percent	Cumulative Percent
Valid	YES	64	56.6	56.6
	NO	49	43.4	100.0
	Total	113	100.0	

Table 4.39 Descriptive statistics: Reasons for question a5.1

		Frequency	Percent	Cumulative Percent
Valid	OTOP products are better quality and more reliable compared to local non-OTOP products	58	90.6	90.6
	OTOP products are lower quality and less reliable compared to local non-OTOP products	3	4.7	95.3
	I do not think the quality is significantly different	1	1.6	96.9
	Other	2	3.1	100.0
	Total	64	100.0	
Missing	System	49		
Total		113		

Table 4.38 presents the summary statistic for question a5.1, 'Do you think OTOP products are different from other local products?' The response rate was 56.6% (N=64) at 'yes' and 43.4% (N=49) at 'no'. Respondents who believe they differ were asked why OTOP products differ from other local products; 90.6% believe that OTOP products are better quality and more reliable than local non-OTOP products (refer to Table 4.39). However, two participants also noted specific reasons that suggested that the quality might not be different. Still, the OTOP producers might have better management, a stronger brand image, and a stronger producer community.

- **Area A2: Customers' perceptions towards the OTOP programme**

This area aimed to understand how the OTOP customer understood the OTOP programme. The respondents were asked to choose multiple answers to the question 'How do you understand and perceive the word "OTOP"?' The results in Table 4.40 show that the top three options that respondents chose were (1) support for locally initiated products (30.6%, N=103), (2) It is local community capacity development (26.7%, N=90), and (3) It is grassroots entrepreneurial development (20.2%, N=68). Nevertheless, the negative aspect, which cannot be ignored, is also shown as the small number of respondents who chose, 'It is a government programme related to political patronage' (5.6%, N=19) and 'It is a populist political approach' (3.0%, N=10).

Table 4.40 Descriptive statistics: *How do you understand and perceive the word 'OTOP'?*

		Responses		Percent of Cases
		N	Percent	
Perception towards OTOP programme	It is support for locally initiated products	103	30.6%	91.2%
	It is grassroots economic development	47	13.9%	41.6%
	It is local community capacity development	90	26.7%	79.6%
	It is grassroots entrepreneurial development	68	20.2%	60.2%
	It is a government programme related to political patronage	19	5.6%	16.8%
	It is a populist political approach	10	3.0%	8.8%
Total		337	100.0%	298.2%

a. Dichotomy group tabulated at value 1.

- **Area A3: OTOP products' accessibility**

This area aimed to determine whether OTOP products are easily accessible and have good distribution. In this area, the results reflect the current situation of how customers buy OTOP products and how they prefer to buy them. As such, the conclusions of this section could lead to new opportunities for OTOP distribution.

Table 4.41 Descriptive statistics: *OTOP products are easy to find*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	15	13.3	13.3
	Neutral	61	54.0	67.3
	Agree	33	29.2	96.5
	Strongly agree	4	3.5	100.0
	Total	113	100.0	

In investigating the accessibility of OTOP products, the research focuses on understanding both the current situation and future distribution channels. For the current situation, as seen from the results in Table 4.41, the vast majority of respondents feel 'neutral' when asked, 'Are OTOP products easy to find?' (54.0%, N=61). This means that customers are reluctant to choose and reflects that the current distribution of OTOP products is not significantly widespread.

Furthermore, the places where customers usually buy the product were also inquired about, as were the preferable places, to see future possibilities – the comparison of current place and preferable places is shown in Table 4.42.

Table 4.42 Descriptive statistics: *Places that usually they buy OTOP products' compare with 'the preferable places to buy'*

	Current places (Current situation)			**Preferable places (Future possibility)**		
	Responses		Percent of Cases	Responses		Percent of Cases
	N	Percent		N	Percent	
OTOP fair/event	94	31.9%	**83.2%**	50	15.5%	**44.6%**
From the shelf in shopping mall or kiosk in the market	58	19.7%	**51.3%**	65	20.2%	**58.0%**
From its original place	25	8.5%	22.1%	28	8.7%	25.0%
From OTOP distribution hubs in big cities	42	14.2%	**37.2%**	29	9.0%	25.9%
From roadside services when travelling	46	15.6%	**40.7%**	32	9.9%	28.6%
Online through an official OTOP website (thaitambon.com)	4	1.4%	3.5%	21	6.5%	18.8%
Online through third-party website (e.g., Shopee, Lazada)	15	5.1%	13.3%	55	17.1%	**49.1%**
Online through brand-owned website or social media	11	3.7%	9.7%	40	12.4%	**35.7%**
Other (please specify)	0	0.0%	0.0%	2	0.6%	1.8%
Total	295	100.0%	261.1%	322	100.0%	287.5%

a. Dichotomy group tabulated at value 1.

Firstly, in terms of current places, the majority of people usually buy OTOP products at fairs or events (83.2%), followed by from the shelf in shopping malls/kiosks in the market (51.3%), roadside services (40.7%), and distribution hubs in major cities (37.2%), respectively. When asked to choose preferable places, on the shelf in a shopping mall (58.0%) and at a fair or event (44.6%) remain in the top positions, with over 30% of respondents preferring to buy there. The new interesting places that customers want to buy are online, both through third-

party websites (49.1%) and brand-owned websites/social media (35.7%). The respondents also suggested other places: local restaurants and convenience stores. In conclusion, new preferred places can be a unique opportunity for the OTOP distributed channel.

- **Area A4: Customers' perspectives on the OTOP standard mark**

Area A4 aimed to gain an overall perspective on the OTOP standard mark. The sub-areas of investigation can be divided as follows:

b1: The noticeability of the OTOP mark

b2: How customers perceive the OTOP mark, and how it influences their buying behaviour

b3: Whether customers choose OTOP products over other non-OTOP products

b1: The noticeability of the OTOP mark

The first sub-area (b1) focuses on the noticeability of the mark. The survey adopted dichotomous questions, and respondents were asked whether they noticed the mark and the number of stars on the package/signage/product. The results presented in Table 4.43 and 4.44.

Table 4.43 Descriptive statistics: *Have you ever noticed the OTOP mark on the package/signage/product before buying?*

		Frequency	Percent	Cumulative Percent
Valid	Unnoticed	23	20.4	20.4
	Noticed	90	79.6	100.0
	Total	113	100.0	

Table 4.44 Descriptive statistics: *Have you ever noticed the number of stars on the OTOP logo?*

		Frequency	Percent	Cumulative Percent
Valid	Unnoticed	74	65.5	65.5
	Noticed	39	34.5	100.0
	Total	113	100.0	

The two tables above show that 79.6% (N=90) of respondents notice the OTOP mark. However, only 34.5% (N=39) can spot the difference in the number of stars on the OTOP mark.

b2: How customers perceive the OTOP mark, and how it influences their buying behaviour

Area b2 was queried using a 5-point Likert-scale to examine how the OTOP mark influences buying decisions. Six aspects were asked about, and the results can be concluded as follows:

Table 4.45 Descriptive statistics: *It helps to ensure the quality of the products*

		Frequency	Percent	Cumulative Percent
Valid	Neutral	25	22.1	26.6
	Agree	40	35.4	69.1
	Strongly agree	29	25.7	100.0
	Total	94	83.2	
Missing	System	19	16.8	
Total		113	100.0	

Table 4.46 Descriptive statistics: *It acts as a standard mark for local products*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	2	1.8	2.1
	Neutral	11	9.7	13.7
	Agree	58	51.3	74.7
	Strongly agree	24	21.2	100.0
	Total	95	84.1	
Missing	System	18	15.9	
Total		113	100.0	

Table 4.47 Descriptive statistics: *It confirms that it is a local product*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	1	.9	1.1
	Neutral	12	10.6	13.8
	Agree	47	41.6	63.8
	Strongly agree	34	30.1	100.0
	Total	94	83.2	
Missing	System	19	16.8	
Total		113	100.0	

Table 4.48 Descriptive statistics: *It confirms that the government supports a product*

		Frequency	Percent	Cumulative Percent
Valid	Disagree	5	4.4	5.3
	Neutral	34	30.1	41.5
	Agree	34	30.1	77.7
	Strongly agree	21	18.6	100.0
	Total	94	83.2	
Missing	System	19	16.8	
Total		113	100.0	

Table 4.49 Descriptive statistics: *It confirms that this brand has joined the OTOP programme*

		Frequency	Percent	Cumulative Percent
Valid	Neutral	4	3.5	4.3
	Agree	50	44.2	57.4
	Strongly agree	40	35.4	100.0
	Total	94	83.2	
Missing	System	19	16.8	
Total		113	100.0	

Table 4.50 Descriptive statistics: *It confirms that this product was initiated by a strong community*

		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	.9	1.1
	Disagree	5	4.4	6.4
	Neutral	32	28.3	40.4
	Agree	34	30.1	76.6
	Strongly agree	22	19.5	100.0
	Total	94	83.2	
Missing	System	19	16.8	
Total		113	100.0	

As shown Tables 4.45–4.50, the medians of each aspect were calculated to determine the level of agreement. The summary is shown in Table 4.51.

Table 4.51 Descriptive statistics of the summary of the b2 area: *How does the customer perceive the OTOP mark?*

	Minimum	Maximum	Median	Interquartile Range
It helps to ensure the quality of the products	3	5	4.00	2
It acts as a standard mark for local products	2	5	4.00	0
It confirms that it is a local produce	2	5	4.00	1
It confirms that the government supports a product	2	5	4.00	1
It confirms that this brand has joined the OTOP programme	3	5	4.00	1
It confirms that this product was initiated from a strong community	1	5	4.00	1

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

As Table 4.51 demonstrates, the medians for each aspect are equal, at 4.00, which indicates that customers agree with all aspects shown in the table. Furthermore, sub-area b2 also investigated the effect of the OTOP mark on buying decisions.

Participants were asked to indicate how the OTOP mark affects their buying. The results are shown in Table 4.52.

Table 4.52 Descriptive statistics of the summary of the b2 area: *Does the OTOP mark influence the customer to buy?*

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Yes[a]	80	70.8%	33	29.2%	113	100.0%
No[a]	39	34.5%	74	65.5%	113	100.0%

a. Dichotomy group tabulated at value 1.

The results can be divided into 'Yes' and 'No', with most participants believing that the OTOP mark encourages them to buy (70.8%, N=80). They further suggested the specific reasons behind the selection (see Table 4.53). The majority of them chose 'Yes, I would love to buy it more because I feel like I support the local produces', with the highest percentage, at 78.8% (N=63), followed by 'Yes, I would love to buy it more because I can be sure about the quality', at 55.0% (N=44). Participants who stated that the OTOP mark does not influence their buying decision chose 'No, it does not matter whether it has the OTOP logo or not', with 74.4% (N=29), followed by 'No, the logo did not confirm the quality that much', with 41.0% (N=16) (see Table 4.54).

Table 4.53 Descriptive statistics of the reasons given by respondents who state that the OTOP mark encourages their buying decision

		Responses		Percent of Cases
		N	Percent	
Yes[a]	Yes, I would love to buy it more because I can be sure about the quality	44	41.1%	55.0%
	Yes, I would love to buy it more because I feel like I support local products	63	58.9%	78.8%
Total		107	100.0%	133.8%

a. Dichotomy group tabulated at value 1.

Table 4.54 Descriptive statistics of the reasons given by respondents who state that the OTOP mark does not encourage their buying decision

		Responses		Percent of Cases
		N	Percent	
No[a]	No, it does not matter whether it has the OTOP logo or not	29	64.4%	74.4%
	No, the logo did not confirm the quality that much	16	35.6%	41.0%
Total		45	100.0%	115.4%

a. Dichotomy group tabulated at value 1.

b3: Whether customers choose OTOP products over other non-OTOP products

Sub-area b3 aimed to examine the different situations of the buying experience. Participants were asked whether they would choose an OTOP product over a non-OTOP product if given two options.

Table 4.55 Descriptive statistics: *If there are two identical products available to buy, would they pick the OTOP product over the non-OTOP product?*

		Frequency	Percent	Cumulative Percent
Valid	Yes, because I believe in OTOP standard	27	23.9	23.9
	It does not matter; I would pick any of them if they can serve me well	85	75.2	99.1
	No, because I do not believe in OTOP standard	1	.9	100.0
	Total	113	100.0	

The results in Table 4.55 show that most surveyed answered, 'It does not matter; I would pick any of them if they can serve me well' at 75.2% (N=85). As such, the positive response they give about the OTOP mark is still not valuable enough for them to choose to support a OTOP product over a non-OTOP product.

- **Area A5: Buying decisions towards local products**

Area A5 aimed to investigate buying decisions for locally initiated products in general. The sub-area can be divided as follows:

c1: Buying decisions for locally initiated products
c2: Customer awareness of product origins

c1: Buying decisions for locally initiated products

Participants were asked to rank the most important aspect of their buying decisions, from least to most important. Then, the mean ranks were calculated to determine the most crucial element for their buying decisions. Table 4.56 shows the results of the ranks. The most important factors that customers are concerned about when buying local products are (1) product quality and its function, (2) product prices that are approachable, and (3) to support the local economy, respectively ranked from first to third place. Statistics testing using Friedman's ANOVA show that the mean ranks are not equal – $\chi 2$ (7) = 269.684, p = .000 – with an effect size of 0.341.

Table 4.56 Descriptive statistics from the ranked survey: *What is the most important aspect of buying local products?*

	Mean Rank	Rank
Product quality and function	1.94	1
Product price is approachable	2.92	2
To help support the local economy	4.31	3
Product is easy to find and access	4.77	4
The product is well known and has a good review	4.88	5
Because you are fascinated by local wisdom and local culture	5.42	6
To try something new	5.45	7
Because you want to be a part of legacy conservation	6.30	8

Test Statistics[a]	
N	113
Chi-Square	269.684
df	7
Asymp. Sig.	.000

a. Friedman Test

Test Statistics[b]	
N	113
Kendall's W[a]	.341
Chi-Square	269.684
df	7
Asymp. Sig.	.000

b. Kendall's Coefficient of Concordance

c2: Customer awareness of product origins

Since the OTOP programme promotes the use of unique resources from different districts, the study aimed to examine customers' awareness of where products come from by asking, 'When you buy local products, do you pay attention to their origin?' The result – see Table 4.57 – is positive, as 65.5% of respondents (N=74) pay attention to local production and where it is produced, while 34.5% (N=39) said that the product's origin does not affect their buying decisions.

Table 4.57 Descriptive statistics: *Do you pay attention to their origin when you buy local products?*

		Frequency	Percent	Cumulative Percent
Valid	Yes, because I am interested in local production and where it is produced	74	65.5	65.5
	No, it does not matter	39	34.5	100.0
	Total	113	100.0	

- **Area A6: Customer expectations for OTOP products**

This area aimed to study customer expectations of OTOP products. The survey was created using the scale to rank the most and least important elements. The results illustrated in Table 4.58 indicate that the most concerning factors are (1) quality, (2) consistency, (3) price, (4) use of local resources, (5) newness/innovation, (6) accessibility, (7) authenticity, (8) community participation, (9) ethics, and (10) promotion. Statistics testing using Friedman's

ANOVA showed that the null hypothesis of equal mean ranks is rejected: $\chi 2$ (9) = 280.451, p = .000; Kendall's effect size = 0.276.

Table 4.58 Descriptive statistics from the ranked survey: *What is most expected for OTOP products?*

	Mean Rank	Rank
Quality	1.72	1
Consistency	4.65	2
Price	4.99	3
Use of local resources	5.04	4
Newness/Innovation	5.59	5
Accessibility	5.81	6
Authenticity	6.33	7
Community participation	6.81	8
Ethics	6.82	9
Promotion	7.23	10

Test Statistics[a]	
N	113
Chi-Square	280.451
df	9
Asymp. Sig.	.000

a. Friedman Test

Test Statistics[b]	
N	113
Kendall's W[a]	.276
Chi-Square	280.451
df	9
Asymp. Sig.	.000

b. Kendall's Coefficient of Concordance

- **Area A7: Value perception for local brands and effectiveness of brand touchpoints**

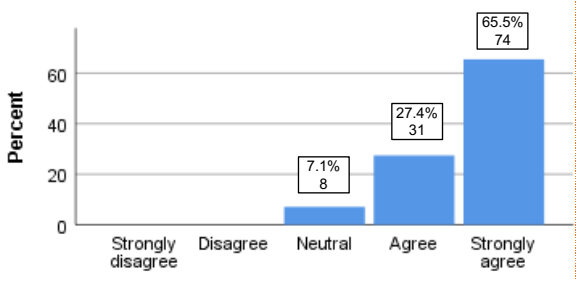
This area aimed to understand customers' perceptions of brand value, philosophy, and story. The survey comprised three sub-areas. The first section (d1) aims to understand the brand touchpoints that the customers think are effective to use as a communication medium. The second section (d2) focuses specifically on social media and how customers feel about its ability as the primary communication channel. Finally, the third section (d3) uses a comparative deductive study, with two brands' communication through social media, to see how respondents react to different ways of communication.

d1: Effectiveness of different brand touchpoints for communicating brand value, brand philosophy, and brand story

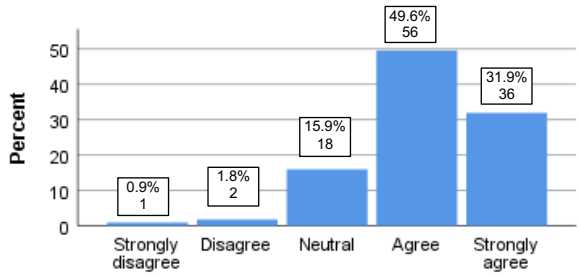
The study used a 5-point Likert-scale to determine the level of agreement on using brand touchpoints to communicate brand value, philosophy, and story (see Table 4.59 for results). The mean was calculated to examine each touchpoint, namely social media, website, prints, packaging, email, shop/store, word of mouth, and sales representatives.

Table 4.59 Bar charts from the Likert-scale question: *To what degree do you agree that each brand touchpoint could deliver brand value, story, and philosophy?*

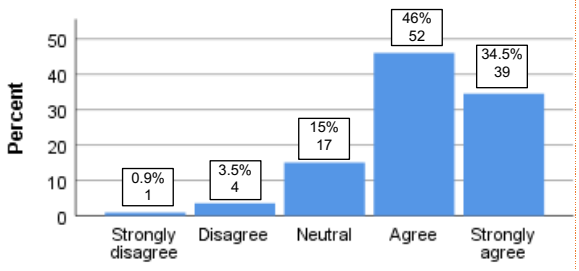
Social media



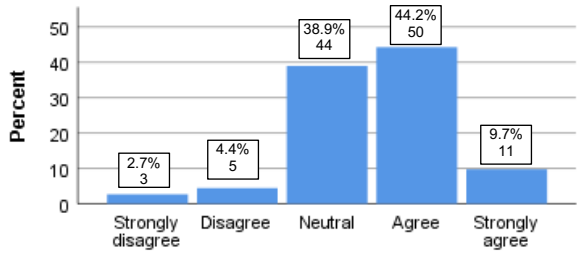
Website



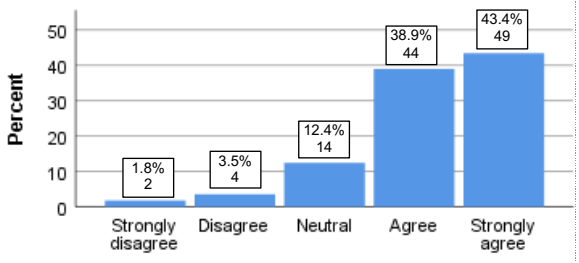
Word of mouth



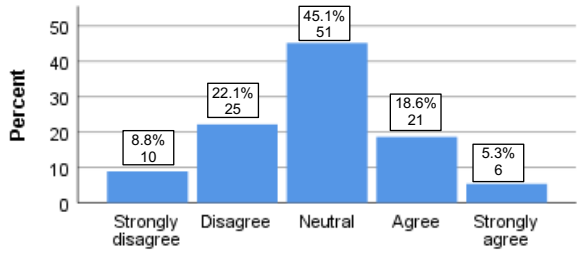
Prints



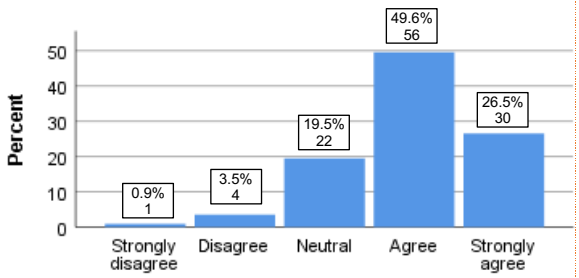
Packaging



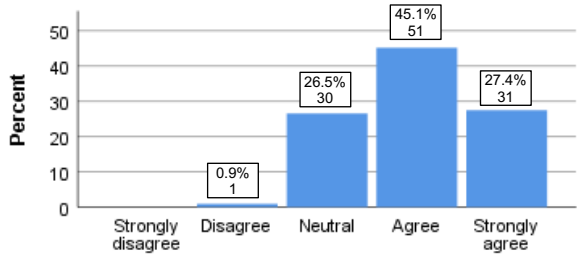
Email



Shop/store



Sales representative



The means of each touchpoint are presented in Table 4.60 and were used to determine which touchpoints customers think can effectively deliver brand value, story, and philosophy. The touchpoint with the highest mean is social media (4.58), followed by product packaging (4.19), website (4.10), and word of mouth (4.10), respectively, with the lowest mean being email (2.89).

Table 4.60 Descriptive statistics from the Likert-scale question: *To what degree do you agree that each brand touchpoint could deliver brand value, story, and philosophy?*

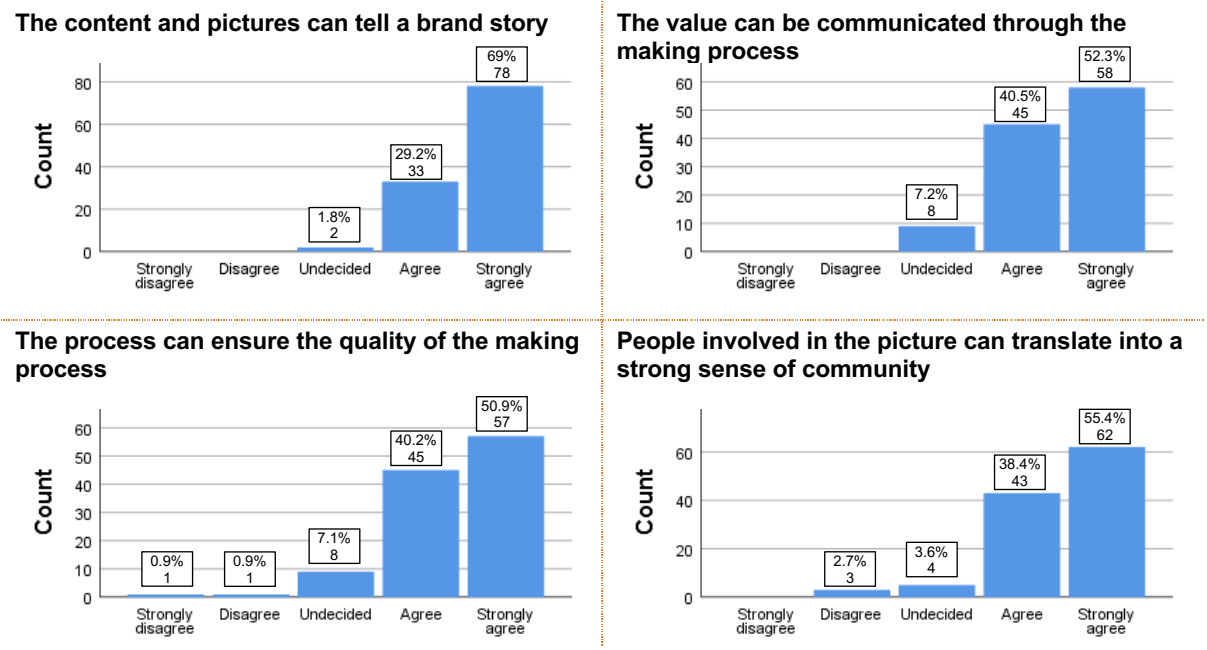
		Social media	Website	Word of mouth	Prints	Packaging	Email	Store	Sales representative
N	Valid	113	113	113	113	113	113	113	113
	Missing	0	0	0	0	0	0	0	0
	Mean	4.58	4.10	4.10	3.54	4.19	2.89	3.97	3.99
	Median	5.00	4.00	4.00	4.00	4.00	3.00	4.00	4.00

Note: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

d2: The use of social media as a brand communication channel

As social media has the most positive response compared to other touchpoints, this study specifically focuses on social media to determine how customers think about it as the channel that communicates the brand's value and story. Within the social media category, the study also investigated what elements can engage customers, such as content, pictures of the making process, or people's involvement. Table 4.61 presents the results of social media elements and their roles.

Table 4.61 Barcharts presents the results of social media elements and their roles



The survey captured four elements and tested them with participants. The response was very positive; strongly agreeing was the most common level that people chose across all elements. From the customer's perspective, social media can translate brand value and story through pictures and content. Images of the making process can convey the value of the brand and help ensure the quality of the product. A strong sense of community can also be expressed through the involvement of people in the content.

d3: Brand value perception (comparison with two cases)

This section uses a comparative deductive study with two brands' communication through social media posts to see how respondents react to different mediums used in a brand's online content. Before asking questions, two pictures of social media posts (gathered from the brands' Facebook sites) were shown and labelled as Brand A and Brand B.

Figure 4.18 Brand A social media content, gathered from the brand's social media posts (Bhukarm, no date)

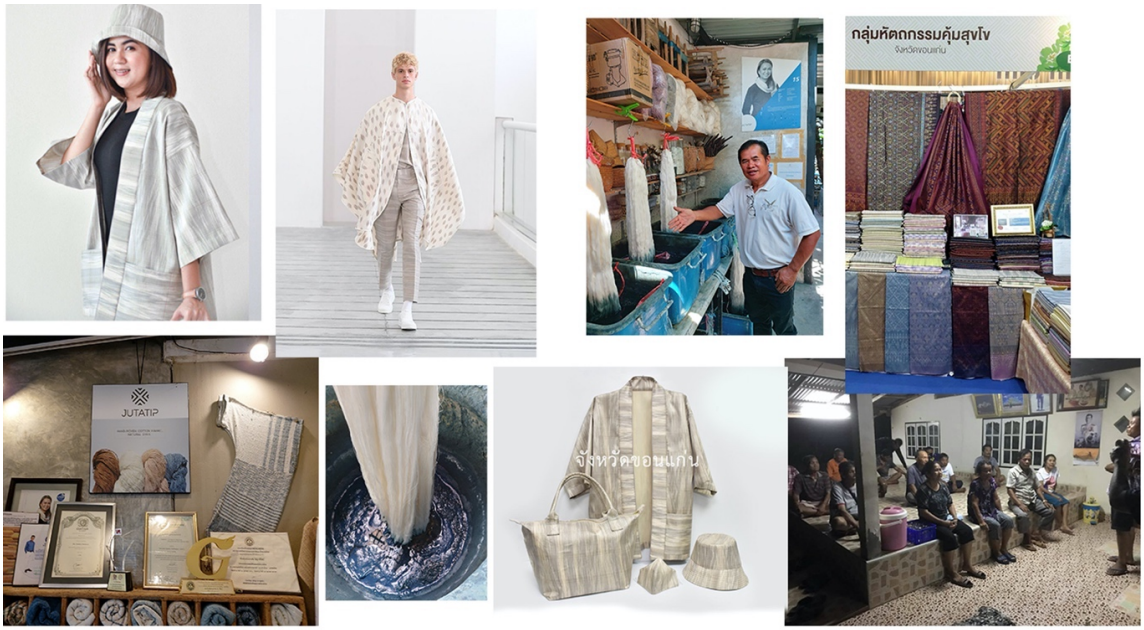


Figure 4.19 Brand B social media content, gathered from the brand's social media posts (Khumsukkho, no date)

In comparison, two brands have different backgrounds. One of the brands, Brand B, has joined the OTOP programme, while the other brand, Brand A, has not. Local entrepreneurs have the option to participate in this programme and receive government support if needed. As a result, some enterprises choose not to join due to differences in vision and goals. Focusing on Brand A, Bhukram is considered a successful non-OTOP business. It emphasises community capacity development and fosters a strong sense of community. The products use traditional natural dyeing and hand-stitching techniques to create patterns. With collaborations and support from international organisations, Bhukram has become a famous brand, and its products are unique and fast selling. The contents capture the strong sense of their hometown and translate into the story of the products. Every maker shares their inspiration and passes it on to the customer as a quote on a Facebook post. The brand's value is well connected with the end-user using pictures of the making process, local involvement (people sit around casually), and quotes in makers' voices.

Secondly, Brand B, Khumsukkho, is a well-known OTOP business and was chosen by the local government to incubate new OTOP entrepreneurs. Its products are wide ranging and made from hand-woven silks. Each collection has a unique design concept using special techniques that elevate the traditional Thai silk image. As confirmed by awards and certificates from governmental organisations, the brand is considered successful. In addition, the content of its social media posts capture the design of the fabric and showcase it on models. The making process is also presented, as is local participation.

Both brands are successful businesses; however, they have different ways of communicating and emphasise brand value in different aspects. For example, social media shows that Brand A (Bhukram) focuses profoundly on the makers' inspiration for each work, which means the brand wants to capture their vital resources: their hometown and people. The brand story is translated by pictures casually presenting their surroundings in warm daylight. In comparison, Brand B (Khumsukkho) highlights the design of each collection, and products are worn by models. The overall image is presented in traditional OTOP style. For instance, awards and certificates are used to represent product quality. The decoration of booth uses the same signage pattern provided by the event organiser. As the strategy and medium differ, the survey aimed to investigate customers' value perception, especially highlighting brand story and which brand represents the product's value better. The survey consequently set a deductive hypothesis that Brand A (Bhukram) could be the brand that engages better with the customers and represents the excellence of their hometown and the people behind the brand better.

The questions combine dichotomous and multiple-answer questions. The first section asked which brand the customer would like to buy (see Table 4.62). Brand A gained more votes, with 54.9% (N=62), whereas Brand B received 45.1% (N=51).

Table 4.62 Descriptive statistics: *Which brand do customers prefer to buy?*

		Frequency	Percent	Cumulative Percent
Valid	Brand A	62	54.9	54.9
	Brand B	51	45.1	100.0
	Total	113	100.0	

Despite this, the votes from Brands A and B did not significantly differ in numbers. However, when dividing the result by age group (see Figure 4.20), the trend shows that younger people (under 45) are interested in Brand A more than Brand B, while people aged over 46 chose Brand B over Brand A.

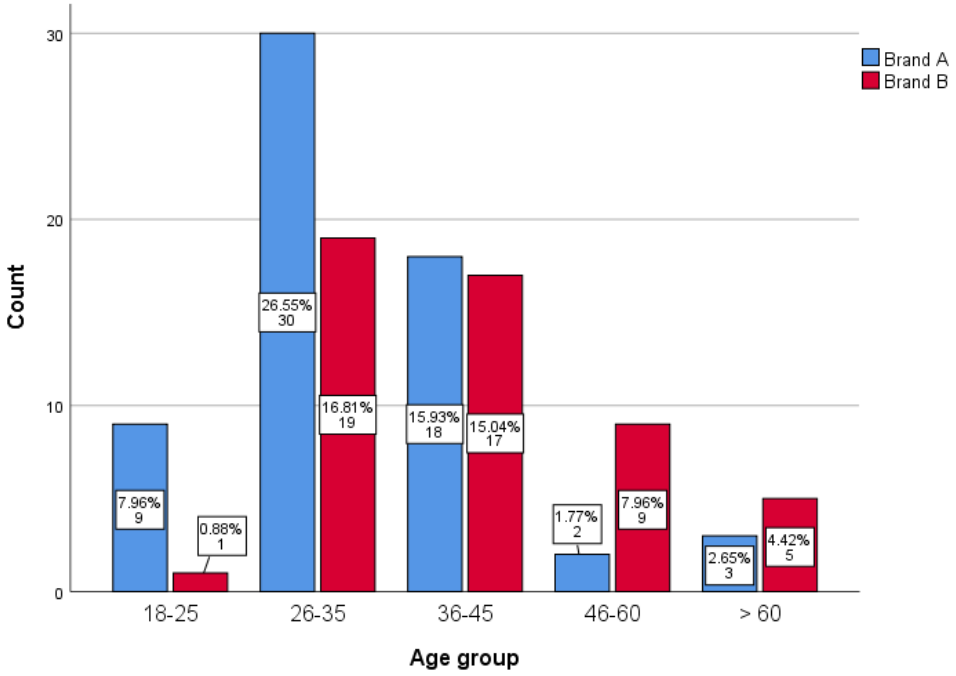


Figure 4.20 Results of preferred brands determined by age groups

The survey further investigated the reasons for choosing. Separated by the respondents who choose Brands A and B; as seen in Table 4.63, the first five reasons for choosing Brand A are as follows:

(1) It represents their hometown better.
(2) The story of their product is easy to connect with.
(3) They show community participation.
(4) The products suit them better.
(5) The craftsmanship is more delicate.

Respondents who chose Brand B gave the top five reasons listed below:

(1) The products suit them better.

(2) Products look better when a model wears them.

(3) The products look better in quality.

(4) Products have more variety.

(5) The prizes and awards the brand has received help ensure product quality.

Table 4.63 Descriptive statistics: Reasons for choosing the preferred brand

Selected brand			Responses N	Responses Percent	Percent of Cases
Brand A	Reason for selecting this brand[a]	The products look better in quality	8	4.1%	12.9%
		The products suit me better	**30**	**15.2%**	**48.4%**
		Products look better when a model wears them	5	2.5%	8.1%
		Products have more variety	4	2.0%	6.5%
		The story of their product is easy to connect with	**33**	**16.8%**	**53.2%**
		It represents their hometown better	**34**	**17.3%**	**54.8%**
		The prizes and awards the brand has received help ensure product quality	1	0.5%	1.6%
		Their booth or kiosk is better decorated	5	2.5%	8.1%
		The craftsmanship is more delicate	**24**	**12.2%**	**38.7%**
		It gives you a sense that you can be a part of supporting the local community	21	10.7%	33.9%
		They show the community participation	**32**	**16.2%**	51.6%
	Total		197	100.0%	317.7%
Brand B	Reason for selecting this brand[a]	The products look better in quality	**19**	**13.1%**	**37.3%**
		The products suit me better	**35**	**24.1%**	**68.6%**
		Products look better when a model wears them	**25**	**17.2%**	**49.0%**
		Products have more variety	**15**	**10.3%**	**29.4%**
		The story of their product is easy to connect with	3	2.1%	5.9%
		It represents their hometown better	6	4.1%	11.8%
		The prizes and awards the brand has received help ensure product quality	**13**	**9.0%**	**25.5%**
		Their booth or kiosk is better decorated	11	7.6%	21.6%
		The craftsmanship is more delicate	6	4.1%	11.8%
		It gives you a sense that you can be a part of supporting the local community	6	4.1%	11.8%
		They show the community participation	6	4.1%	11.8%
	Total		145	100.0%	284.3%

a. Dichotomy group tabulated at value 1.

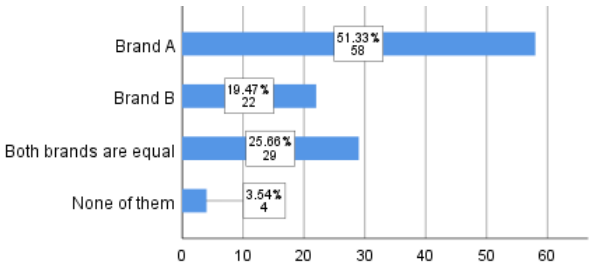
As seen from the reasons shown here, people who chose Brand A appreciate the product's place of origin. The product's story is easy to connect with, and they appreciate the sense of community that translates through the pictures. Alternatively, Brand A's value is story oriented. In contrast, people who chose Brand B pay attention to the product's quality, whether it is style or quality, and how it looks when worn.

Furthermore, as the research is interested in community capacity, all participants were also asked to answer a set of questions related to those aspects. The questions are as follows:

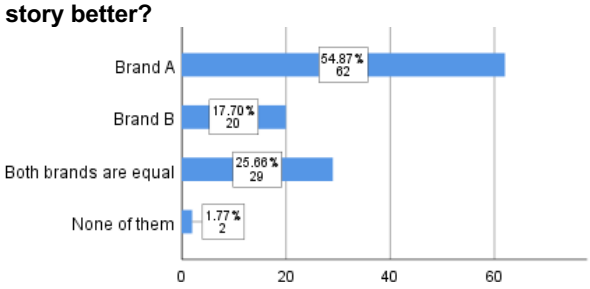
- Which brand represents the place of origin better?
- Which brand communicates their product/brand story better?
- Which brand encourages people's empowerment better?
- Which brand presents a stronger sense of community?
- Which brand shows more pride in their local wisdom?

Table 4.64 Bar chart comparison of brand values between two brands

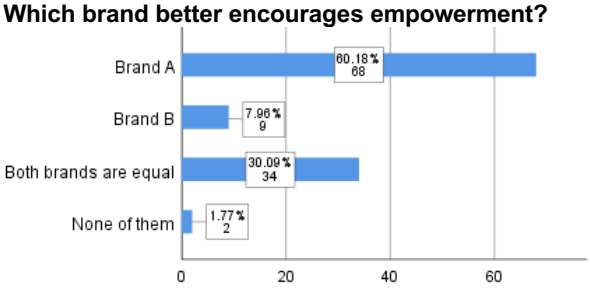
Which brand represents the place of origin better?



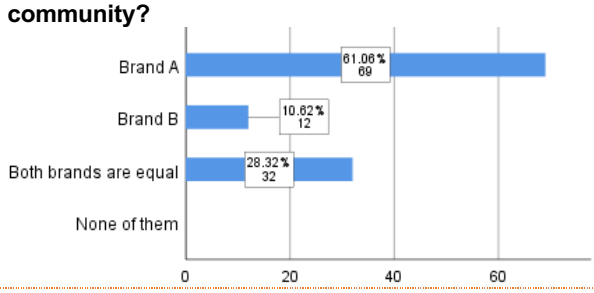
Which brand communicates their product/brand story better?



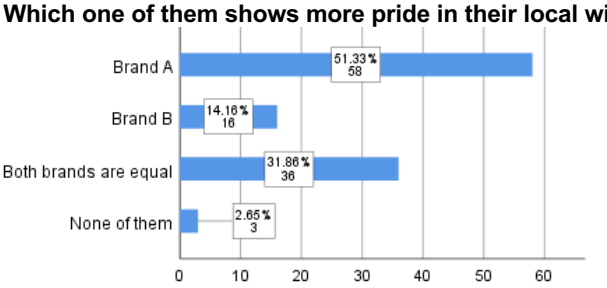
Which brand better encourages empowerment?



Which one of them presents a strong sense of community?



Which one of them shows more pride in their local wisdom?



The responses – see Table 4.64 – considerably lean towards Brand A; it can consequently be concluded that Brand A better represents place of origin, people's empowerment, a strong sense of community, pride in local wisdom, and their brand and product story. Those aspects are lacking in Brand B, which is the typical OTOP business. If the OTOP business were to adopt the idea of people's empowerment or a sense of community in their business, it could be an opportunity for OTOP businesses to add a livelier brand story and build another level of engagement with the customer.

- **Area A8: OTOP customers' opinions and feedback for the OTOP brand and products**

Area A8 focuses on customer involvement. The questions were asked to learn whether they wanted to share their thoughts about the products they bought and through which channel. Table 4.65 shows the result, states that 87.6% (N=99) of respondents want to share their opinion.

Table 4.65 Descriptive statistics: *Would you like to share your opinion on the product you buy?*

		Frequency	Percent	Cumulative Percent
Valid	Yes	99	87.6	100.0
	No	14	12.4	12.4
	Total	113	100.0	

The investigation went further to ask which channels were preferable to express customers' thoughts. As report in Table 4.66, the first place is in person with the owner or brand representative (73.7%), followed by the website (35.5%), social media (18.4%), and email (17.1%), respectively.

Table 4.66 Descriptive statistics: *Which channel do you prefer?*

		Responses		Percent of Cases
		N	Percent	
Which channel do you prefer?[a]	Email	13	11.8%	17.1%
	Website	27	24.5%	35.5%
	Social media	14	12.7%	18.4%
	In person	56	50.9%	73.7%
Total		110	100.0%	144.7%

a. Dichotomy group tabulated at value 1.

Furthermore, the reasons customers think that brands would benefit from the customer's perspective can be seen in Table 4.67. The first four reasons are (1) to understand customer's needs (80.5%), (2) to provide a better product that engages with customers (75.2%), (3) to help spot the areas of inefficiency (60.2%), and (4) to look for new product opportunities (57.5%).

Table 4.67 Descriptive statistics: *Why do you think local brands should involve the customer's perspective in their development?*

		Responses		
		N	Percent	Percent of Cases
Why brand need customer feedback[a]	**To understand customer's needs**	**91**	**17.4%**	**80.5%**
	To understand customer journey better	48	9.2%	42.5%
	To provide a better product that engages with customers	**85**	**16.3%**	**75.2%**

	To create a better customer experience	34	6.5%	30.1%
	To look for an opportunity for a new product	**65**	**12.4%**	**57.5%**
	To help spot the areas of inefficiency	**68**	**13.0%**	**60.2%**
	It gives a sense that the brand does really care for customer	37	7.1%	32.7%
	To build a strong relationship with customers	23	4.4%	20.4%
	To build trust with customers	31	5.9%	27.4%
	To increase customer loyalty	41	7.8%	36.3%
Total		523	100.0%	462.8%

a. Dichotomy group tabulated at value 1.

- **Area A9: Opinions on the working procedures of local authorities in providing support for local communities**

This area, A9, aims to specifically investigate the relationship between OTOP customers and the government. Since the OTOP programme has been active with Thai people for over a decade and the scheme is well known nationally, the survey asked if people wanted to see how the government provides support; the result – in Table 4.68 – was that 80.5% (N=91) of participants responded yes.

Table 4.68 Descriptive statistics: *Since the OTOP entrepreneurs are supported by the government, would you like to see how the support goes?*

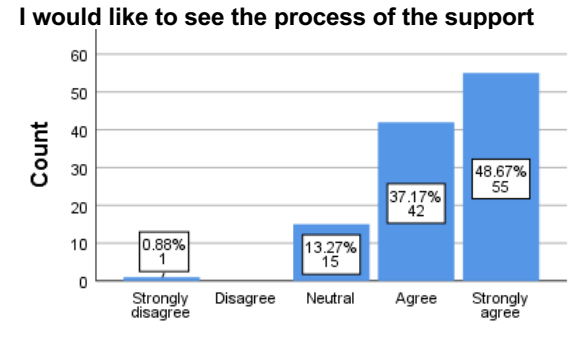
		Frequency	Percent	Cumulative Percent
Valid	Yes	91	80.5	100.0
	No	22	19.5	19.5
	Total	113	100.0	

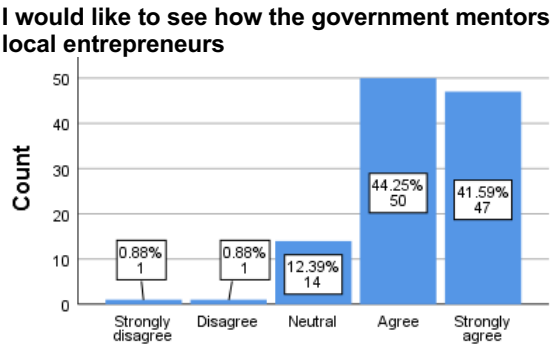
To understand customers' opinions further, Likert-scale questions were used to ask what evidence of providing support the customer would like to see. Tables 4.69 and 4.70 provide the results. The overall responses mostly agree with all statements. In terms of the means, customer agreements are highly focused on 'I want to know how the budgets allocated' (μ=4.54), followed by 'the outcomes of the support' (μ=4.46) and 'how they truly work together' (μ=4.39), respectively.

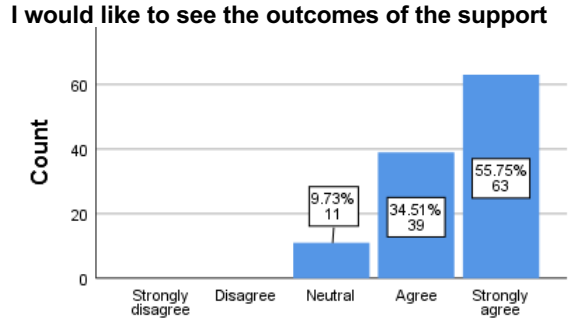
Table 4.69 Descriptive statistics: *How would you like to see the evidence of the provided support?*

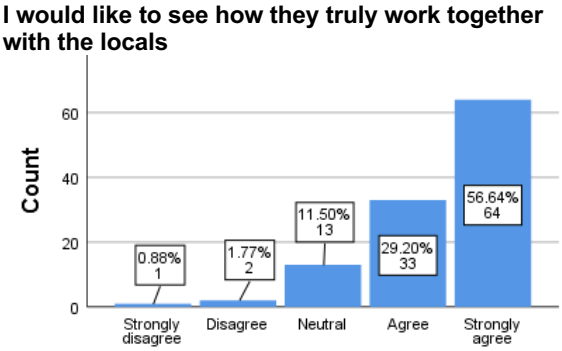
		I would like to see the process of the support	I would like to see how the government mentors local entrepreneurs	I would like to see the outcomes of the support	I would like to see how they truly work together with the locals	I want to know how they allocate budgets
N	Valid	113	113	113	113	113
	Missing	0	0	0	0	0
Mean		4.33	4.25	4.46	4.39	4.54
Median		4.00	4.00	5.00	5.00	5.00

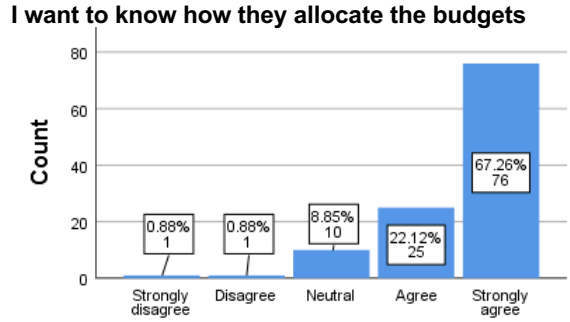
Table 4.70 Bar charts of the question: *How would you like to see the evidence of the provided support?*











Furthermore, the survey investigates 'what kind of activities you think are meaningful as the medium used when government works with the local community?' As shown in Table 4.71, the most meaningful activities are (1) product development process (74.3%), (2) idea sharing (61.9%), and (3) co-design and co-creation process (57.5%).

Table 4.71 Descriptive statistics: *What kinds of activities do you think are meaningful as the medium used when the government works with the local community?*

		Responses		Percent of Cases
		N	Percent	
Meaningful activity[a]	Training	35	11.0%	31.0%
	Idea sharing	**70**	**21.9%**	**61.9%**
	Meeting	17	5.3%	15.0%
	Co-design and co-creation process	**65**	**20.4%**	**57.5%**
	Product development process	**84**	**26.3%**	**74.3%**
	Trial and error process	48	15.0%	42.5%
Total		319	100.0%	282.3%

a. Dichotomy group tabulated at value 1.

In addition to the previous question, asking which channel they prefer to see the evidence is helpful in practice. As reported in Table 4.72, 91.2% of respondents prefer to see evidence from the brand's social media/website, followed by the product's leaflet/packaging (49.6%), and the local government website (35.4%). Other mediums that the respondents suggested are governmental organisation announcements or annual reports, reviews from each side (government and local entrepreneurs), the use of support marks to guarantee well being, interviews with locals, and the use of media such as governmental news channels or government publications.

Table 4.72 Descriptive statistics: *In which medium would you like to see the evidence?*

		Responses		Percent of Cases
		N	Percent	
Which medium would you like to see the evidence[a]	On the brand's social media or website	103	49.8%	91.2%
	Through the product's leaflet or packaging	56	27.1%	49.6%
	On the local government website	40	19.3%	35.4%
	Others	8	3.9%	7.1%
Total		207	100.0%	183.2%

a. Dichotomy group tabulated at value 1.

4.2.3.2 Summary of key findings from questionnaires

As the questionnaire focuses on the customer sphere, the study area results cover the relationships between customers and local entrepreneurs and between customers and service providers. This section summarises the key findings from all questions and categorises them into two areas, as shown in Figure 4.21.

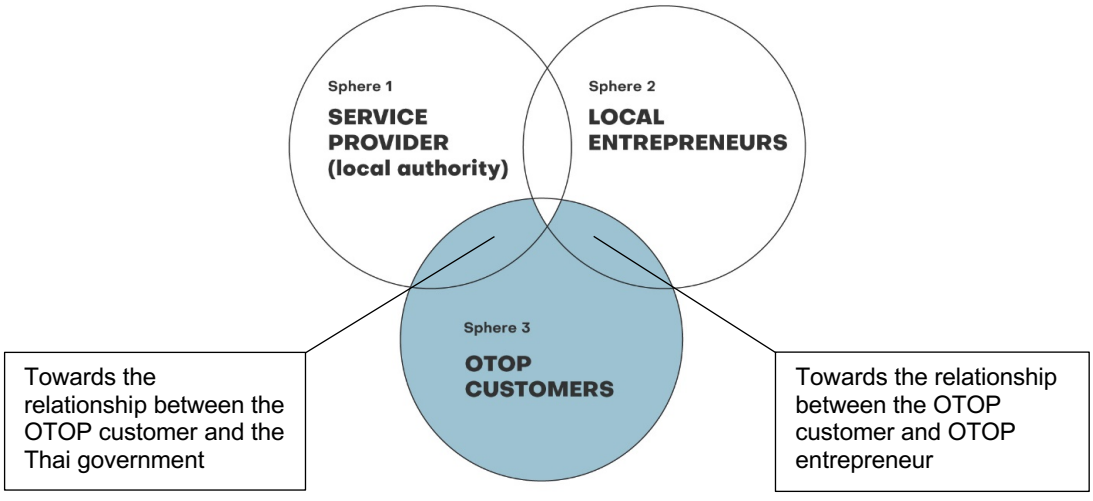


Figure 4.21 Two areas of study from the questionnaire

All areas (A1–9) are indicated under the categorised themes and specific strategies for the OTOP programme's development. In this way, key findings can be targeted to current barriers and used to spot new strategies.

4.2.3.3 Key findings towards the relationship between OTOP customers and the Thai government

Table 4.73 Key findings towards the relationship between OTOP customers and the Thai government

Area	Key findings	Strategy	Themes
A1	**Attitude towards OTOP product:** 1) Quality and reliability (mostly agreed, median=4) 2) Distribution of local resources (mostly agreed, median=4) 3) Originality (mostly disagreed, median=2) 4) Newness/innovation (neutral, median=3) **Conclusion for a new strategy:** Customers have a good attitude towards product quality, reliability, and the distribution of local resources. In comparison, product originality and innovation are the areas that can be nurtured and improved as the new opportunity of the OTOP programme.	Product development	New direction for product development (originality and innovation)
A2	**Perception of OTOP programme:** 1) It is a support for local initiated products (30.6%, N=103). 2) It is a local community capacity development (26.7%, N=90). 3) It is a grassroots entrepreneurial development (20.2%, N=68). **Conclusion for a new strategy:** The value of the OTOP programme from the customer's point of view can be reflected through this question. Despite the fairly good understandings, however, the negative aspect cannot be ignored ('It is a government programme related to political patronage' [5.6%, N=19] and 'It is a populist political approach' [3.0%, N=10]). Consequently, the advocated communication can be improved to avoid those negative aspects.	Communication	Clarification of the OTOP programme's value
A4	**The OTOP standard mark:** - 79.6% (N=90) of respondents notice the OTOP mark. - Only 34.5% (N=39) of them notice the number of stars on the OTOP mark. - 70.8% agree that it affects buying decisions. The most reason for buying is 'I feel like I support the local produces' (58.9%). **Conclusion for a new strategy:** The OTOP standard mark affects buying decisions because they want to support local products. However, in the situation that if there are two same products available to buy, would they pick the OTOP product over the non-OTOP product? The dominant answer is 'It does not matter; I would pick any of them if they can serve me well' at 75.2% (N=85). Therefore, it can be seen that the positive response they give about the OTOP mark is still not valuable enough for the customer to choose to support the OTOP product over the non-OTOP product.	Communication	- Value-adding to the OTOP programme - Value communication through the use of a new standard mark

A9	**Co-design process:** - 80.5% of participants want to see how the government support local entrepreneur and community. - The top reasons are 'I want to know how the budgets are allocated', 'the outcomes of the support', and 'how they truly work together'. - Meaningful activities that participants think that could be used as the medium when the government works with the local community are: (1) *Product development process* (74.3%), (2) *Idea sharing* (61.9%), (3) *Co-design process* (57.5%), (4) *Trial and error process* (15.0%). The support evidence should be accessible through the brand's social media and government publications/TV programmes. **Conclusion for a new strategy:** Even though the customers are indirectly involved in the OTOP programme's support, they want to see how the support goes. Mainly the budget allocated, the outcomes of the support and how the government works with the locals.	Communication	Increase information transparency of the provided support to build trust

As the table above demonstrates, the first strategy to develop is the product's originality and innovation. Therefore, the local authority should create a new product development strategy that emphasises uniqueness and originality. Also, the innovation of the product can be moved away from traditional and outdated local products toward innovative and trendy products that serve new lifestyles.

Apart from product development, the key findings between OTOP customers and the Thai government are above all about communication. From the communication of the OTOP programme's value to information transparency, the local authority should address this and create new communication strategies that enhance the programme's value and provide evidence of providing support to build trust with the public. Furthermore, about the standard mark, the programme should emphasise new development and introduce a new mark that creates and captures the value of the new product strategy.

4.2.3.4 Key findings regarding the relationship between OTOP customers and OTOP entrepreneurs

Table 4.74 Key findings towards the relationship between OTOP customers and OTOP entrepreneur

Area	Key findings	Strategy	Themes
A3	**Product accessibility:** - Customers report that OTOP products are not relatively easy to find (with most respondents feeling 'neutral' [54.0%, N=61]). Most of the current places they buy the OTOP products are OTOP fair, shelf/kiosk in a shopping mall, roadside service, OTOP hub in a big city. - Preferable places for buying are shelf/kiosk in a shopping mall, on third-party websites, OTOP fairs, online through brand websites/social media. The respondents also suggested other places: local restaurants and convenience stores. **Conclusion for a new strategy:** The new preferable places can be an opportunity for OTOP distribution. Online places are significantly getting more attention.	Product accessibility	New 'place'
A5	**Buying decision:** - The top ranks of buying decisions are: (1) Quality and functions (product-related), (2) Price (product-related), (3) Help support the local economy (social-related). - 65.5% (N=74) of respondents pay attention to the place of origin. **Conclusion for a new strategy:** The ranks of buying decisions range from product and social aspects. On the product-related aspect, OTOP product quality satisfies the customer, as seen in the agreement of statements from the A1 section. However, customers also pay attention to the social aspect of the local support as it results in the third rank. Consequently, emphasising the place of origin and how well the product makes good use of local resources and economically and socially develops the local community can be a new opportunity for customer engagement.	Customer engagement	Enhancing the story of the place of origin
A6	**The expectation on OTOP products:** - The top concerning factors are (1) quality, (2) consistency, (3) price, (4) use of local resources, and (5) newness/innovation. **Conclusion for a new strategy:** Following the concerning factors can increase customer engagement. The factor 'newness and innovation' is the one that local authorities and local entrepreneurs should work upon. It is one of the most concerning factors and yet there is an evident lack of innovation in OTOP products.	Customer engagement	Innovative local product scheme

A7	**Effectiveness of brand touchpoints:** - The top three touchpoints for brand value communication are (1) social media, (2) packaging, (3) website. **Conclusion for a new strategy:** Customers think social media plays an essential role in brand value communication. Brand value can be translated through pictures and content representing the making process and a strong sense of community.	Customer engagement	Effectiveness of touchpoints for value communication
A7	**Value perception for the local brand:** - With two brands in comparison, the younger age group (aged 18 to 45) tends to choose Brand A over B in contrast with the older age group (aged over 46). - The most reasons who choose Brand A are story oriented: (1) It represents their hometown better. (2) The story of their product is easy to connect. (3) They show the community participation. - The most reasons for whom choosing Brand B are physical product oriented: (1) The products suit me better. (2) Products look better when a model wears them. (3) The products look better in quality. - Brand A better represents in terms of place of origin, empowerment, a strong sense of community, pride in local wisdom and their brand and product story. **Conclusion for a new strategy:** The younger generation tends to be interested in emotional value rather than physical product value. The opportunity for the new age of OTOP business could maintain this aspect as a centre of development and social aspects (e.g., people empowerment, a strong sense of community, pride in local wisdom) to build another level of engagement with the customer.	Customer engagement	Enhancing social value behind the making process
A8	**OTOP customer opinions and feedback for the OTOP brand and product:** - 87.6% of respondents want to provide their opinion and feedback through the following channels: (1) in person with the owner or brand representative (73.7%), (2) website (35.5%), (3) social media (18.4%), and (4) email (17.1%) - The reasons that brand could benefit from customers' feedback are (1) to understand customer needs (80.5%), (2) to provide a better product that engages with customers (75.2%), (3) to help spot the areas of inefficient (60.2%), and (4) to look for new product opportunities (57.5%). **Conclusion for a new strategy:** Customers are willing to give opinions and feedback. Brands could find a way to allow customers to provide their perspective to understand needs and spot weak areas. The two-way communication could lead to more engagement.	Customer engagement	Two-way communication for stronger engagement

In terms of the relationship between OTOP customers and local entrepreneurs, the results of the survey reflect new opportunities between them, which can be categorised into two main themes: product accessibility and customer engagement. The former focuses on the new place opportunities that emerged from the survey results, while the latter emphasises the opportunity to build another level of engagement with the customer. This can be done by highlighting the social value of connecting with customers emotionally, using appropriate touchpoints suggested by customers, and reflecting value through the use of delicately created content.

4.3 Summary of findings from the investigation

After investigating current barriers, new potential strategies arose. The rich data from interviews and questionnaires is categorised into themes and sorted into main categories, as presented in Table 4.75. The list of themes and strategies can be used in the framework development in the next chapter.

Table 4.75 Summary of themes and categories from current findings

Themes	Main category of strategies	Research method used to obtain themes
Transparency to rebuild trust	Communication (from local authority side)	In-depth interviews with OTOP stakeholders
Clarification of the OTOP programme's value		Questionnaire with OTOP customers
Value-adding to the OTOP programme		Questionnaire with OTOP customers
Value communication through the use of a new standard mark		Questionnaire with OTOP customers
Effectiveness of touchpoints for value communication	Communication (from local entrepreneur side)	Questionnaire with OTOP customers
Enhancing the story of the place of origin		Questionnaire with OTOP customers
Enhancing social value behind the making process		Questionnaire with OTOP customers
Inclusiveness for strong commitment building	Inclusive acts	In-depth interviews with OTOP stakeholders
Equality in partnership to create a sense of ownership		Cross-national case studies
Two-way communication for stronger engagement		Questionnaire with OTOP customers
A new perception of benefit	Tuning mindset	In-depth interviews with OTOP stakeholders

Seamless connections and reciprocal networks	Network building	In-depth interviews with OTOP stakeholders
Systematic network (micro implementation to macro-scale impact)	Scale up the impact	Cross-national case studies
Tool for operational management	Programme management	In-depth interviews with OTOP stakeholders
Appropriate time and scale		In-depth interviews with OTOP stakeholders
Incorporating social value as KPIs	Programme evaluation	In-depth interviews with OTOP stakeholders
Enhancing self-reliance mechanism and creativity	Human development and learning culture	In-depth interviews with OTOP stakeholders
A place to express and exchange knowledge		Cross-national case studies
Providing leadership skills to trainers		In-depth interviews with OTOP stakeholders
New focus for product development (originality and innovation)	New product development strategy	In-depth interviews with OTOP stakeholders
Innovative local product scheme		Questionnaire with OTOP customers
New 'place'	New distribution strategy	Questionnaire with OTOP customers

After the themes and categories are identified, the current issues and barriers have potential strategies that can be used to tackle each of them. After analysing the data from in-depth interviews and questionnaires, key stakeholders' relationships are developed. By examining the overall picture of the three spheres, the exchanged relationships between each group of stakeholders are explained in Figure 4.22. Furthermore, by looking at the relationships here, the achievement of a group of beneficiaries is identified. In this way, developing mutual value can be practical and relevant for the stakeholders.

Starting with the relationships between a service provider and local entrepreneurs, the locals' *requirements* differ from one community to another. The requirements must be discovered together. In return, the service provider must serve the local enterprises and provide a certain level of *commitment* in a partner-like relationship to show sincerity when working together. The relationship here can lead to a synchronised and sustainable service system that benefits both. The service provider can provide support that matches local needs, and the local entrepreneur can achieve the support they need for business growth.

Moving to the relationship between local entrepreneurs and the OTOP customers, the exchanged relationships here provide a better *experience* to build more robust customer *engagement.* According to the data analysis, customer engagement can be developed through various medium; the dominant one is through the communication of brand/product

value, which can be built through a brand or product story (e.g., emphasising the place of origin and the making process) and communicated via appropriate touchpoints.

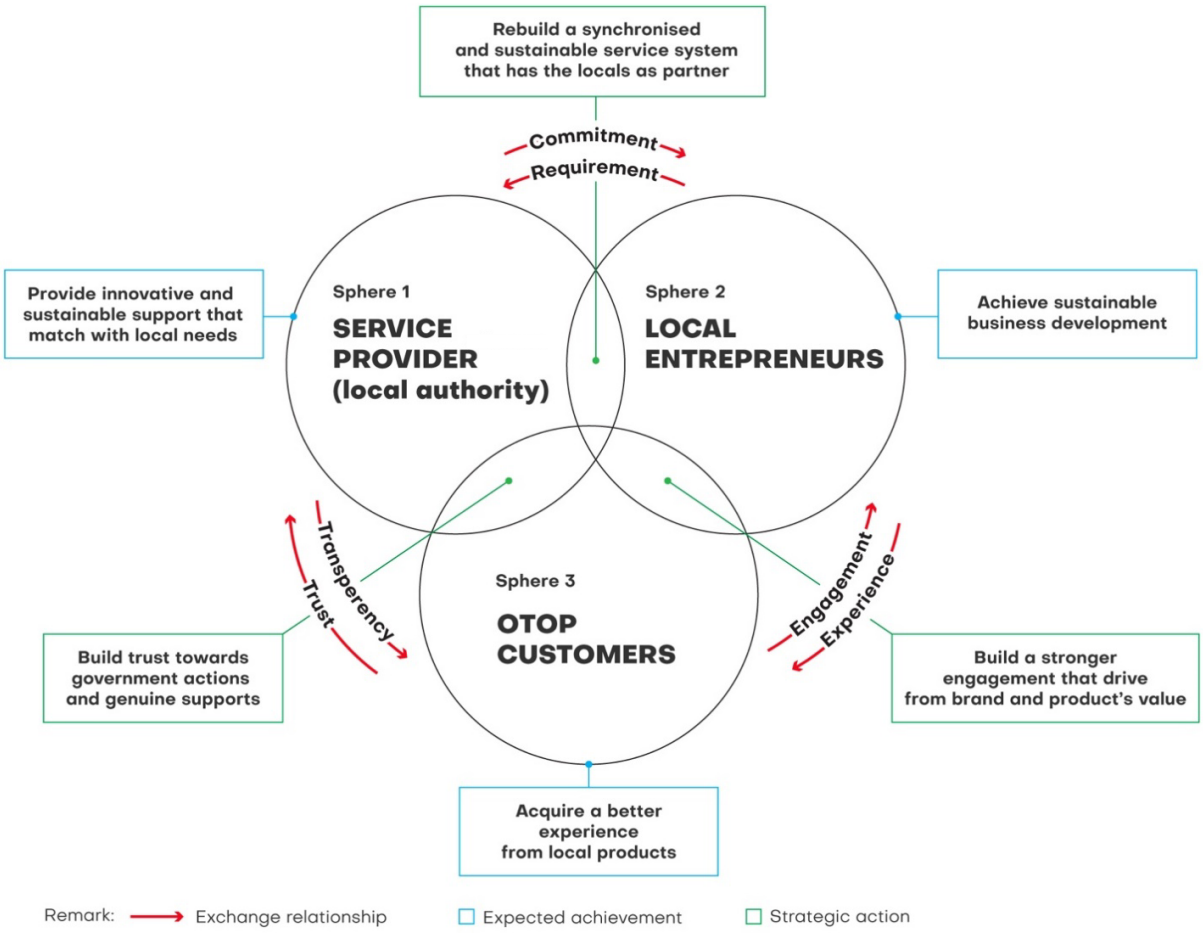


Figure 4.22 Three spheres of stakeholders and their relationships, achievements, and strategic actions

Lastly, relationships between OTOP customers and local authorities lean towards *trust* issues. In the public sector, trust is a crucial foundational element. The questionnaire clearly demonstrates that OTOP customers are willing to see how the government helps and supports locals. Communication and providing information with *transparency* are the best ways to earn trust from local entrepreneurs, as well as the general public.

In conclusion, the relationships between key stakeholders are identified, which can be used to address the value and beneficiaries in the next phase of research (the value co-creation workshop) and as fundamental elements in developing a value co-creation framework and the implementation guidelines for the OTOP service.

Chapter 5 — Value co-creation framework development and evaluation

Value co-creation framework development and evaluation	5.1 The principal goals of the framework	
	5.2 Drawing data for formulating the framework	5.2.1 Arrange the findings into themes of strategies 5.2.2 Identify dominant themes 5.2.3 Determine what needs to be considered in developing the framework
	5.3 Framework components	5.3.1 Framework phase 5.3.2 Generative tool, technique, and canvas
	5.4 Framework synthesis (initial version 1.0)	
	5.5 Framework evaluation procedure	
	5.6 Descriptive Study II: Expert evaluation workshops (WS-1-DE)	
	5.7 Prescriptive Study II: Improvement of framework (version 2.0)	
	5.8 Descriptive Study III: User evaluation workshops	5.8.1 Workshop with a community-based enterprise (WS-2-LC): Thai coconut crispy rolls producer 5.8.2 Workshop with a community-based enterprise (WS-3-LC): Hand-woven fabric producer 5.8.3 Workshop with local entrepreneurs (WS-4-LE)
	5.9 Prescriptive Study III: Improvement of the framework (version 3.0) and facilitator guidelines	
	5.10 Descriptive Study IV: Stakeholder evaluation interviews with local authorities (IN-5-LA)	
	5.11 Improvement of the final framework	

Table 5.1 Overall structure of Chapter 5

This chapter presents the development of the Value Co-Creation (VCo) framework. It begins by defining the framework's goals and formulating them based on the data presented in the previous chapter. Additionally, this chapter explains the evaluation process undertaken during the development of the framework.

5.1 The principal goals of the framework

The research aims to provide a value co-creation framework and implementation guidelines for local authorities under the OTOP programme to use as an approach with grassroots communities to promote equal partnerships among them. In order to achieve this goal, mutual value obtained from the co-creation process needs to be at the heart of the implementation. However, the value co-creation process alone will be inadequate if the value cannot be translated into real implementation. Mutual value should serve as the foundation for a co-design strategic action that guides both parties to collaborate effectively. This research also aims to provide implementation guidelines based on the research findings (e.g., current issues and barriers, potential solutions) in order to transform value into achievable goals with potential strategies. Hence, the goals of the framework are:

I. Value is co-created inclusively among stakeholders to achieve mutual value. This process aims to enable local entrepreneurs to create value that can benefit them, their community, and their customers.
II. The co-created value is captured and developed to guide the co-design process to design strategic actions for both the enterprise and local government to determine the agreement and commitment of all stakeholders.
III. The co-created value can aid local authorities in co-designing with the local entrepreneurs and providing relevant support to them, which can be considered as a meaningful value of public service.

Once the goals and the users are defined, the next step is to gather findings and to construct an initial framework.

5.2 Drawing data for formulating the framework

This section describes the procedure of putting the findings and how the preliminary framework is formulated. At a glance, the procedure can be concluded according to the following steps:

- Arrange the findings into themes of strategies, categorised into an implementing configuration.
- Identify key issues through the use of dominant themes.
- Determine what needs to be considered during the process.

Each step will be described in detail again in the following section.

5.2.1 Arrange the findings into themes of strategies

After analysing the collected data from in-depth interviews and questionnaire surveys, the key findings were summarised in Table 4.20 (refer to section 4.2.2.7), Table 4.73, and Table 4.74 (refer to section 4.2.3.4) accordingly. The themes were then categorised into different strategies. In order to connect the findings into the framework formulation, the important step is to arrange them into implementing configurations in order to determine when it should be considered during the co-design and implementation plan. Table 5.2 presents the arrangements of themes that arose from the investigation phase.

Table 5.2 Summary of themes and categories from the current findings and how they are connected to the framework formation

Themes	The main category of strategies	Implementing configuration
Inclusiveness for strong commitment building	Inclusive acts	Value co-creation process
Equality in partnership to create a sense of ownership		
Two-way communication for stronger engagement		
A new perception of benefit	Tuning mindsets	
Clarification of the OTOP programme's value	Revisiting OTOP programme's value	
Value-adding to the OTOP programme		

Transparency to rebuild trust	Communication (from local authority side)	Creating appropriate communication strategy
Value communication through the use of a new standard mark		Setting up dissemination strategy to promote new value for the OTOP programme
New focus for product development (originality and innovation)	New product development strategy	Innovative product development
Innovative local product scheme		
New 'place'	New distribution strategy	Marketing and distribution channel and network
Seamless connections and reciprocal networks	Network building	
Enhancing self-reliance mechanism and creativity	Human resource development and learning culture for both local entrepreneurs and local authorities	Encouraging a forward-looking mindset
A place to express and exchange knowledge		
Leadership skill development for local entrepreneurs		
Providing leadership skills to trainers		
Effectiveness of touchpoints for value communication	Communication (from local entrepreneur side)	Understanding value and express value to customers
Enhancing the story of the place of origin		
Enhancing social value behind the making process		
Tool for operational management	Programme management	Developing programme management
Appropriate time and scale		
Incorporating social value as KPIs	Programme evaluation	Addressing social impact in developing a strategy
Systematic network (micro implementation to macro-scale impact)	Scale up the impact	Scaling up strategy

By sorting the data into the implementing configuration, the themes of the strategies are ready to be chosen when doing the value co-creation and implementation planning.

5.2.2 Identify dominant themes

The previous section presents all the themes that were derived from the key findings. In order to prioritise the issues that need to be addressed first, the study utilised the content analysis method to identify the dominant themes from the interviews with stakeholders. Most issues that participants mentioned were grouped, arranged, and addressed as the dominant themes with the roots of the problem. Table 5.3 illustrates the dominant themes, which are:

- DT1: Promoting inclusivity to build strong commitment
- DT2: Fostering a new perception of benefits
- DT3: Enhancing a self-reliance mechanism
- DT4: Rebuilding trust through transparency
- DT5: Adding value to the OTOP programme
- DT6: Incorporating social value as KPIs

The dominant themes here act like a top priority of concern, which can be addressed by the value co-creation framework.

Table 5.3 Dominant themes and the root of the problem

Dominant themes (DTs)					
DT1 Promoting inclusivity to build strong commitment	**DT2** Fostering a new perception of benefits	**DT3** Enhancing self-reliance mechanism	**DT4** Rebuilding trust through transparency	**DT5** Adding value to the OTOP programme	**DT6** Incorporating social value as KPIs
Lack of motivation from within	Unaware of growing as a community	Lack of leadership skill	Doubt in local staff's behaviour	Value of OTOP programme focus on economic value rather than social value	Concern on getting KPIs as a result or report
		Reciprocal networks are not strong	Unknown criteria about selected business for providing support and funding		
		Rely heavily on external support	Unknown budget allocation		

5.2.3 Determine what needs to be considered in developing the framework

Before developing the framework, certain things need to be kept in mind. This section gathers the findings and categorises them into groups regarding what needs to be considered in the framework.

First, reviewing the current values of the OTOP programme is helpful in order to retain the good values that can be expanded to new values. The current values are gathered from the

interviews with stakeholders (see Table 5.4) and can be seen as the programme's strengths. On the other hand, the weaknesses can be counted as aspects that destroy the programme's value and should be eliminated.

Table 5.4 OTOP programme's strengths and weaknesses

OTOP programme's strengths and weaknesses	
Strength	**Weakness**
Economic value ○ Providing opportunities to expand business connections ○ Providing new market channels ○ Adding value to local products (with OTOP quality standards) ○ Encouraging people to establish their own brand rather than selling to bigger companies at lower profits ○ Reaching out at the grassroots level and providing opportunities ○ Fostering micro-level development using local resources **Social value** ○ Supporting locals in making the most of their free time ○ Strengthening family and community bonds ○ Promoting legacy products ○ Bringing people together and building community capacity ○ Creating new roles and jobs for locals, such as instructors and guides ○ Instilling a sense of diligence in the local community	○ Political favouritism and unequal distribution of assistance ○ Involvement of SMEs in the competition with grassroots scale enterprise ○ Weakening social structure (e.g., locals have become too reliant on external support) ○ Fast development without building a strong foundation ○ Lack of research on locals' needs and readiness before giving support

Table 5.5 Characteristics of the local entrepreneur

Characteristic of local entrepreneurs	
Livelihood ○ Treating the OTOP business as a second job may result in giving it less commitment and priority ○ Prioritising a secure job that can make ends meet ○ Time is a valuable asset **Workforce is limited** ○ OTOP jobs/tasks are mainly related to seasonal agricultural activities ○ Seasonal workforce may be required when receiving large orders ○ Outsourcing for extra job	**The owner/leader is occupied with too many tasks and responsibilities** ○ The leader has too many responsibilities and is not investing enough in team building. **Obstacle mindsets** ○ Rely heavily on external support ○ Passively act without taking control ○ Less commitment to developing businesses with local governments ○ Lack of internal motivation ○ Benefit comes first

Table 5.6 Characteristics of local authorities

Characteristic of the local authorities	
Nature of governance ○ Discontinuity after a four-year period of staff governance ○ Project's structure, budget, and KPIs are highly restricted ○ Project must have measurable outcomes for approval **Involvement of local organisation** ○ Colleges and universities ○ Local foundations **Support frequency** ○ Mass training is provided 3-4 times per year	**Current focus** ○ Online market **Evaluation:** **When joining** ○ Use a star grading system **For follow-up** ○ Evaluate how locals have improved their businesses ○ Assess new product development ○ Measure profits

Furthermore, the characteristics of the local entrepreneurs and local authorities (presented in Table 5.5 and 5.6) can be seen as their nature. Therefore, taking their characteristics into account can provide a better understanding of their way of living, working, and their limitations.

5.3 Framework components

In order to achieve the framework's objectives, it is helpful to be familiar with all of the framework's components before assembling them. Therefore, this section deconstructs the components, which consist of (1) the phases and outcomes of each phase, and (2) the generative tools, techniques and canvas.

5.3.1 Framework phases

Phases are the main components of building a framework. Each phase should produce specific outcomes that can be used to build upon for the next phase. Before determining the framework phases, the researcher reviewed the co-creation and collaborative methodologies from the literature in order to learn about the processes from other techniques (see Table 5.7).

Table 5.7 Review of the co-creation methodologies adapted from Kruger et al. (2018)

Methodologies	Description	Focus/Differential
Design Thinking	It uses divergent and convergent thinking and consists of a process based on the user experience, formatted in three stages: inspiration (circumstance of the problem and/or opportunity that motivates the search for solutions, change), ideation (brainstorming, generation, development and testing of ideas that can lead to solutions) and implementation (business model and verification of results for the new project).	Use of techniques (sometimes experiential) to know the users' perspective and use of prototypes in the ideation phase (brings gains in agility and creativity for the development of solutions).
Appreciative Inquiry	The process begins with the choice of an affirmative topic and is conducted in four stages: Discovery (investigation of what is best), Dream (sharing, checking of common themes and development of shared dream), Planning (construction of the plan for the dream to become reality), and Future (public declaration of the actions intended by all involved)	Methodology of organisational change focused on quality, on the positive, not on the problem to be solved (confers a solution based on something that is already in the nature of the organisation and can facilitate implementation).
Dragon Dreaming	It is part of the priorities and values of the individual and is conducted in four stages: dreaming (stimulating the intention of the relationship), planning (threshold of possibility in context), performing (acting with commitment) and celebrating (response with expected satisfaction).	The methodology uses deep listening tools in order to have a more transparent dialogue to establish great empathy (which allows the project scope to emerge from the group itself).

U Theory	A framework of leadership and change based on consciousness in a process that can be demonstrated graphically as the letter "U" because it includes: descent (listening tools), bottom of the "U" (moment of reflection) and ascent (prototype, feedback, adjustments and evolution).	Although it is useful as a technique for co-creation, it is much more than a punctual methodology with beginning, middle and end because it presents a series of tools that act on the behavioral change of individuals and society.
Living Lab	An open, user-centric ecosystem of research and innovation, integrated with society and real-life contexts, using a variety of methods of co-creation, with multi-stakeholder participation and generally provided by a scientific or academic institution.	It is a platform for co-creation, not a co-creative methodology in itself, therefore, it uses several methodologies of approach of experimentation, providing more flexibility and greater conditions for prototyping in real situations.
Open Space Technology	This technique introduces a step-by-step process to generate the collaborative process, free and that provokes the sense of responsibility, that disposes the people in circles, in order to provoke the dialogue, without a clearly defined agenda (the group agenda, collaboratively).	Commonly used to facilitate the exchange of information and building solutions for complex and potentially conflicting issues in large groups.
Nonviolent Communication	Language and communication skills, based on awareness of what we are perceiving, feeling and desiring, that allows us to reformulate the way in which we listen and express ourselves, with honesty and clarity, generating empathy.	It presents more as a behavior, a value translated in the form of communication that stimulates inclusive, collaborative and productive dialogue, leaving generalisations and judgments out of the conversation. It is complementary to other co-creative techniques.
Networks	Tools that facilitate interaction and, make it possible to convert, as a result of their dynamics, competition in cooperation.	In general it is used in support of a process, since the purpose must be assumed by the members in order for the network to transform, in fact, competition in cooperation
Listening	It is a practice of listening deeply. It is presented in four levels: Level 1 or Downloading (basic, ruled by habitual judgment, that only serves to reconfirm old opinions); Level 2 or Factual (occurs when the individual opens the mind to receive different information), Level 3 or Empathic (occurs when the individual establishes an emotional connection, which we see from the eyes of another person) and Level 4 or Generative when, connected to the medium, it enters into a generative process and liberates collective creativity).	Like the Nonviolent Communication, it presents itself more as a behavior, a value translated in the way of listening in an open way and without judgments. It is complementary to other co-creative techniques.
World Cafe	Participatory dialogue in groups, distributed in a receptive and hospitable environment (like coffee tables) that talk about relevant questions around a purpose.	It allows the group to have access to a form of collaborative intelligence, since it stimulates the participation of all (from smaller groups), allowing richness in the variety of points of view and their connections, patterns and insights (table rotation and conclusion in the form of plenary).
Circle Process	Focused on a single circular group, it is a process that, from the use of a "stick of the word", passed from person to person consecutively around the circle, is configured the dialogue, in which the person can speak without being interrupted.	It combines empathy-generating and participatory techniques, facilitating collective awareness and consensus.

In accordance with the framework's objectives, the entire process involves creating mutual value, translating value into strategies and action, and then determining government support based on co-created mutual value. Following the framework's objectives, value will be derived from a positive core or a strengths-based approach. After reviewing the strategic collaboration methodologies, the Appreciative Inquiry (AI) process seems to fit the framework's objectives since it focuses on strengths, values and capabilities (Randolph, 2006; Berkessel-Stratton, 2010). The AI process is underpinned by two philosophies. The first is social constructionism (i.e., reality can be built through a dialogue between participants). The latter is that positive images influence positive action (i.e., creating clear visions and taking action to make them a reality) (Randolph, 2006). Participants can find solutions to new developments built on their values, beliefs, motivations, hopes and dreams while sharing their success stories (Berkessel-Stratton, 2010). The phases of AI begin with determining affirmative topics and continue through the 4-D cycle, which comprises: (1) Discover, (2) Dream, (3) Design, (4) Destiny, see Figure 5.1.

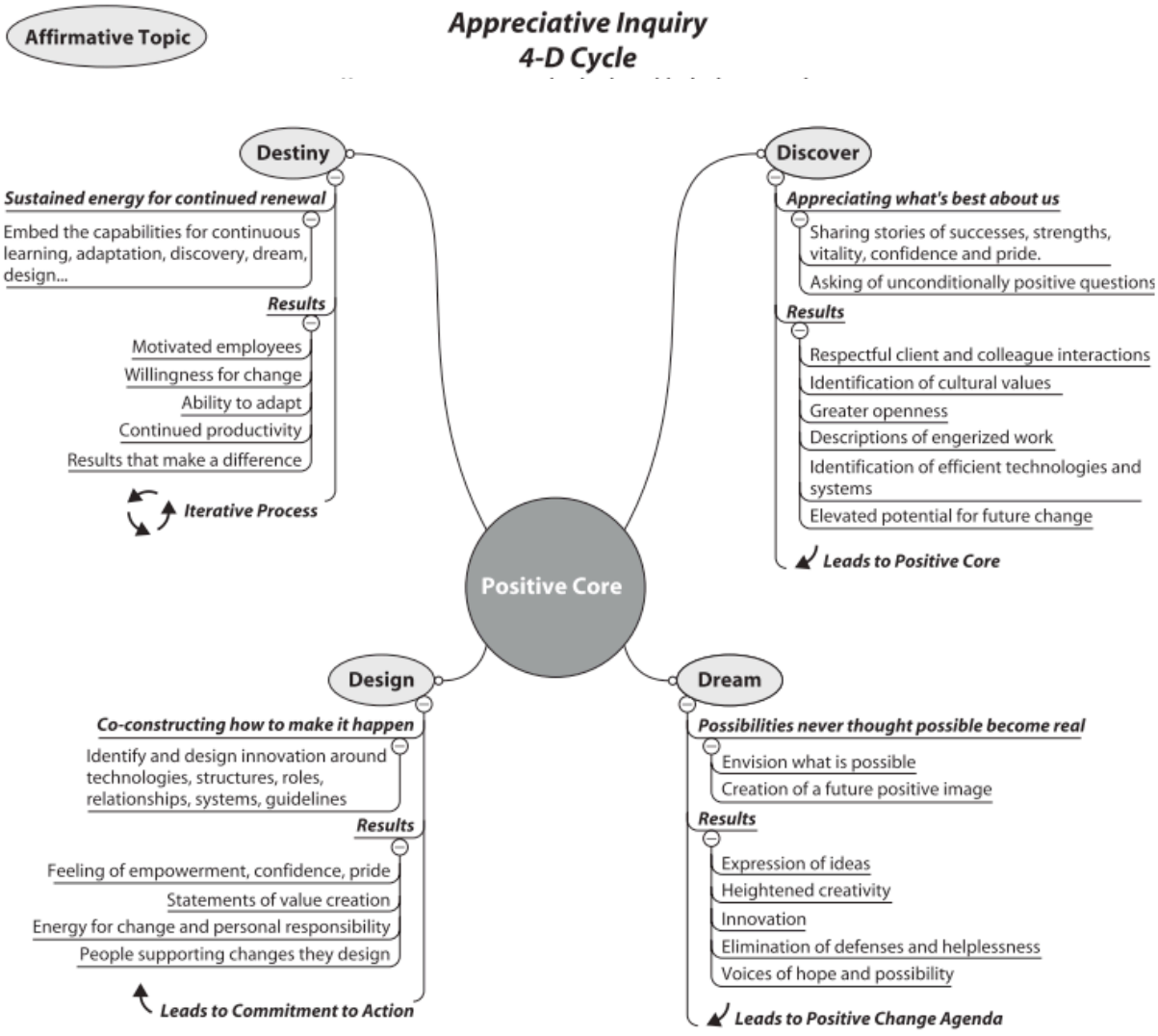


Figure 5.1 The 4-D cycle of Appreciative Inquiry adapted from (Berkessel-Stratton, 2010)

However, in the OTOP context, value can also be created through the transformation of the problems or challenges that local entrepreneurs might face. This can be considered a value driver. The framework must incorporate a problem-solving methodology in order to accomplish this objective. In order to turn challenges into innovative solutions, the Design Council (2019) offers a framework for innovation, the Double Diamond, which emphasises on people engagement and leadership. The framework is divided into four phases: (1) Discover, (2) Define, (3) Develop, and (4) Deliver, see Figure 5.2.

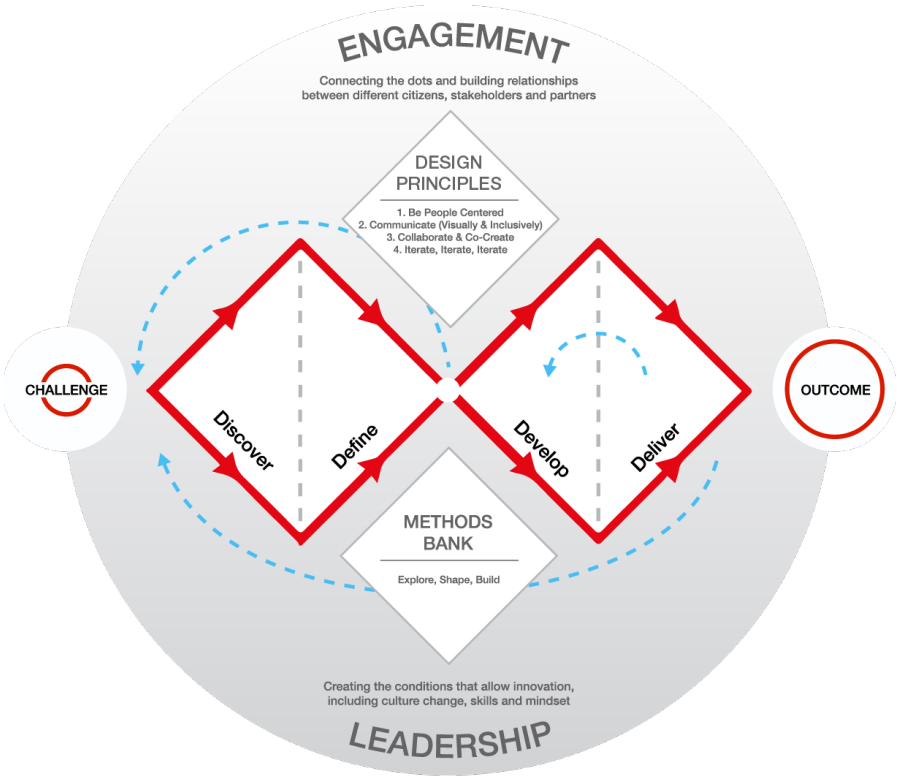


Figure 5.2 Design Council's Double Diamond, a framework for innovation (Design Council, 2019)

To construct the phases of the framework, AI and the Double Diamond will be used together. This combination will enable the co-creation of value and serve as a foundation for co-designing strategy among stakeholders. Both AI and the Double Diamond have similar objectives in each phase, although certain details may be more useful in specific circumstances. For instance, the strength-based approach and affirmative nature of AI might be suitable for generating new inspirations (e.g., seeking new product collections or brand communication), whereas the Double Diamond might be more appropriate when dealing with complex issues (e.g., production and management).

5.3.2 Generative tool, technique, and canvas

After identifying the framework phases, finding the right tools to facilitate value co-creation is important. In light of the discussion in Chapter 2, generative tools are used to help participants explore their potential and enhance their creativity as a group. Following the method suggested by Sanders and Stappers (2018), the Say, Do and Make technique allows participants to visualise their ideas and opinions. As a result of studying the co-creation of previous practices, the main two components of generative tools can be analysed and categorised into context, technique, and canvas. In each phase of the value creation framework, these main components (see Figure 5.3) are used to create appropriate activities.

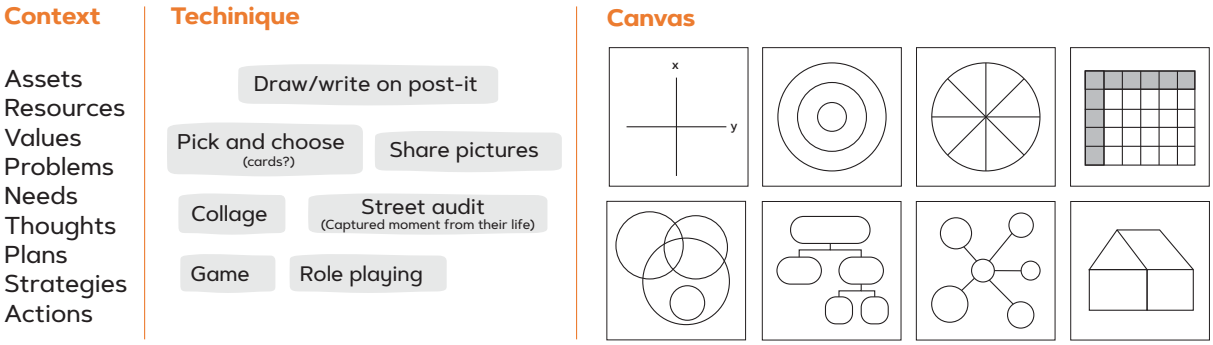


Figure 5.3 Main components of generative tools

5.4 Framework synthesis (initial version 1.0)

In the previous section, the components of the value co-creation framework (version 1.0) were identified. This section shows the initial framework, which has four main phases, as shown in Figure 5.4. It was determined what the expected outcomes of each phase would be. The following pages provide a general overview of each phase. However, this framework version was created in order to explore the details further with design experts in the WS-1-DE workshop. Consequently, some of the components are left open-ended for further suggestion, and the box entitled *'what will we do together?'* identifies the activity to be discussed with the design experts.

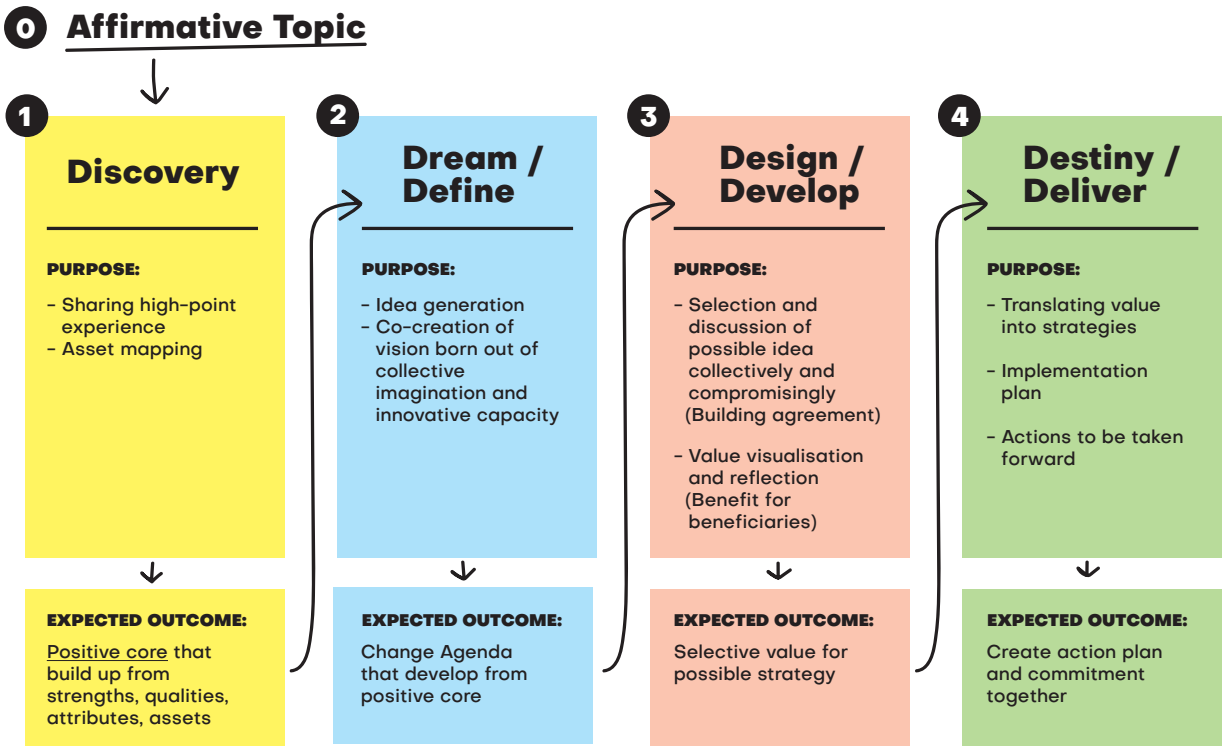


Figure 5.4 Initial value co-creation framework (version 1.0) – Overview

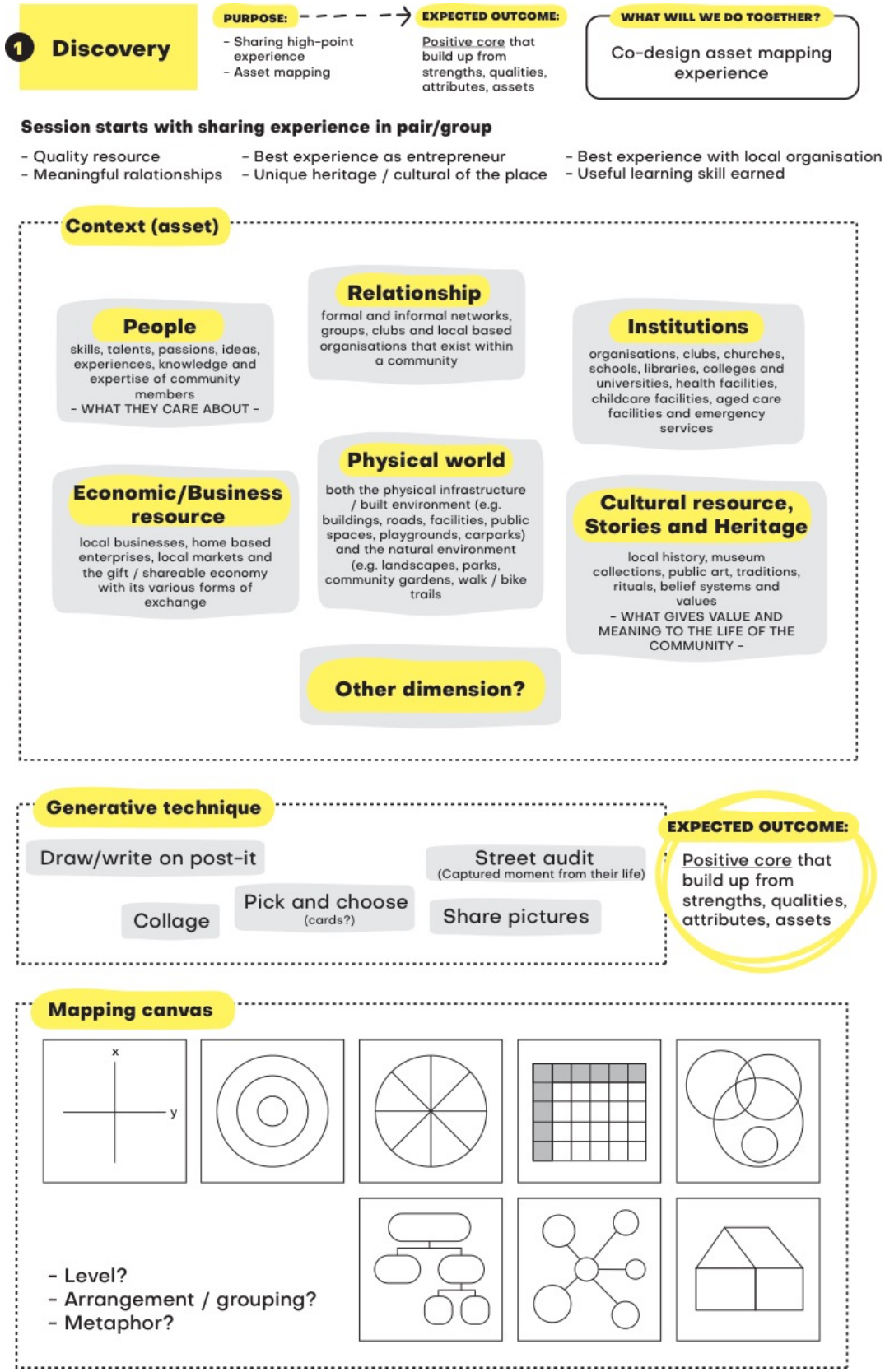


Figure 5.5 Initial value co-creation framework (version 1.0) – Discover phase

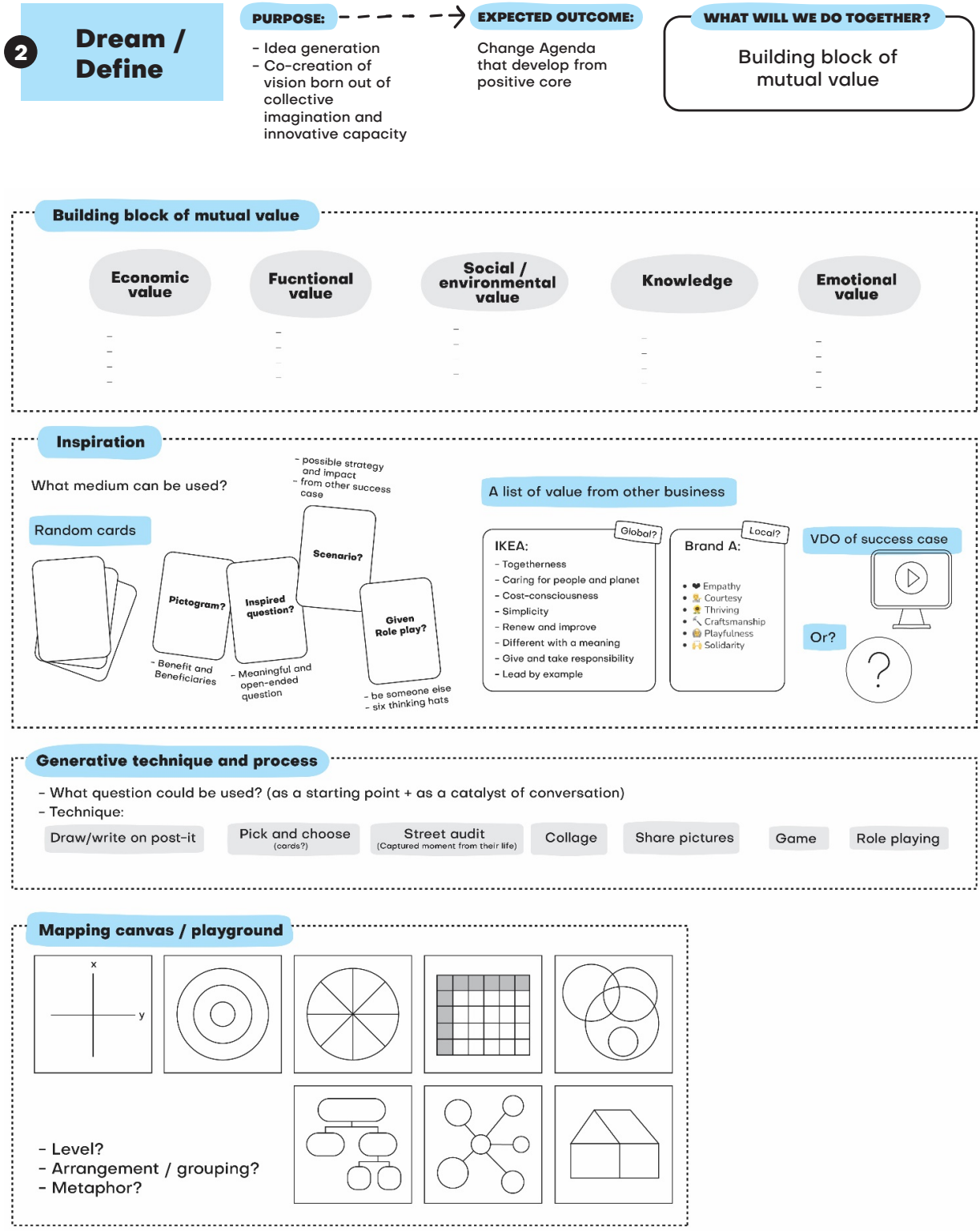


Figure 5.6 Initial value co-creation framework (version 1.0) – Dream/Define phase

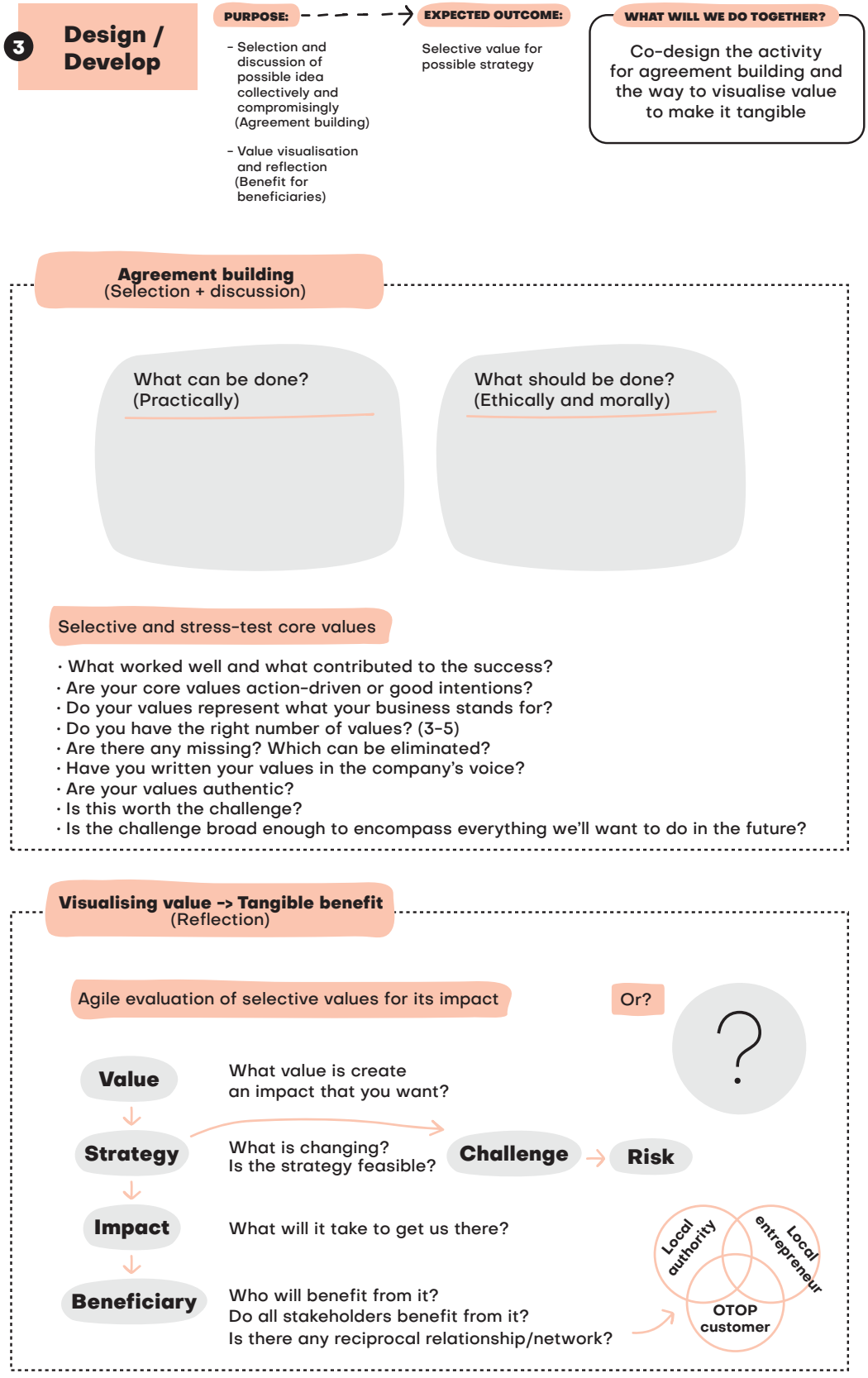


Figure 5.7 Initial value co-creation framework (version 1.0) – Design/Develop phase

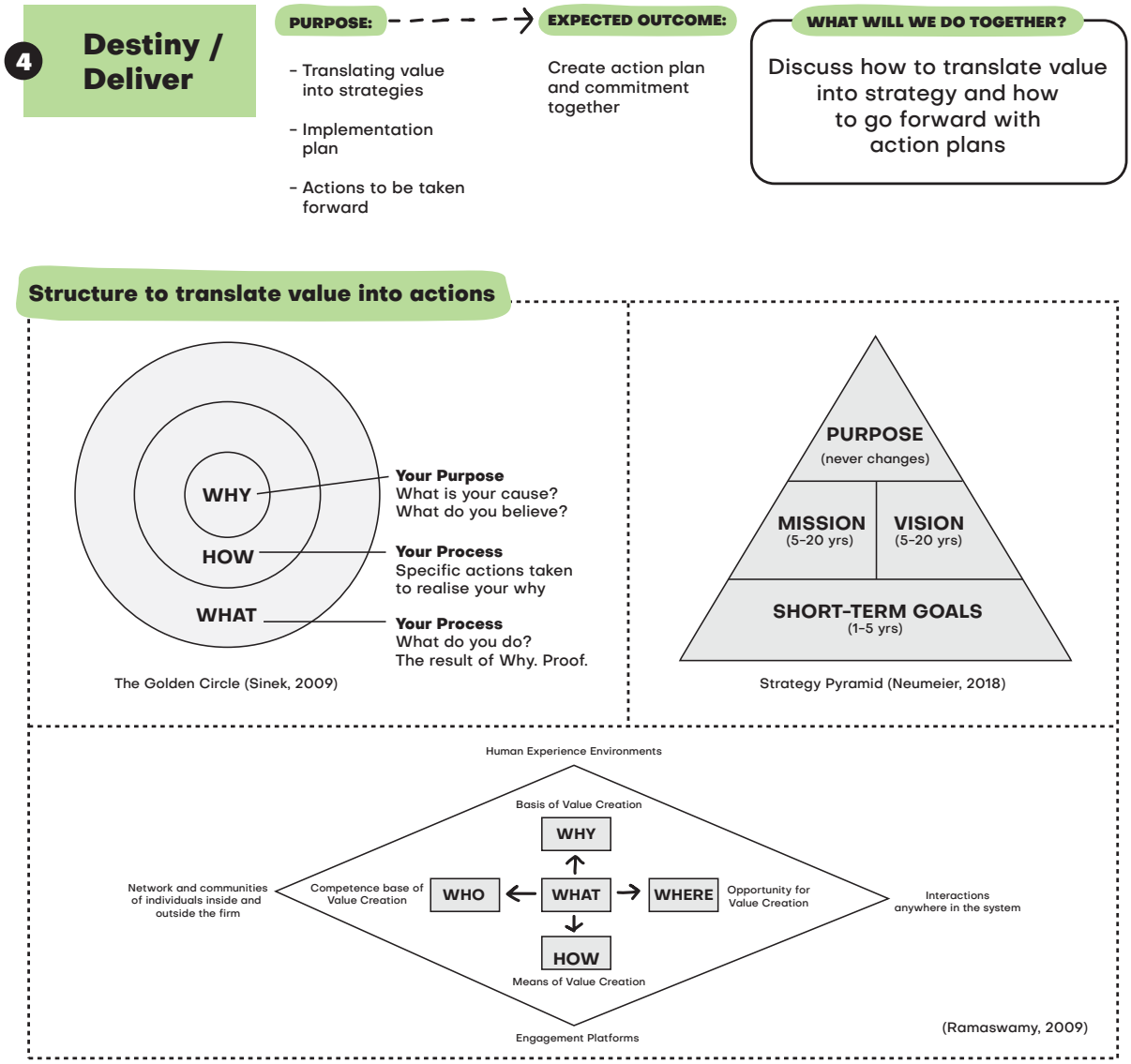


Figure 5.8 Initial value co-creation framework (version 1.0) – Destiny/Deliver phase

The initial framework (version 1.0) was developed after deconstructing and reassembling the components to achieve the main goals. Afterwards, three workshops with design experts were conducted to validate the framework. The next chapter describes the procedure and the outcomes of the evaluation workshops.

5.5 Framework evaluation procedure

The initial framework for value co-creation (version 1.0) was constructed in the previous section. However, it must be developed, tested, and analysed for improvement. For the evaluation, four empirical evaluation workshops and interviews were conducted with the

application of an iterative approach. An overview of the evaluation procedure is provided in Table 5.8.

Table 5.8 Overview of the framework evaluation

Research stage	Participants	Evaluation criteria
Descriptive Study II Expert evaluation workshop	**Workshop (WS-1-DE)** **Design experts:** designers, facilitators, design academics, design consultants **Sampling size:** 4 x 3 groups, total = 12	- Test the flow of activities - Co-design and select appropriate tools
Prescriptive Study II	Improvement of the framework (version 2.0)	n/a
Descriptive Study III User evaluation workshop	**Workshop (WS-2-LC)** **Local community:** a community-based enterprise: coconut crispy rolls producers **Sampling size:** 16 **Follow-up period:** 3 weeks	- Ease of use - Practicality and usefulness - Level of engagement
	Workshop (WS-3-LC) **Local community:** a community-based enterprise: hand-woven fabric producers **Sampling size:** 12 **Follow-up period:** 6 weeks	
	Workshop (WS-4-LE) **Local entrepreneurs** from Nakhon Pathom province **Sampling size:** 14	
Prescriptive Study III	Improvement of the framework (version 3.0) and facilitator guidelines	n/a
Descriptive Study IV Stakeholder evaluation interviews	**Semi-structured interviews (IN-5-LA)** **Local authorities** under the OTOP programme **Sampling size:** 5	- Ease of use - Practicality and usefulness - Applicability and feasibility
Finalisation and conclusion	Finalisation of the framework (version 4.0) and facilitator guidelines	n/a

5.6 Descriptive Study II: Expert evaluation workshops (WS-1-DE)

Begin The first evaluation workshop was conducted with 12 design experts that have had experience working with grassroots and local communities. The workshops (WS-1-DE) adopted the co-design principle, allowing participants to give their opinion regarding developing the framework. The workshops were divided into three groups of four individuals and were conducted online using Miro – an online collaboration platform (see Appendix C for the collaborative boards). The duration of the workshop was between three and three and a half hours. The workshops comprise three sessions: introduction, exploration, and evaluation. The results of the critical discussion and feedback from the three groups were compared, reviewed, and selected for improvement.

At the beginning of the workshop, the participants were given background information (i.e., brief research background, problems with the OTOP programme implementation, the concept of value co-creation and mutual value, the framework's purpose and its users, and the workshop's purpose). The researcher also allowed the participants to ask questions if they needed to. After the introduction, the procedure and outcomes of the two main activities of the workshop can be broken down into the following.

- **Discussion of open-ended questions to explore value, the value's synonyms in Thai, and possible value for the OTOP entrepreneurs**

  Procedure: As Appreciative Inquiry begins with an affirmative topic, this part of the workshop sought to brainstorm ideas from the participants regarding the affirmative topics and questions. The concept of affirmative topics was explained along with examples. Before constructing the topic, the participants were asked to think of synonyms for 'value' in both English and Thai to form the affirmative sentences (i). It could be useful to select appropriate words when conducting research that requires a translation between two languages. As the languages and choice of words were explored, the discussion shifted to possible values in the OTOP context (ii), which would serve as a foundation when building the affirmative topics. Lastly, open-ended sentences and questions were listed as a result of the collaboration. During the collaboration process, the participants used an online whiteboard with the mind map technique and sticky notes to facilitate the collaboration.

  Discussion of the results: This part's first outcome is (i) the synonym for value in both Thai and English. There were two words in English that were mapped in every group: *purpose* and *benefit*. Similarly, the most frequently words for value explination in Thai can be translated in English as *benefit, pride*, and *usefulness*. In addition to the most frequently mentioned words by participants, there are many other useful words that should not be overlooked, for example, words related to personal emotion (i.e., *goodwill, happiness, pleasure, fulfilment*), those related to outcome (i.e., *satisfaction, beneficial outcome, positive impact, positive consequences, meets expectations, sustainability*), and those related to one's ability (i.e., *bargaining power, self-assurance, creativity*).

  Secondly, the possible values in the OTOP context (ii) were discussed and mapped out. The results were categorised into groups. As a result, the most frequently reported value was well-being, primarily associated with safety issues (i.e., *secure job, family welfare, financial and emotional security, social stability, and life assurance*). This was followed by the personal satisfaction of being part of something (i.e., *equality, joy, happiness, self-*

expression, being part of a community). Next, the value could be in relation to passing on a legacy (i.e., *knowledge, heritage*) to the younger generation. Using the expertise of experts with experience working with grassroots provides a better understanding of local circumstances, which can be applied while working with the locals.

Finally, the open-ended questions and sentences to be used as affirmative topics for discussion were written down and voted on among the participants in order to determine which were most appropriate. Listed below are the sentences that scored two and over.

What is your community's dream that you would like to see become a reality?
In this community, what do you feel most proud of?
What is the most meaningful thing that you have done for this community that you feel proud of?
What do you want to pass on to the young generation?
If you were able to promote something positive about your community, what would it be?
What three words best describe your community?
Do you have any unique characteristics that set your community apart from others?
What is a must-see or must-try in your community?
If you could describe your community's uniqueness in a slogan, what would it be?
What are you proud of being a member of this community?
What legacy have your ancestors left behind?
Compared to living in the city, what are the advantages of living in the country?
What does sustainability mean to you?
What can you do all day without boredom?
What is the most unique asset or resource of your area?
Think about what you/your community owns that you would regret losing.
What is your special talent?
In this community, what makes you feel happy?

- **Co-designing and evaluating the flow of activity, the generative tool, and the technique and appropriate canvas**

Procedure The initial framework (version 1.0) was designed to facilitate an open discussion with design experts through the incorporation of co-design activities. After the discussion of the open-ended questions, this part of the workshop focused on evaluating the flow of the framework, the activities and appropriate techniques, the outcomes of each stage, and the linkage between phases. The participants were guided through each phase of collaboration, beginning with (1) Discovery, (2) Dream/Define, (3) Design/Develop, and (4) Destiny/Deliver. In each phase, the participants were asked to evaluate, discuss and design the key components of the activity, including the context, tool, technique, canvas,

and structure and outcome. Finally, the participants shared a holistic view of an overall framework that can be developed collectively for framework development.

Discussion of the results: Overall, the participants agreed that the framework has the potential to help local authorities facilitate meaningful activity with locals (mentioned by Group 1, 2, and 3), especially with the facilitator, who is perceived as lacking innovation skills (mentioned by Group 2). However, a clear facilitator guide could be seen as important as the process of the framework and should be developed in parallel with the framework (mentioned by Group 2). In addition, the participants also suggested areas of improvement. First, the users of this framework are local entrepreneurs, but the stage of development is unclear (mentioned by Group 1 and 2). An important question asked was: *"Is the framework designed to assist newcomers or existing entrepreneurs who need to develop their businesses?"* The different stages of development require a different starting topic (mentioned by Group 1). As a result, in developing the adaptability of the framework, the starting point needs to be determined for a different type of business.

Phase 1, *Discovery*. This phase of the framework aims to discuss the high points of experience by utilising asset mapping activities. The participants were asked to explore the categories of the local context that can be used in the mapping process along with affirmative questions/topics. The researcher provided some categories at the beginning (i.e., people, relationships, institutes, physical world, economic resources, cultural resources/heritage) for the participants to explore further. Figure 5.9 provides additional dimensions raised by the exploration of the three groups.

Figure 5.9 Additional dimensions of the context for asset mapping

For the mapping process, the participants suggested that it could begin with tangible assets (i.e., physical resources), followed by intangible assets (i.e., relationships,

knowledge, expertise). As a result, the framework could begin with a discussion of tangible assets, which are more straightforward. Then, it could move on to the discussion of intangible assets, which creates a deeper connection to physical assets.

In selecting the mapping canvas, the chosen criteria are (1) ease of use, (2) engaging the user, and (3) application in real-life implementation. A pie chart was preferred by the participants in Group 1 and 3, while Group 2 suggested an actual local map that could build more engagement. The insightful arguments between the pie chart and the actual map provide support for the final selection. In certain situations where the context has nothing to do with a physical location, the map might be irrelevant. In regards to ease of use and application in real life, the circle chart has more advantages as it is a geometry form that is easy to draw. It also gives a sense of completeness and togetherness that is built from small slices of the pie. As a result of considering both the advantages and disadvantages of each method, the framework should utilise the pie chart as a canvas for asset mapping

Phase 2, *Dream/Define*. The discussion focused on the building blocks of value. From the participants' experiences, asking the locals to explain their intrinsic value is challenging (mentioned by Group 1 and 2). A critical suggestion focused on the driver of value. As the OTOP programme seeks the development of local enterprises, the driver of value should emphasise factors that could create success for local businesses (mentioned by Group 2). In line with the participants in Group 3, they also recommended beginning with the problem or “pain point,” turning it into a challenge for creating new value, and then capturing the value along the way. A capture can begin as early as Phase 1 (Discovery). In Groups 1 and 2, the participants remarked that the categories of values aimed to be used as building blocks might be too complex for the grassroots to understand. It may not be necessary for the locals to specify the categories of value. However, the facilitator should address these categories and encourage the locals to think about these value dimensions implicitly.

Phase 3, *Design/Develop*. This phase aims to build agreements. The steps of agreement building consist of (1) selecting the possible value, (2) building an agreement on mutual value, and (3) determining the strategy to achieve mutual value. Several examples of brand statement/mantra building were presented (i.e., The Onlyness by Neumeier (2018) and Make Mantra, part of The Art of Innovation by Guy Kawasaki (TEDx Talks, 2014)). The participants noted that The Onlyness could have potential over other techniques. As a result, they were asked to modify The Onlyness structure to be applicable to mutual

statement building. Figure 5.10 illustrates the mutual value building structure adapted from The Onlyness by Neumeier (2018) and the suggestions from the design experts.

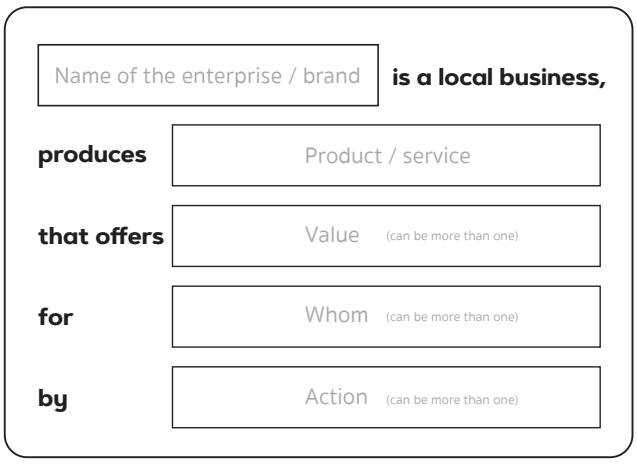


Figure 5.10 Mutual value building structure adapted from Neumeier (2018)

Additionally, the insightful reflections from Group 1 participants indicate that the mutual value building structure provides a clear picture of what value is and whom it benefits. Therefore, by addressing the beneficiaries, the values created here are valid. Furthermore, the participants also suggested that giving an example before letting the locals discuss their values could be useful. Facilitators can provide locals with examples of successful local cases so that they can observe and discuss them. Doing so could create a comfortable environment for people to 'throw ideas around' before constructing their own statements. The process of constructing statements could use keyword cards (suggested by Group 1) or sticky notes (suggested by Group 2 and 3) generated from the previous phase. Regarding value reflection, according to suggestions from Group 3, it is important to let the entrepreneur realise the value at different levels. First, look at how it could benefit the enterprise, then consider how it could benefit their community, and then how it could benefit individuals.

Phase 4, *Destiny/Deliver*. This phase focuses on brainstorming how to translate value into strategy with action plans. The main objective is to create commitment among the members of an enterprise, as well as among entrepreneurs and local authorities. The participants recommended using a flow chart with sticky notes for mapping (mentioned by Group 1, 2, and 3). In creating action plans, it is critical to make sure that the plans are related to the needs and benefits of the participants. The commitment-building process can enable them to visualise their success. When actions are mapped, a goal becomes clearer and easier to accomplish. There was a suggestion that a time frame and follow-up

engagement are crucial. Accordingly, the action plan could include a long-term and short-term plan with a clear time frame.

In relation to government support, facilitators could identify strategies and actions that could be implemented in conjunction with government support in order to accelerate the goal. Transparency regarding support services could be made clear. By participating in this activity, local authorities and entrepreneurs could build their commitment and create a partner-like relationship.

5.7 Prescriptive Study II: Improvement of framework (version 2.0)

After gathering all of the suggestions from the evaluation workshop with design experts (WS-1-DE), the researcher combined the critical comments to evaluate the framework. In conclusion, the framework was revised, as shown in Figure 5.11. The selected tools to be used during the workshop were also tailored to fit the context.

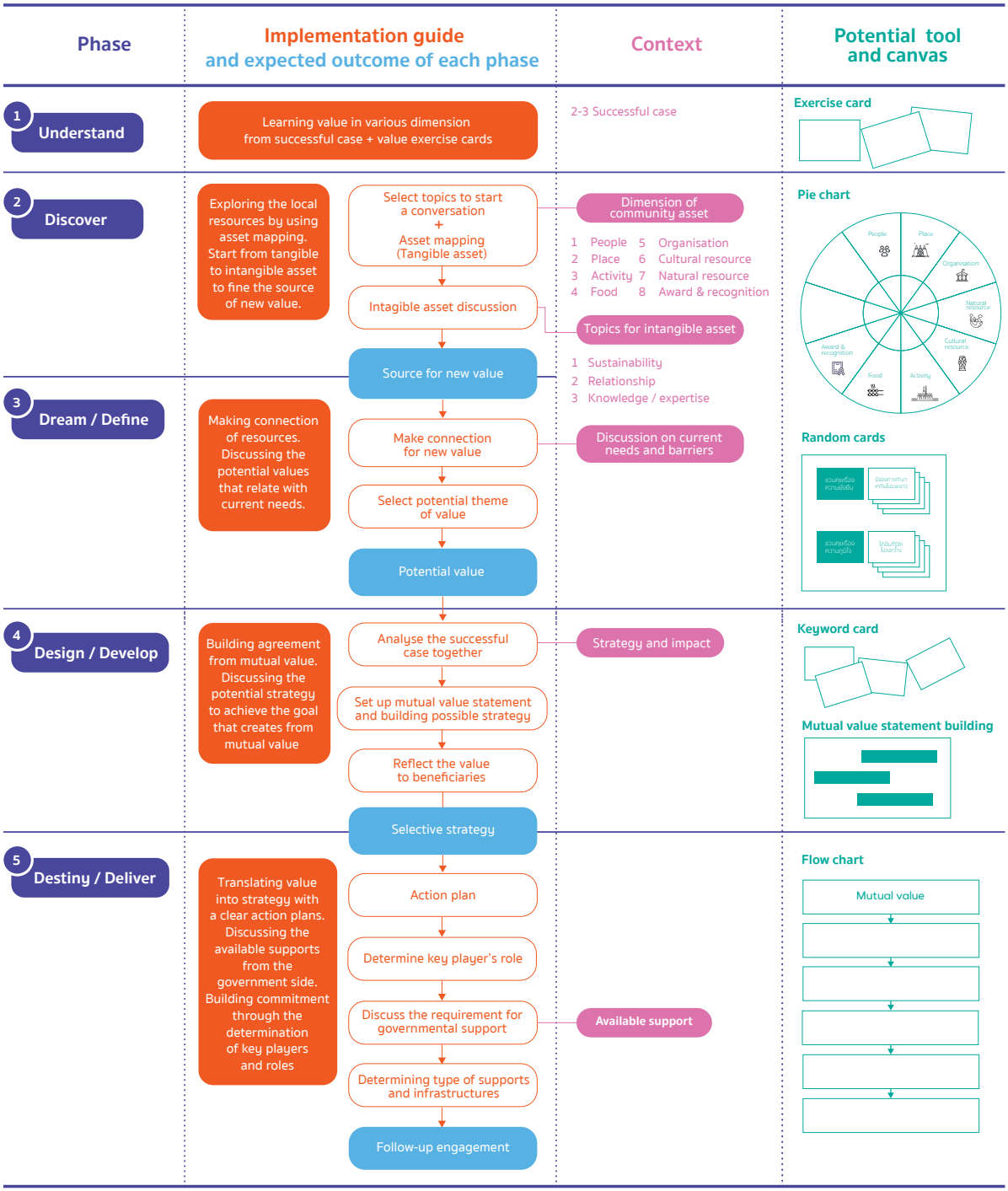


Figure 5.11 Value co-creation framework version 2.0

5.8 Descriptive Study III: User evaluation workshops

This part of the research (Descriptive Study III) comprises three workshops with the users of the framework: (1) a community-based enterprise (WS-2-LC, sample size N=16), (2) a

community-based enterprise (WS-3-LC, sample size N=12), and (3) local entrepreneurs (WS-4-LE, sample size N=14). In the first two groups, the researcher aimed to evaluate the ease of use, practicality and usefulness, and user engagement focused on a community-owned enterprise where the participants are doing the same business. On the other hand, the third workshop explored specific elements of the framework and examined how the framework could be adapted when it was used by entrepreneurs from various industries. The data of the workshops were collected through observations, workshop output, informal interviews, and questionnaire surveys. These three workshops adopted an iterative approach. The outcomes of the previous workshop determined what could be improved for the next one. Additionally, the researcher participated in the workshop as a facilitator during Descriptive Study III as well as being a researcher.

5.8.1 Workshop with a community-based enterprise (WS-2-LC): Thai coconut crispy rolls producer

The first user evaluation workshop was conducted with a community-based enterprise from Baan Krok Makha Nuea village, Phra Thong Kham District, Nakhon Ratchasima province. The group produces coconut crispy rolls distributed in the local market. The group comprises 18 members, who also work for this enterprise as a side job. The workshop was organised in collaboration with academics of the Faculty of Business Administration at the Rajamangala University of Technology Isan (RMUTI) under the U2T (University to Tambon) programme run by the Ministry of Higher Education, Science, Research and Innovation. They took part as the local public body responsible for local enterprise development of the programme.

Prior to the workshop, a researcher visited the enterprise site and conducted an informal interview with the leader and members in order to better understand the work environment and how they live. Figure 5.12–5.14 shows the production site, which is also the leader's house.

Figure 5.12 Coconut crispy rolls product, produced by the group

Figure 5.13 Production site

Figure 5.14 Traditional Thai crispy roll making station

5.8.1.1 Phase 1: Understand

Procedure: After visiting the production site, 16 group members attended the workshop held at the village community hall. Based on the latest phase of the framework, the session began with the Understand phase. A brief introduction and instructions were given. Successful cases were presented along with a value exercise activity. The example of a successful case was obtained from the brand's social media channels (i.e., Facebook posts, written content, pictures). The participants were instructed to record the value that they gathered from successful cases by using the value exercise card and a set of shout-out cards (a value ready card for pick-and-choose). The duration of this phase was 40 minutes.

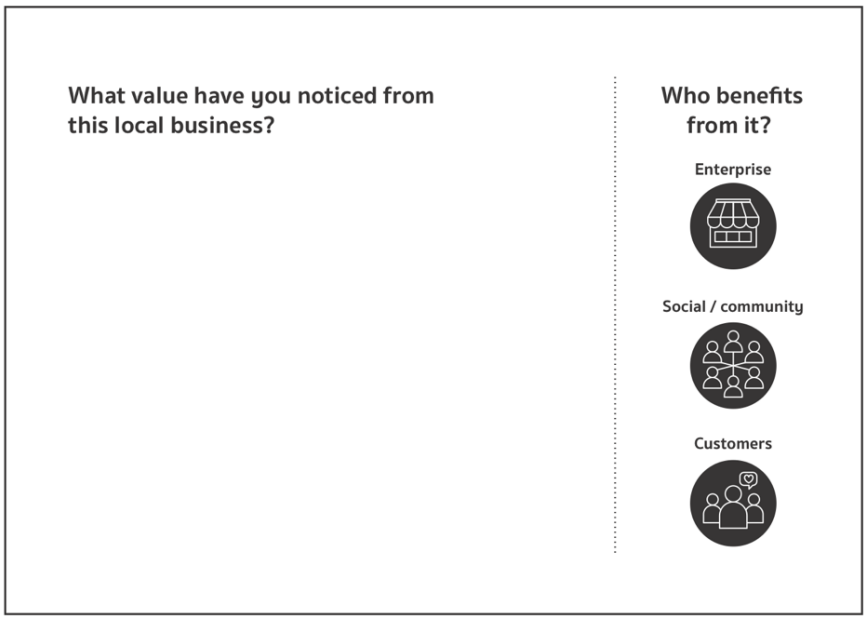


Figure 5.15 Value exercise card

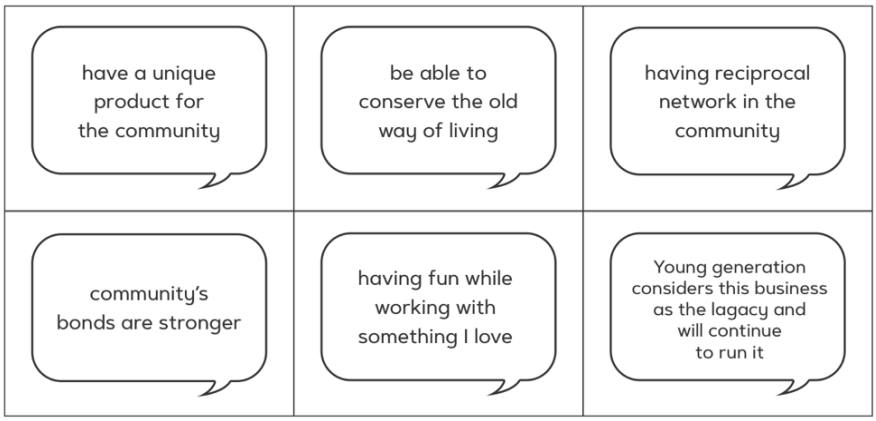


Figure 5.16 Shout-out cards: a value-ready cards for pick-and-choose

Figure 5.17 Value exercise cards and shout-out cards in use with the participants

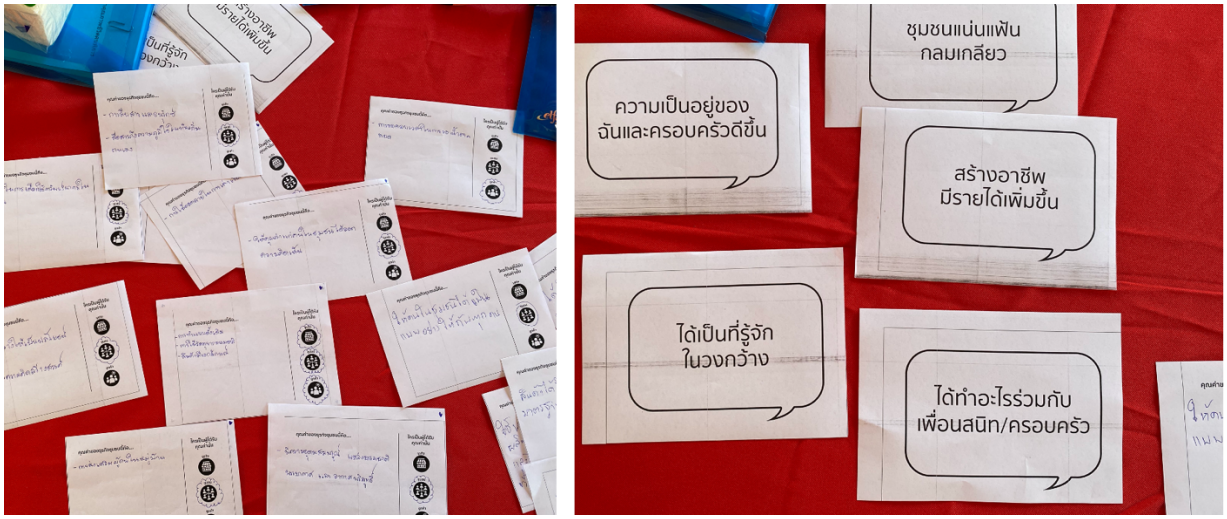


Figure 5.18 Outcome of the ‘Understand’ activity

Outcome: The participants hesitated at first to write on the card. The researcher had to encourage them and point out the value from the case and utilise the use of the value-ready shout-out cards. After several examples, the participants were able to write down the value and select the beneficiary by themselves. The average number of cards that a person produced was 4–8.

5.8.1.2 Phase 2: Discover

Procedure: At this phase, the participants were asked to map out their assets. Before beginning the process, the participants were divided into two groups. Topics for mapping (as illustrated in Figure 5.19) were given to each group. The researcher chose a topic randomly for the participants to discuss, and the participants then wrote down their ideas using sticky notes and mapped them out on the pie chart canvas. The sticky notes, such as the leader of the group and the respectful monk who influenced people in the community, were placed under the topic "People". In the topic "Natural resources", items such as coconut, pandanus leaf, banana, asparagus, and compost made from cow's droppings were written down. After finishing the mapping, the researcher asked them to present the outcomes and draw connections towards building blocks of new value. This phase took roughly one hour to finish.

Figure 5.19 Topics for asset mapping

Figure 5.20 Asset mapping process with the participants

Outcome: The outcome of this activity was mapped onto the canvas as shown in Figure 5.21. Using the list in Figure 5.19 as a guide, local assets were categorised and discussed by topics. Further discussion also aimed to establish connections where applicable. For instance, the knowledge of agriculture and handcraft were linked to the individuals who impart this knowledge to the community. Local beliefs were also associated with the places where ceremonies take place. The asset mapping results were considered rich. Comparing the outcomes of the two groups, Group 2 produced more sticky notes with all of the topics provided to complete the pie chart. Additionally, the activities' outcomes shows that they were capable to connect value and attach value cards (both tangible and intangible) to the canvas. When presenting their idea, Group 1 was observed to be reluctant as Group 2 performed better. Nevertheless, the researchers encouraged them to share their ideas without comparison in a spirit of togetherness. By doing so, the ideas began to form potential new value. The researchers pointed out the ideas that emerged from the two groups, which may indicate that the idea was most relevant for them.

Figure 5.21 Outcomes from the asset mapping: Group 1 (left) and Group 2 (right)

5.8.1.3 Phase 3: Dream/Define

Procedure: In this phase of the workshop, the two groups were combined into one to discuss the potential development and its value. The asset map was used and referred to. In order to help the participants grasp the idea, The researcher helped make connections among the occurred values. The researcher then raised the topic of discussion using affirmative open-

ended questions to stimulate the conversation and to expand the potential development and the value attached to it. The challenges and issues were also brought up in the discussion. Thus, the researcher and participants helped connect the dots by drawing lines and circling the related sticky notes on the map. The period of this process lasted about 60 minutes.

Figure 5.22 The asset maps on the board for presentation and making connections

Outcome: A rich discussion revealed information that could lead to new development opportunities. For example, the information gathered from the participants shows that natural resources in the village have been used to produce crispy rolls (e.g., bananas, jackfruit, pandan). The crispy rolls are made without electricity on a traditional hob. The thinness of the rolls is a unique feature that local customers appreciate. They have never stocked their products for a long time since they will be sold to customers quite fast. The distribution channels in the local area match the volume of production capacity. Hence, a new distribution channel is not what they seek to develop. As a result of the goods being cracked during transportation, the participants cited the need for improved packaging structures. A new label also needed to be developed as they have been using inconsistent designs. The flavour difference cannot be identified from the label. In the group, the members run several businesses under the leadership of one leader. It was evident from the conversation with the participants that the leader is well-liked by the members. They are proud of what she does for the community, bringing extra income for the group. The participants report that this group's workforce is managed well. The workers are capable of rotating between several jobs while maintaining the main job (rice cultivation) during some seasons. Accordingly, the results of

this phase will continue to be used in the next phase in order to evaluate potential development opportunities.

5.8.1.4 Phase 4: Design/Develop

Procedure: The objective of this phase underpins the agreement building concept and uses it to construct the mutual value and strategy for new development. It was done through the use of the mutual value building structure. The sticky notes from the previous phase were taken out and rearranged on the canvas while new notes were written and added to the canvas. The duration of this phase was about 40 minutes.

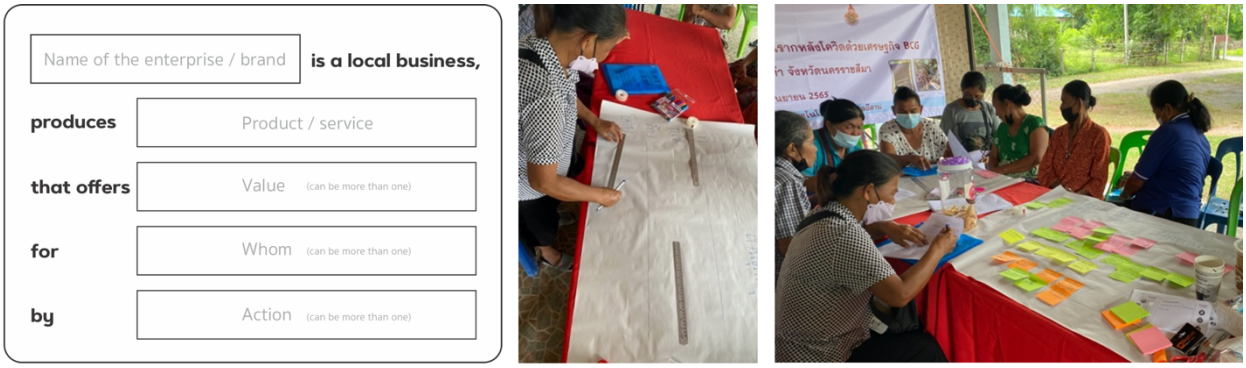


Figure 5.23 Mutual value building structure (left), and while in use (middle and right)

Figure 5.24 Mutual value building structure while in use

Outcome: After the discussion, the outcomes of this phase was constructed based on the input of the participants. By using the mutual value building structure, potential strategies were identified and evaluated based on their associated values. The beneficiaries were also identified. Finally, the actions necessary to achieve the potential strategies were determined (see Table 5.9).

Table 5.9 Structure of the potential developments with value attached, beneficiary, and action: WS-2-LC

Potential strategy (PS)	New crispy rolls flavour (PS1)	New packaging structure (PS2)	New packaging label (PS3)	Expand business opportunities (PS4)
Value attached	Having fun exploring new ingredients Excitement from receiving customers' feedback	The product will be well-protected and delivered to the customer in good shape.	The brand will be communicated better. The label can help the customer identify the flavour more easily.	Supporting other enterprises that are run by members of the group Creating a reciprocal network
For (beneficiary)	Enterprise Customers	Customer	Enterprise Customers	Members Enterprise
By	Exploring new savoury flavours	Using more protective packaging material	New design of the label and adding all the flavours with a checkbox for identifying what is inside	Incorporating with the member's own businesses to create a special occasional hamper using local goods (i.e., coconut crispy rolls, salted eggs, crispy sliced banana)

The participants were asked to evaluate potential strategies. They agreed on all of them while prioritising the first three (i.e., PS1, PS2, PS3).

5.8.1.5 Phase 5: Destiny/Deliver

Procedure: Due to the time limitation of the U2T programme, the workshop could only run for one day. During the workshop, this phase of the framework was not fully tested or evaluated with all of the stakeholders (namely: local entrepreneurs and local authorities). However, participating in the U2T programme allows the researcher and academics from RMUTI to take a role of the local public body to implement the strategy into action. The discussion in this phase centred around the requirements to develop all of the strategies. After the workshop, the researcher conducted informal interviews with some of the participants (including the leader) to discuss the potential of the OTOP service and support if local authorities take part and implement the framework, create an action plan, and discuss available support with the

locals. Furthermore, the discussion also went towards the evaluation of the framework in terms of ease of use, and its practicality and usefulness.

Outcome: According to the discussion about the action plan within the limited time frame of the U2T programme, the 'new packing structure (PS2)' and 'new packaging label (PS3)' were executed and had a result as shown below. The co-design activity initiated discussions about the requirements for the new packaging and potential solutions, which were handed over to the designer. As a result, a new packaging structure was introduced to provide additional protection for the products. The label design reflected the members' consensus on brand presentation, including colour, the image of a tamarind tree, and the main ingredients. The label was created to incorporate the new flavour and can be marked according to the flavour inside. For the 'new crispy rolls flavour (PS1)', it has not been carried out within the timeframe of the programme; however, the members of the group committed to developing a jackfruit flavour as the new flavour for the crispy rolls.

Figure 5.25 Packing development as a result of the workshop

The participants of the interviews expressed that this process could be useful and effective if the local authorities are involved and create commitment together with the group. The action plan and support could be well-synchronised and produce the most beneficial outcomes for both the enterprise and the local government. During the follow-up process, the leader also mentioned that she would like the local authorities to check back and see if the support they provided had a good impact or not, which could lead to good relationships and profound development.

5.8.1.6 Results from the questionnaire surveys after the workshop

After the workshop, the participants were asked to fill in the questionnaire surveys, and they returned only 11 out of 16 forms. As a result (see Table 5.10), the participants were satisfied with the overall process (90.90%). Regarding comprehensiveness, all of the participants

strongly agreed that the process was *easy to understand* (100%) and *easy to follow* (agree 45.45%, strongly agree 45.45%); and most of the participants agreed and strongly agreed that the framework helped to boost creativity, achieve goals, and led to sustainability. A few aspects received strong disagreement and disagreeing feedback, namely: *'business needs analysis'* (strongly disagree 18.18%), *'achieve new business value'* (strongly disagree 9.10%), *'intrinsic value reflection'* (disagree 18.18%), *'agreement building'* (disagree 9.10%), and *'new perception of benefit'* (disagree 9.10%). Even though the weight of the agrees and strongly agrees was significantly higher in these aspects, this should not be ignored. The researcher will revise the process for further framework development.

Table 5.10 Descriptive statistics: Feedback from workshop WS-2-LC

WS-2-LC (N=11)	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Easy to understand					11 (100%)
Easy to follow			1 (9.10%)	5 (45.45%)	5 (45.45%)
Practicality and usefulness					
Boost up creativity				4 (36.36%)	7 (63.64%)
Understand the benefit of exploring business value				1 (9.10%)	10 (90.90%)
Achieve new business value	1 (9.10%)			6 (54.55%)	4 (36.36%)
New perception of benefit		1 (9.10%)		3 (27.27%)	7 (63.64%)
Agreement building		1 (9.10%)		5 (45.45%)	5 (45.45%)
Intrinsic value reflection		2 (18.18%)		3 (27.27%)	6 (54.55%)
Business needs analysis	2 (18.18%)			4 (36.36%)	5 (45.45%)
Leading to sustainable development				3 (27.27%)	8 (72.73%)
Overall satisfaction				1 (9.10%)	10 (90.90%)

5.8.1.7 Reflection and discussion for framework improvement (version 2.1)

In conclusion regarding the framework development, the critical points were raised after analysing the workshop results, which are summarised below.

In the *Understand* phase, the participants became familiar with the business value quite well. The value dimensions helped them to expand their perception of value through the successful cases and value exercise cards. In the *Discover* phase, the participants mapped out their assets from physical resources to intangible resources. The outcomes of this phase were fruitful and can be referred to in the next phase. Regarding the number of groups, dividing them into two groups created a sense of comparison, which resulted in reluctance while presenting their thoughts to the group. In *Dream/Define* phase, the aim was to build the blocks

of value; however, referring to the asset map seems inadequate. The issues and challenges had not been discussed, resulting in the purpose of development remaining unclear. The researcher later adopted the challenge mapping process in the next workshop in order to determine whether it would facilitate the value drivers more effectively. During the *Design/Develop* phase, the mutual value statement building structure appeared to be useful for building agreements. As a result, the strategies were set up in a straightforward manner. For the *Destiny/Deliver* phase, it was not fully tested due to the limitations in participant recruitment and time constraints. This phase, then, will be evaluated later with local authorities.

5.8.2 Workshop with a community-based enterprise (WS-3-LC): Hand-woven fabric producer

The second user evaluation workshop was held one week after the previous workshop. The participants were members of a community-based enterprise producing hand-woven fabric in Baan Huay Yang Tai village, Phra Thong Kham District, Nakhon Ratchasima province. All of the group members (12 people) participated in the workshop. Similar to the previous community-based enterprise group, this workshop cooperated with the Faculty of Business Administration, Rajamangala University of Technology Isan (RMUTI), under the U2T (University to Tambon) programme. Framework version 2.1 was adopted to facilitate this workshop.

Figure 5.26 Production site visit

Before the workshop, the researcher visited the village and conducted an informal interview with the group leader. The leader demonstrated the fabric that the members produced as well as described the resources used, the production capacity, and certification from government agencies. She also examined the process of making the fabric using a wooden loom. Various handmade fabrics are produced by the group (such as loincloths, Hangkrarok silk, and Mudmee silk). Visiting the production site allows the researcher to understand the context of their business.

Figure 5.27 The process of making the hand-woven fabric

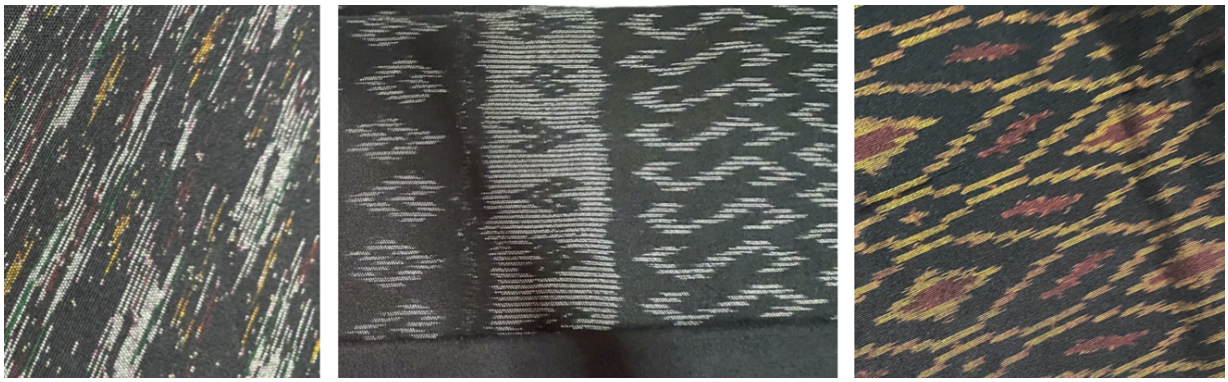


Figure 5.28 Examples of fabrics produced by the group

Figure 5.29 Outsourced pre-tie-died yarns (left) and after dyeing (right)

The procedure at each stage is slightly different from the previous workshop (i.e., adding challenge mapping and the revised structure of mutual value building), as described in the following section.

5.8.2.1 Phase 1: Understand

During this phase, the same activities and tools were used as in the previous workshop. The participants were able to write down their responses on the exercise card. However, most of the participants in this workshop were elders, and some of them were unable to write on it. The facilitator used a slightly different approach by discussing with the participants and outlining the question (*'What value have you noticed from this local business?')* and encouraging them to answer and identify the beneficiaries. Thus, it can be concluded from the participants' responses that they comprehensively understand value and its beneficiaries.

5.8.2.2 Phase 2: Discover

Procedure: Participants joined the session as a group. At the beginning of this phase, challenge mapping was introduced to extract and to gather the current problems. It was begun by asking the following questions: *'What challenges or problems does the group face in doing business?'* and *'What would be a new change you would like to see in doing business?'* Then, a researcher helped them write down their ideas on paper. Some of the participants wrote their ideas on sticky notes that were later attached to the same paper. Later, asset mapping was also used for idea exploration. The researcher randomly picked the topics for discussion of the physical assets and wrote down the information gained from the participants on sticky notes. This part of the workshop lasted 90 minutes.

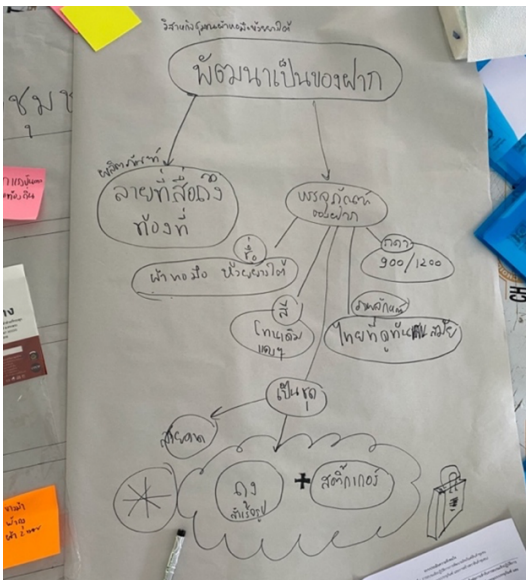


Figure 5.30 Challenge mapping process

Outcome: For the challenge mapping part, the conversation began with a discussion on how to enhance the value of the product. This discussion was documented using a mind mapping technique, branching out to address requirements and potential agile solutions. The discussion offered insights into the difficulty of conveying local identity through product design, primarily due to a lack of skills in design creation and tie-dye techniques. During the discussion, other requirements, such as packaging the product for special occasions, were also identified.

For the latter part, the asset mapping, the researcher treated the outcomes from challenge mapping as a value driver starting point, then encouraged the participants to see other opportunities from the asset mapping. The asset mapping process produced purposeful outcomes since the drivers from the first part were clearly defined. Moreover, asset mapping was particularly useful in defining a new unique pattern from their current assets.

Figure 5.31 Asset mapping process with the participants

Figure 5.32 Outcome of the asset mapping

5.8.2.3 Phase 3: Dream/Define

Procedure: This phase aimed to explore potential development and its value by discussing the outcomes from the previous phase. The same procedure as in the last workshop was adopted, and affirmative topics and open-ended questions were used. The intrinsic value was extracted from the discussion by the researcher using green sticky notes.

Figure 5.33 The researcher and participants discussing on the potential developments

Outcome: As a result of discussing the outcomes, opportunities for the new development were uncovered through a rich discussion. For instance, the group was selected to receive the royal fabric pattern designed by the princess and to get the opportunity to weave the fabric for the royal family, which allowed them to acquire new knowledge of tie-dying yarns. This can solve the situation that the group currently outsources the pre-tied yarn, where the patterns are limited to what the supplier can provide. By gaining new knowledge, they are able to create new patterns without limitation. Concerning the goal of developing the product as a gift, the discussion focused on finding which group of customers would be the target group. Several target groups were mentioned (e.g., government officers and wedding guests). Gift-giving occasions were also explored according to the target groups. Furthermore, creating a new pattern highlighted the product's uniqueness which can be emphasised as a brand story for telling a gift receiver. Further discussion of the new pattern, asset mapping was often referred to, and local foods and their ingredients were pointed out (e.g., Pad Mee Korat – stir-fried noodles). The area's name, Huay Yang Tai, represents the local tree that produces a unique shape of fruit that can be turned into a design element. The fascination with the local language was also discussed, and potential new designs emerged. Once the design has been discussed, the packaging for the gift needs to be developed. Finally, the gift requirements were stated (i.e., low-budget, sizes, products that it could contain).

Regarding the intrinsic value reflected from the discussion, the participants reported that they were proud of being part of producing the hand-woven fabric in the province (as the province's slogan has a phrase that represents 'deliciate hand-woven fabric'). In addition, they are proud of being a positive example for the young generations to let them see that folk wisdom can generate income for the family. To summarise, the results of this phase were used in the next phase to develop mutual value and to select potential developments.

5.8.2.4 Phase 4: Design/Develop

Procedure: The procedure of this phase was adopted from the previous workshop (refer to section 5.8.1.4). The outcomes used the mutual value building structure with the challenge map put on the side as a reference (see Figure 5.34).

Figure 5.34 Mutual value building structure and challenge map while in use together

Outcome: The outcomes of this phase were constructed from the discussion with the participants (see Table 5.11), including the potential for developments, the value attached, beneficiaries, and actions. In addition, the mutual value-building structure was rearranged and developed with an additional row (i.e., intrinsic value). Finally, the participants were asked to evaluate potential developments and they agreed to take all potential development into consideration.

Table 5.11 Structure of the potential developments with value attached, beneficiary and action: WS-3-LC

Mutual value for enterprise	Have new packaging for a gift-giving occasion that the receiver would appreciate	Be able to tie-dye yarns by ourselves	Launch a new fabric pattern inspired by local resources	Influence the young generation to see the potential of the community's business
By (potential strategies)	Developing low-budget gift packaging (PS1)	Learning the tie-dye method and exploring new patterns (PS2)	Developing new patterns inspired from local resources (PS3)	Involving the young generation to help with technology (e.g., online market) (PS4)
Value attached	New opportunity to expand the market Customers have a variety of choices The selling price will be higher due to the new look of the packaging.	New knowledge for members New opportunity to create new patterns	Representing the uniqueness of their the local resources Generating a meaningful gift	Expand the enterprise opportunity Develop new ideas from the young generation
For (beneficiary)	Enterprise Customers	Members Enterprise	Enterprise Customers Community	Enterprise Community Member
Intrinsic value	Enhancing the value of the product	Empowering members' ability To learn new things Boosting creative skills	Disseminating local assets Boosting creative skills	Inheriting the local heritage

5.8.2.5 Phase 5: Destiny/Deliver

The fifth phase involves developing an action plan and discussing the need for governmental support. In order to build a partner-like commitment, local authorities should be key actors in this phase. Due to time and recruitment limitations, the procedure was not fully tested with all stakeholders. The researcher and academics involved in the U2T programme, therefore, play a similar role to local authorities in carrying out the strategies and delivering the outcomes. All phases of the framework were later evaluated by local authorities during the stakeholders' evaluation (Descriptive Study IV).

Procedure: The data collection for this phase was conducted through a discussion with the members of the enterprise. All potential developments, PS1-PS4, were taken into consideration. Due to time constraints, the discussion did not thoroughly cover all of the steps

of this phase as expected (i.e., using verbal discussion instead of mapping on canvas). An online group discussion was created using the Line application for further discussion and information dissemination. The data on strategy execution and support provided were collected through this channel.

Outcome: The action plans, key players, and roles, as well as the requirements for support, were determined as the outcomes of this phase. After the workshop, the online platform was used to communicate work progress and inform the next plans. All strategies were carried out and funded by the U2T programme. The outcomes of this phase, after follow-up, can be summarised as follows:

- PS1: Developing low-budget gift packaging, the requirement of the packaging was discussed. A collaborative designer was sourced by the administrator of the project. The designer helped to source the appropriate structure for the packaging.
- PS2: Learning the tie-dye method and exploring new patterns, the project administrator invited the tie-dyeing experts to teach the locals.
- PS3: Developing new patterns inspired from local resources, members discussed and agreed that they will include the local elements in the design, so after they achieve the tie-dye skill, they can create the pattern by themselves.
- PS4: Involving the young generation to help with technology, for example by putting them in charge of creating social media content. The project administrator outsourced an expert to hold a one-day workshop in photo shooting and content creating. As a result, the young generation and elderly took part in this workshop together.

Figure 5.35 Product for gift-giving occasion (PS1), the low budget gift packaging was developed

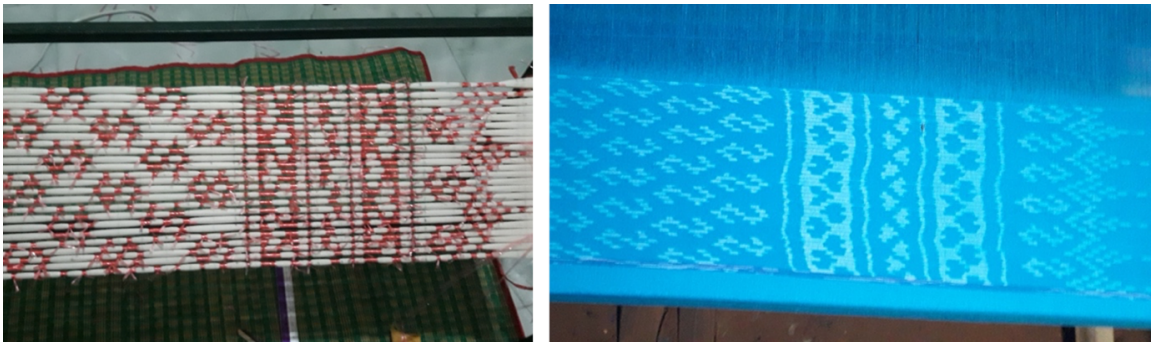


Figure 5.36 Learning the tie-dyeing method (PS2): The tied yarn before the dying process is presented on the left, and the ongoing waving fabric with the dyed yarn is on the right

Figure 5.37 On the left is the pattern from the royal family. In the middle is the pattern created by a member. On the right is the pattern created by a member combining local natural resources as a new design element

Figure 5.38 Involving the young generation (PS4) in the creation of photos for the social media

In order to further develop the framework with the facilitation guides, the researcher organised the outcomes of this phase into a structure, as shown in Table 5.12, to develop the canvas for this phase's activity. Limitations, risks, and available support should be considered once the data has been arranged. As a result, these elements were considered to be added to the framework.

Table 5.12 Arrangement of the outcomes with the action plan, and key players' role and requirements for support

Mutual values for enterprise	Have new packaging for a gift-giving occasion that the receiver would appreciate	Be able to tie-dye yarns by ourselves	Launch a new fabric pattern inspired by local resources	Influence the young generation to see the potential of the community's business
By (Potential strategies)	Developing low-budget gift packaging (PS1)	Learning the tie-dye method and exploring new patterns (PS2)	Developing new patterns inspired from local resources (PS3)	Involving the young generation to help with technology (e.g., online market) (PS4)
Action plans and key player roles	Outsourcing designer to design gift package (Programme administrator)	Outsourcing an expert for passing on the tie-dying technique (Programme administrator)	Adopting local rubber tree winged seeds to the fabric pattern (Enterprise members)	Outsourcing an expert for holding a one-day workshop to provide knowledge about online content creation (Programme administrator)
Determine types of supports	Sourcing appropriate materials for packaging and delivering the design	Making connections with experts to provide and exchange knowledge	Following up the process	Suggestions for further knowledge learning place (both offline/online)
Follow-up engagement	Communicating and engaging with the execution progression through an online group discussion platform			

5.8.2.6 Results from the questionnaire survey after the workshop

After the workshop, the participants were asked to fill out the questionnaire surveys, and they submitted 10 out of 12 forms. As a result (see Table 5.13), most of them strongly agreed on all aspects, with the percentage ranging from 70 to 90. This means that the focus group satisfied the value co-creation framework and saw its potential.

Table 5.13 Feedback from the surveys after the workshop WS-3-LC

WS-3-LC (N=10)	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Easy to understand				2 (20%)	8 (80%)
Easy to follow				1 (10%)	9 (90%)
Practicality and usefulness					
Boost up creativity				2 (20%)	8 (80%)
Understand the benefit of exploring business value				3 (30%)	7 (70%)
Achieve new business value				2 (20%)	8 (80%)
New perception of benefit				2 (20%)	8 (80%)
Agreement building				2 (20%)	8 (80%)
Intrinsic value reflection				2 (20%)	8 (80%)
Business needs analysis				3 (30%)	7 (70%)
Leading to sustainable development				2 (20%)	8 (80%)
Overall satisfaction				2 (20%)	8 (80%)

5.8.2.7 Conclusion for framework improvement (version 2.2)

This section is a summary of the evaluation of the value co-creation framework (version 2.2) – which has slight revisions from the version 2.1 – that arose from the WS-3-LC workshop. The following provides the discussion of the results.

Understand phase: This phase followed the same procedure as in the previous workshop with the coconut crispy rolls group. Therefore, as the participants in this group have less ability to write, the activity was done through conversation. In spite of the different methods of idea expression, the results still indicate that this phase accomplished its objectives.

Discover phase: The use of 'challenge mapping' as an additional step was considered effective in defining current issues and initial needs. However, the structure of the challenge map can be developed further to extract latent needs more systematically. With the whole group of participants, this phase generated more fruitful resources, and provided a better sense of togetherness than the first focus group. Asset mapping also appeared to be more purposeful when used with the challenge map.

Dream/Define phase: Compared with the previous workshop, new business opportunities were quickly discovered when extracting information from the asset and challenge maps. As a result of this phase, intrinsic value was systematically reflected on by using sticky notes for mutual value construction in the next phase.

Design/Develop phase: This phase applied the mutual value building structure with an additional row of intrinsic value. This was to improve the perception of value as an individual and community in order to address the dominant theme: 'new perception of benefit (DT2)'. Furthermore, after analysing the workshop outcomes, the researcher identified missing elements that could be added to the structure, such as key player roles, available types of support, limitations on both sides, and risks.

Destiny/Deliver phase: Due to the time constraints and the recruitment of local authorities to participate in the workshop, the researcher collaboratively took part in the U2T programme and acted like a support body. After following up on the results of the workshop with the channel created by the U2T programme administrator, the potential developments from the workshop were executed. This means that the value co-creation process created new developments that could be used in a real-world situation.

However, after summarising the results from the workshop WS-2-LC and WS-3-LC, there were some elements of the framework that needed to be tested and revised further (i.e., challenge mapping process and structure). Therefore, the next workshop aimed to explore this aspect forward.

5.8.3 Workshop with local entrepreneurs (WS-4-LE)

The workshop WS-4-LE is the fourth evaluation workshop. This workshop explored the challenge mapping process further, as it could be an essential component as a value driver. This section examines the procedures and the outcomes of the workshop that form framework version 3.0.

Prior to the workshop, the structure of the challenge map was created (see Figure 5.39), based on the four key areas of development of the local business, which are: (1) product and service, (2) marketing and communication, (3) production and management, and (4) networking and social relationships. In addition, any challenge and issue could be specified with its causes in order to obtain a better understanding of the surrounding context.

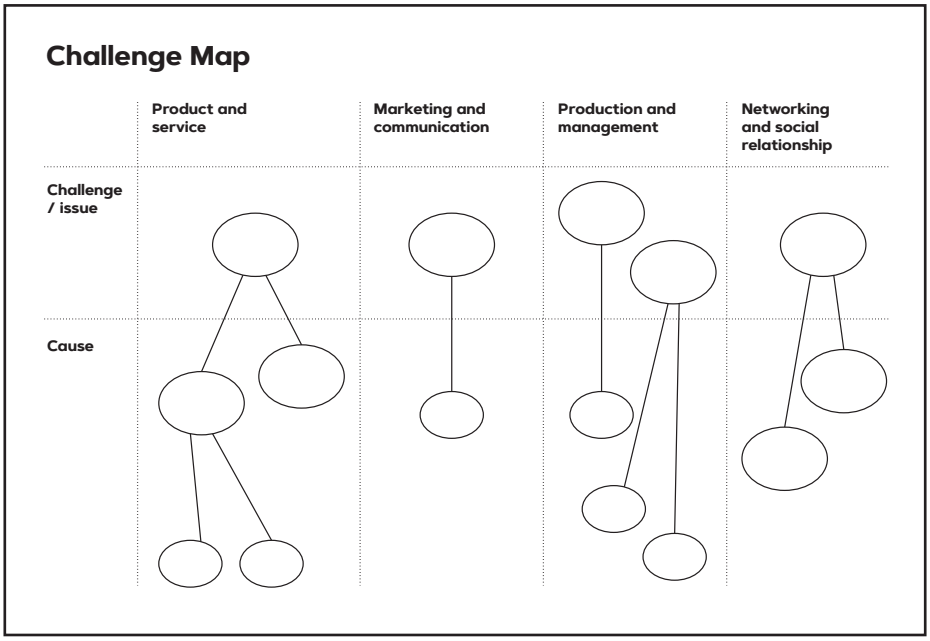


Figure 5.39 Challenge map developed with key areas of development

A half-day workshop was done with 14 local entrepreneurs from Phutthamonthon district, Nakhon Pathom province with two research assistants. The participating businesses produce various types of products, which can be categorised according to the OTOP system: (1) food and beverage group, (2) fabric and fashion accessories, (3) home decoration and souvenirs, and (4) non-food herbal products.

Table 5.14 Participants categorised by different types of products

No.	Group	Product
LE-01	Food and beverage	Rice producer and farm products
LE-02		Homemade Thai dessert
LE-03		Traditional Thai snacks
LE-04		Cannabis drink
LE-05	Fabric and fashion accessories	Hand embroidered t-shirts
LE-06		Leather products
LE-07		Batik fabric
LE-08		Thai fabric-covered jewellery boxes
LE-09	Home decoration and souvenirs	Thai porcelain products
LE-10		Models of the Thai Khon mask from the Ramakien epic
LE-11		Carved Buddha wooden frame
LE-12	Non-food herbal products	Herbal insect killer
LE-13		Herbal insect repellent product for pets
LE-14		Herbal toothpaste

Figure 5.40 Local products that the participants brought to the workshop

Procedure: At the beginning of the process, the researcher asked the participants to introduce themselves with a brief description about their business and present the products. After that, they were divided into four groups according to the types of products (see Table 5.14). The researcher gave an introduction of the challenge mapping process and presented examples and asked the participants to discuss the example cases together. The time used for each group to discuss was 45 minutes. The researcher and research assistants rotated between the groups to encourage a discussion. After the discussion, they were asked to give a presentation of the map.

Figure 5.41 Participants introducing themselves and giving a brief introduction about their business

Figure 5.42 Four groups of participants discussing the challenge mapping process

Outcome: The process began with the question, *'What are the challenges/issues you are facing as an entrepreneur?* The participants shared their thoughts and mapped them out on the paper. Then, the researcher and research assistants asked them to expand the problem one by one to see its causes and roots. Furthermore, beyond the problems and its causes, the brainstorming went towards an “agile solution” to the issues. The solutions they discussed was later examined to see what support they needed from the local authorities. The outcomes of the challenge mapping were divided into groups of entrepreneurs (see Figure 5.43).

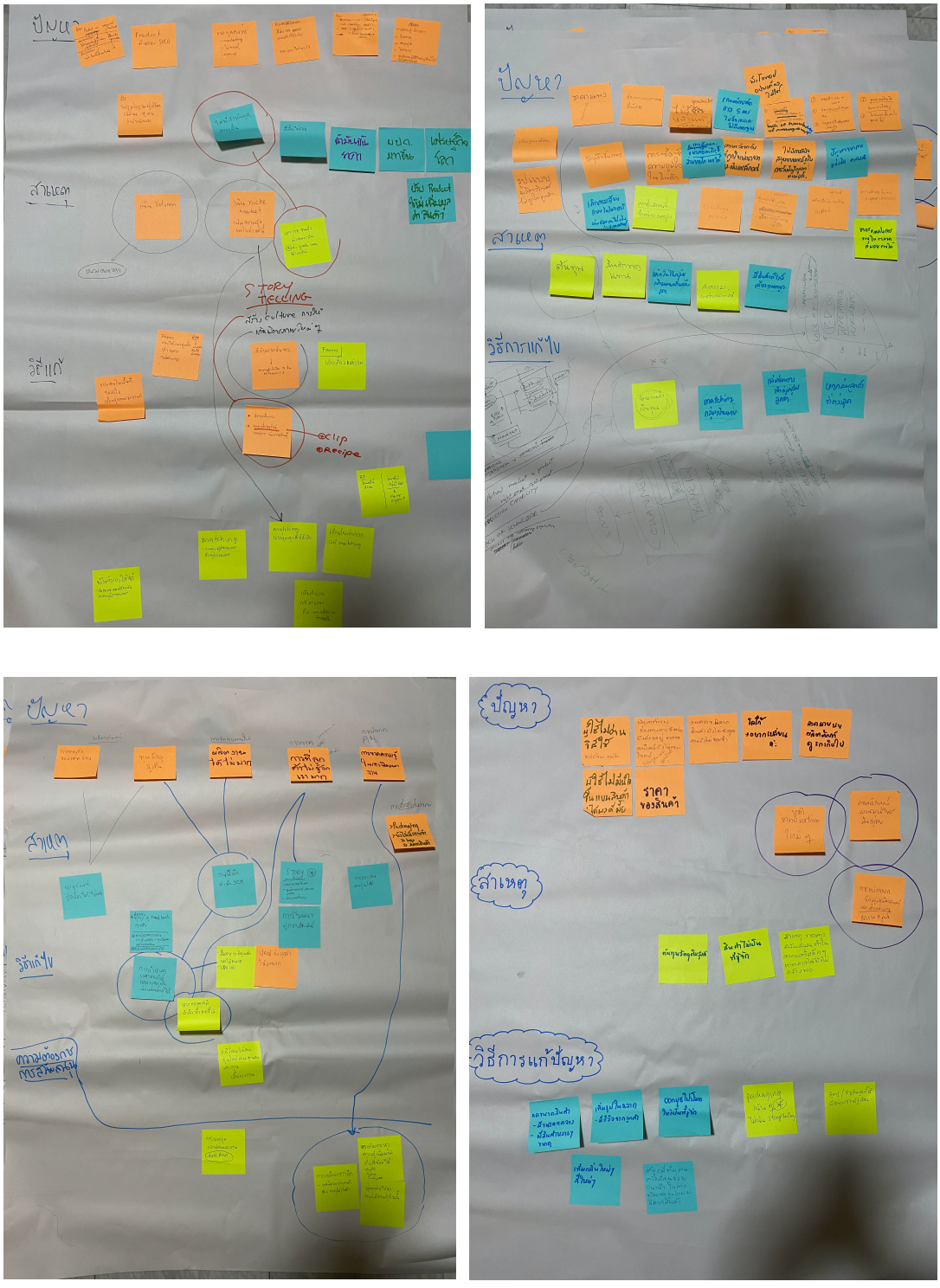


Figure 5.43 Outcome of the challenge mapping: top left from ‘Food and beverage’ group, top right from ‘Fabric and fashion accessories’, bottom left from ‘Home decorations and souvenirs’ group and bottom right ‘Non-food herbal products’

As a result, the common issues within each group were collected (as shown in Table 5.15). When comparing the results from all groups, one theme that emerged in every group was *'making a connection.'* They want the support that provides a connection for developing their business (i.e., matching the right customers, distributors, and knowledge providers). This

could be one of many challenges that local authorities can address and for which they can provide support regarding this issue.

Table 5.15 Common issues in different group of entrepreneurs

Food and beverages • Agricultural production is limited due to seasoning changes. • Agriculturists' knowledge does not meet the expectations of the enterprise. Outsourcing an extra workforce usually involves apprentices. • The food and beverage enterprise has two main operational directions: large batch production (emphasis on volume) and small batch production (quality/consuming culture). These two groups use different marketing communications, which require different support. The standard/trademark/certificate for guaranteeing is different between the two groups. • Creating a cluster among producers (to increase negotiating power with buyers/modern trade) is not easy. • Innovation about prolonging shelf-life/packaging • It is difficult to create an outstanding brand when everyone is doing the same thing in the market.	**Home decorations and souvenirs** • Unable to manage the cost and selling price to cover all expenses and get enough profit Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Logistics problems due to fragile products • The customer does not understand the value of the product. • The entrepreneur does not know how to add value to the product. • The entrepreneur does not know how to communicate artistic value. • Lack of craftsmanship skill in the young generation • Lack of knowledge of applying chemicals for product finishing • Lack of negotiation skills when dealing with the customer about the waiting time
Fabric and fashion accessories • Unable to manage the cost and selling price to cover all expenses and to get enough profit Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Lack of machines/tools to shorten the production time • It is difficult to find new and right market/buyers. • Cannot reach the right customer/buyers • Trends and fashion change over time, and it is difficult to keep up.	**Non-food herbal products** • Repetition of the herbs/key ingredients with other local areas that provide the same benefit • Lack of innovation for new product formulas • The image of Thai herbal products is outdated and unreliable. • Confusion about communication of the product's effectiveness and how to avoid overclaimed advertising • The target market is too small, and the entrepreneur does not know how to expand it.

5.8.3.1 Results from the questionnaire survey after the workshop

After the workshop, the participants were asked to fill out the questionnaire surveys, and they only returned 12 out of 14 forms. As a result (see Table 5.16), overall, the participants agreed and strongly agreed with the evaluation criteria. The highest number of strongly agreed leant about *'problem identification and problem-solving'*. Five of the participants that commented in the questionnaire form stated that *'I would like to paricipate more in activity like this'*, and *'This workshop is very helpful, sharing problems with others help me to see the problem and solution clearer'*, and *'It would be good if the knowledge-sharing workshop can be arranged*

more often with more extended time to explore and discuss further', and *'The addition to this workshop can be a business opportunity in the same type of entrepreneurs'.*

Table 5.16 Feedback from surveys after the workshop WS-4-LE

WS-4-LE (N=12)	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Comprehensive					
Easy to understand				6 (50%)	6 (50%)
Easy to follow				9 (75%)	3 (25%)
Usefulness					
Boost up creativity			1 (8.33%)	6 (50%)	5 (41.67%)
Understand the benefit of exploring business value				8 (66.67%)	4 (33.33%)
Achieve new business value			1 (8.33%)	10 (83.33%)	1 (8.33%)
New perception of benefit				7 (58.33%)	5 (41.67%)
Knowledge exchange				8 (66.67%)	4 (33.33%)
Problem identification and problem solving				4 (33.33%)	8 (66.67%)
Analysis business‘s needs			1 (8.33%)	8 (66.67%)	3 (25%)
Leading to sustainable development			1 (8.33%)	10 (83.33%)	1 (8.33%)
Overall satisfaction			1 (8.33%)	6 (50%)	5 (41.67%)

5.8.3.2 Conclusion for framework improvement (version 3.0)

In conclusion, the additional 'common issues' categorised by different types of entrepreneurs were added to the framework in order to aid the challenge mapping process. Furthermore, doing the third workshop with users from different enterprises also proved that the framework's activities can be divided into chunks with the workshop that had time constraints, and with users from diverse backgrounds. The following section summarises the changes and improvements collected from all of the evaluation workshops to form framework version 3.0.

5.9 Prescriptive Study III: Improvement of the framework (version 3.0) and facilitator guidelines

This section gathers all of the data collected from the all user evaluation workshops in order to identify the changes and improvements in the value co-creation framework.

After the framework's procedure was tested with the users, two community-based enterprises and a group of entrepreneurs from different backgrounds, the researcher took notes for the

framework improvement. As a result, the framework's components were reconsidered to make the procedure more comprehensive. Consequently, the elements added to the framework are:

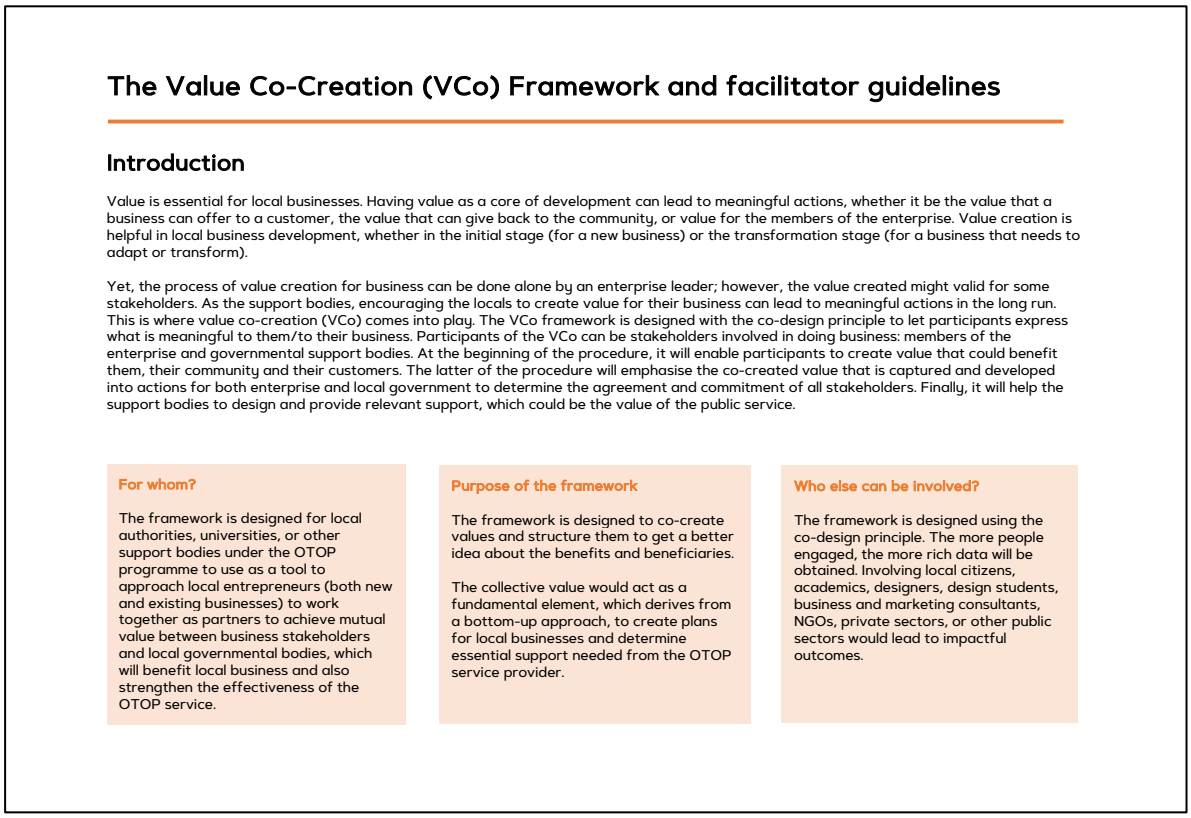
- Introduction: to briefly understand value co-creation for businesses and why it is needed. It includes the user and facilitator of the framework and the purpose of the framework.
- The framework phases use colour coding to separate one from another. It could help divide the framework's procedure into smaller chunks when conducting a workshop with a limited time frame. In addition, the phases' names were changed to indicate their activity straightforwardly.
- The framework overview was redesigned to be easy to follow at first glance. Each phase of the framework has the expected outcomse stated with it.
- In each phase, more details were added to provide an explanation for the facilitator. The instruction comprises essential elements: expected outcomes, duration, 'what to do', 'how to do', examples of tools and the canvas, and the facilitator's note. The facilitator guidelines for framework implementation were formed through the researcher's experience, observations, and analysis of the outcomes of the workshops.
- The key areas for development (see figure 5.44) were also added to the framework (in phase two) to be used as a dimension checklist for facilitating the challenge mapping process.

Figure 5.44 The key areas for developments in the OTOP business

- The common issues regarding groups of entrepreneurs were also attached to the framework for the facilitator to learn the possible issue beforehand.

- After studying the common issues, the exploring phase (phase 3) needs to provide more examples of the canvas to serve other problems in key development areas.
- In phase 4, the mutual value building structure was revised with the value dimension's expansion as a ripple effect of potential development.
- In phase 5, the commitment building phase, the flow chart of commitment building was slightly changed to include: limitations, risks, the role of key players, and available and feasibly possible.

In conclusion, framework version 3.0 was developed, as illustrated as follows. Also, see enlarged framework version 3.0 in Appendix F.



The Value Co-Creation (VCo) Framework and facilitator guidelines

Introduction

Value is essential for local businesses. Having value as a core of development can lead to meaningful actions, whether it be the value that a business can offer to a customer, the value that can give back to the community, or value for the members of the enterprise. Value creation is helpful in local business development, whether in the initial stage (for a new business) or the transformation stage (for a business that needs to adapt or transform).

Yet, the process of value creation for business can be done alone by an enterprise leader; however, the value created might valid for some stakeholders. As the support bodies, encouraging the locals to create value for their business can lead to meaningful actions in the long run. This is where value co-creation (VCo) comes into play. The VCo framework is designed with the co-design principle to let participants express what is meaningful to them/to their business. Participants of the VCo can be stakeholders involved in doing business: members of the enterprise and governmental support bodies. At the beginning of the procedure, it will enable participants to create value that could benefit them, their community and their customers. The latter of the procedure will emphasise the co-created value that is captured and developed into actions for both enterprise and local government to determine the agreement and commitment of all stakeholders. Finally, it will help the support bodies to design and provide relevant support, which could be the value of the public service.

For whom?

The framework is designed for local authorities, universities, or other support bodies under the OTOP programme to use as a tool to approach local entrepreneurs (both new and existing businesses) to work together as partners to achieve mutual value between business stakeholders and local governmental bodies, which will benefit local business and also strengthen the effectiveness of the OTOP service.

Purpose of the framework

The framework is designed to co-create values and structure them to get a better idea about the benefits and beneficiaries.

The collective value would act as a fundamental element, which derives from a bottom-up approach, to create plans for local businesses and determine essential support needed from the OTOP service provider.

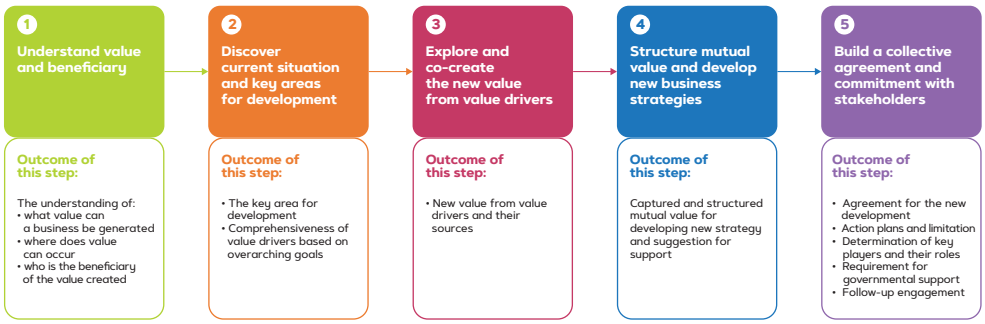
Who else can be involved?

The framework is designed using the co-design principle. The more people engaged, the more rich data will be obtained. Involving local citizens, academics, designers, design students, business and marketing consultants, NGOs, private sectors, or other public sectors would lead to impactful outcomes.

Figure 5.45 The VCo framework version 3.0 (page 1)

Overview of the VCo framework

The VCo framework comprises five phases. The diagram below shows all five of them with the expected outcome of each phase for the facilitator to note when doing the procedure.



The following pages will focus on the guideline for each step and examples of tools that can be used during the facilitation. The structure of each step includes: (1) an expected outcome, (2) what to do, (3) how to do it, (4) examples of tools, (5) facilitator note.

The number of participants can be varied. The VCo procedure can be used with **a single community-based enterprise** or **a group of entrepreneurs** from different enterprises.

Figure 5.46 The VCo framework version 3.0 (page 2)

1

Understand value, its beneficiary and explore the new value

Outcome of this step:

The understanding of:
• what value can a business be generated
• where does value can occur
• who is the beneficiary of the value created

Duration:
1-1.5 hours

What to do?

Discuss about value with the locals by learning and exercising from successful cases

The concept of value might be intangible and vague for the locals. Before co-creating the value, it is beneficial to let them learn from successful case. It helps the locals to understand what value a business can be generated and get familiar with the concept of value and its beneficiaries in their context. The value captured here can be the **functional value of the product and service, economic value, environmental value, social value, emotional value, and knowledge.**

How to do?

A facilitator can show examples from the cases. The form of information can be any of the brand's touchpoints. For example, a good example of social media content with the value presented in text or pictures, a good product or packaging design that value is well-presented. The facilitator can discuss with participants to point out what value can they witness from the case. Furthermore, facilitator can also discuss who is the beneficiary of that value to expand their perspective to think beyond the functional value and monetary value (e.g., social value, emotional value, knowledge).

Examples of value from successful cases

1) "Pean Yod Tarn" (organic palm sugar producer): the discussion about this local business can be about the value and beneficiaries as the table shows below.

The values are:	**Type of value**	**The beneficiaries are:**
Cherishingly and sustainably treat the natural resource	- Environmental value - Social value	- Members of the community (having sustainable resources) - Enterprise (having sustainable resources)
Using the old traditional technique to produce palm sugar	- Social value - Functional value	- Community (folk wisdoms are preserved) - Customer (be able to help preserve the local heritage)
Using organic preservation from wood barks instead of chemical preservative	- Functional value	- Customer (get the organic product without any chemicals)

Figure 5.47 The VCo framework version 3.0 (page 3)

Figure 5.48 The VCo framework version 3.0 (page 4)

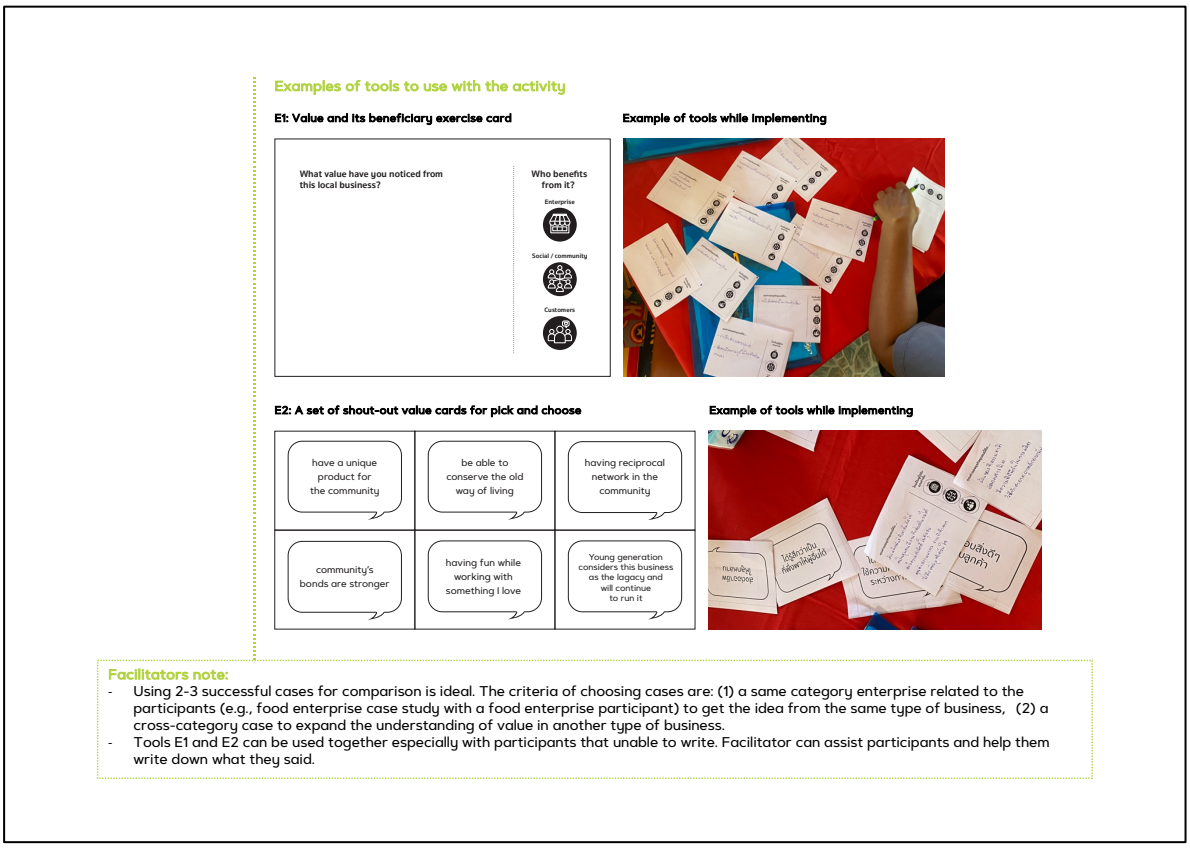


Figure 5.49 The VCo framework version 3.0 (page 5)

2

Discover current situation and key areas for development

Outcome of this step:

- The key area for development
- Comprehensiveness of value drivers based on overarching goals

Duration:
1-1.5 hours

Facilitators note:
The value drivers are subdivided into subsidiary topics listed on the right. The facilitator can use this as a guide or checklist of overall need from participants.

What to do?
Discover the current issue of the enterprise and find the key area of development which can be the value driver
The second step of the VCo is to get to know what they are facing to scope the area of development. It often starts with their explicit needs and requirements; however, it could be latent or tacit needs that they might not realise or be able to express. The expected outcome of this step is to understand the value driver from the key area of development.

How to do?
To get started, interviewing by asking the question to enable the conversation is helpful (see the example of questions below). The value drivers are the key areas for development which can be categorised into: (1) product and service, (2) marketing and communication, (3) production and management, and (4) networking and social relationship. However, the conversation might fall into one area of development; therefore, the facilitator can also ask about other areas to get the latent needs.

Furthermore, the facilitator can ask the questions that underpins the positive mindset towards business development. The positive mindset can be seen as a foundation of every area of development. It can be about, for example, encouraging them to support other local businesses and grow together as a part of the community or letting them think about sustaining their local resources.

Value driver: key areas for development

Product and service	Marketing and communication	Production and management	Networking and social relationship
o Quality o Design o New product line or new collection o Standardisation o Expertise & craftmanship o Research and development (R&D)	o Market channel o Distribution channel o Offline/online marketing o Promotion o Retail/wholesale o Branding o Packaging design o Communication design o Advertising o Finding new potential customer	o Planning o Pricing o Financial management o Logistic o Resource management o Human resource management o Workforce management o Operational management o Law and legitimacy o Trademark registration o Intellectual patent	o Interpersonal network o Interorganisational network o Reciprocal network o Involvement of the young generation o Friendship in community
Mindset:	o Leadership o Keen on new knowledge	o Enterprise's self-sufficiency o Grow together as a part of community	

Figure 5.50 The VCo framework version 3.0 (page 6)

Facilitators note:
The facilitator should ask the question to enabler the conversation which should covers all key areas. Then, try to scope down to what is the dominant value driver.

Example of questions to enable the conversation:

Product and service
- Who designs your product?
- Does your product have a national or international standard?

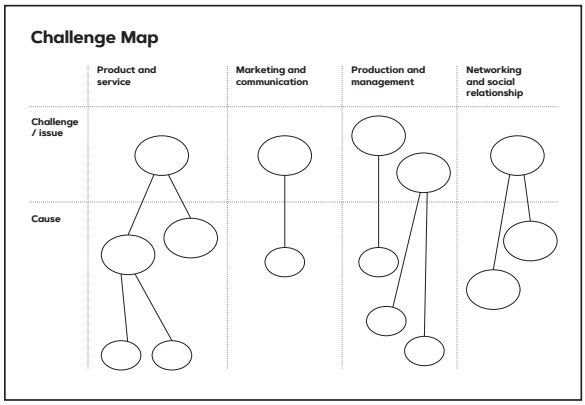
Production and management
- Who designs your product?
- How do you handle a large-amount order?
- In your opinion, how important is to have leadership skill?
- What can you do to sustain local resources?

Marketing and communication
- Where can the customers access your product?
- Do you think your brand communicates to the right target group?

Networking and social relationship
- Do you have reciprocal relationship with other local enterprises? How does it support your enterprise?
- What kind of information shared in your network?
- How can your business support other business in your community?

To aid the conversation, mapping on canvas allows all participants to see the holistic picture and engage better in the discussion. Participants can write down on the post-it note and arrange them on the canvas. The structure of the canvas includes the current issues and the cause of the issues. Once the mapping is done, the key area of development can be concluded, and it can be the value driver for the next step of the VCo.

Example of collaborative canvas:



Facilitators note:
The canvas can be hand-drawn. Participants can involve in mapping on the canvas by writing down their opinion on the post-it note and arrange them on the canvas. The canvas could be big enough for all participants in the group to see. If the VCo runs with the small group of participants (3-10) within the same enterprise, facilitator could use only one canvas to let people help thinking about their business. If the participants are a group of entrepreneurs from different enterprises, facilitator can use more than one canvas, ideally separated the group by types of business that could share the common issues. Presentation between the groups can also be useful.

Figure 5.51 The VCo framework version 3.0 (page 7)

Challenges identified by different types of local enterprises from the previous study

The table below shows the common issues from the previous discussion with each group of entrepreneurs, namely: (1) food and beverage group, (2) fabric and fashion accessories, (3) home decoration and souvenirs, and (4) non-food herbal products. Some issues are shared across the group. The facilitator can use this list as a guideline to learn possible issues beforehand.

Food and beverages • Agricultural production is limited due to seasoning changes. • Agriculturists' knowledge does not meet the expectation of the enterprise. Outsourcing an extra workforce usually involves apprentices. • Food and beverage enterprise has two main operational directions: large batch production (emphasise volume) and small batch production (quality/consuming culture). These two groups use different marketing communication, which requires different support. Standard/trademark/certificate for guaranteeing is different between the two groups. • Creating a cluster among producers (to increase negotiating power with buyers/modern trade) is not easy to happen. • The innovation about prolonging shelf-life/packaging • Hard to create an outstanding brand when everyone is doing the same in the market	**Home decorations and souvenirs** • Unable to manage the cost and selling price to cover all expenses and get enough profit. Appropriate pricing is the issue. • Deficient batch production due to the number of makers • The logistics problem due to the fragile product • The customer does not understand the value of the product • The entrepreneur does not know how to add value to the product • The entrepreneur does not know how to communicate artistic value • Lack of craftsmanship skill in the young generation • Lack of knowledge of applying chemicals for product finishing • Lack of negotiation skills when dealing with the customer about the waiting time.
Fabric and fashion accessories • Unable to manage the cost and selling price to cover all expenses and get enough profit. Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Lack of machine/tool to shorten the production time • It is hard to find the new and right market/buyers • Cannot reach the right customer/buyers • Trends and fashion change over time, and it is hard to keep up	**Non-food herbal products** • Repetitive of the herbs/key ingredients with other local areas which gives the same benefit • Lack of innovation for new product formula • The image of Thai herbal products is outdated and unreliable • Confusion about communication the product's effectiveness and how to avoid overclaim advertising • The target market is too small, and the entrepreneur does not know how to expand it

Facilitators note:

- The list in the table is only the examples generated from brainstorming, however, it might not be applicable with every enterprise.

Figure 5.52 The VCo framework version 3.0 (page 8)

3

Explore and co-create the new value from value drivers

Outcome of this step:

• New value from value drivers and their sources

Duration:
2-2.5 hours

What to do?

Explore and co-create potential values through value drivers and value source

Once the facilitator has learnt what the key area of development is, the **value driver** can be determined. Accordingly, the facilitator can introduce **value source** which is the *subject for discussion* as a starting point of new value exploration.

How to do?

The exploration of new value can be done through thinking, discussion, writing down ideas and mapping out to construct the ideas and let other participants see the whole picture together. The subject for the discussion can be local resources (tangible), or it can go deeper by using the topics that bring out their tacit thoughts (intangible).

Value driver and value source

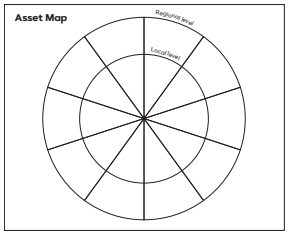
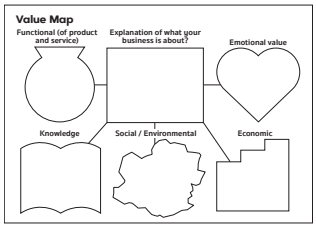
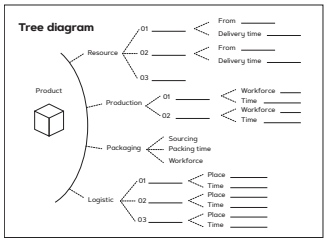
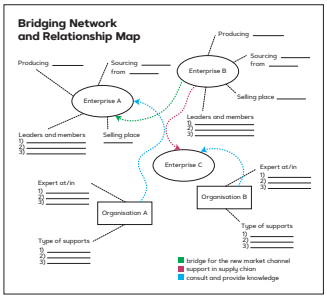
Value driver from key area of development)	**Value source** and technique for exploring and co-creating new value	**Example of canvas for mapping**
Product and services development (For example: to seek a new product collection / new design)	**Value source** (subject for discussion): Community's asset for new inspiration **Suggested technique:** - Asset mapping (e.g., cultural resources, natural resource, places, food)	
Marketing and communication development (For example: to rebrand and communicate the new brand image emphasise on local value	**Value source** (subject for discussion): - What are you proud of doing this business? - What are you proud of being a member of this community? - How does your business offer value to your community and members? **Suggested technique:** Discussion on the topics, grouping by themes using mind mapping (e.g., social value, emotional value, value of achieving new knowledge)	

Figure 5.53 The VCo framework version 3.0 (page 9)

Value driver (from key area of development)	**Value source** and technique for exploring and co-creating new value	Example of canvas for mapping
Production and management development (For example: to source and manage resource more effectively)	**Value source** (subject for discussion): Unfolding the current resource and discussing on how to manage them better **Suggested technique:** Supply chain mapping using tree diagram, assembling by product's parts	
Networking and social relationship development (For example: to bridging and connect a new reciprocal network)	**Value source** (subject for discussion): Finding the support system from current enterprises or organisations (local/regional/national/international) **Suggested technique:** Demand mapping (using local and regional map)	

Facilitators note:

- The lists in the table are the example of value driver, value source and canvas. Facilitator can explore new canvas according to the subject for discussion. Value can be captured in the mapping process or during the discussion.
- The next page will illustrate the example from the real case study using asset mapping.

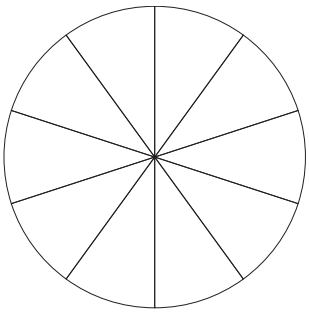
Figure 5.54 The VCo framework version 3.0 (page 10)

Example A: Hand-woven fabric enterprise

Value driver: To seek a new product collection / new design
Value source: Community's asset for new inspiration
Topics for mapping:

คน People	สถานที่ Place	องค์กร Organisation	ทรัพยากรธรรมชาติ Natural resource	ทรัพยากรวัฒนธรรม Cultural resource	กิจกรรม Activity	อาหาร Food	รางวัลและชื่อเสียง Award & recognition
• คนมีชื่อเสียง • คนที่มีความสามารถเด่น • คนที่มีความสัมพันธ์ที่ดีกับคนในชุมชน	• ที่รวมตัวกัน • ที่สืบสรรค์ • ที่ที่เกี่ยวข้องกับวัฒนธรรมประเพณี • ที่ที่เกี่ยวข้องกับศาสนา • พื้นที่ออนไลน์	• องค์กรรัฐ/เอกชน • สถาบันการศึกษา • ศูนย์เรียนรู้ • สหกรณ์	• ธรรมชาติ • ภูเขา / น้ำไม้ / ทะเล • ทรัพยากร • วัตถุดิบ	• เรื่องราวที่นำมอกต่อจากอดีต • ความเชื่อ • ศิลปะวัฒนธรรม • ภูมิปัญญา	• ประเพณี • กิจกรรมศิลปะ • กิจกรรมยามว่าง • กิจกรรมที่ร่วมมือกัน	• อาหารท้องถิ่น • ร้านดัง • อาหารเด่น	• รางวัล • สิ่งคนที่ทำให้คนนอกรู้จักเรา

Example of canvas:



Captured value: new potential design for a new fabric collection that co-created during the mapping process. The new collection sparked from the discussion about their heritage, local food, and local language.

Figure 5.55 The VCo framework version 3.0 (page 11)

4

Structure mutual value and develop new business strategies

Outcome of this step:

Captured and structured mutual value for developing new strategy and suggestion for support

Duration:
1.5-2 hours

What to do?

Structure mutual value, build a collective statement, and develop new potential strategies.

From the previous phase, new values are captured from the discussion and mapping process. In this phase, the goal is to arrange them into a collective structural statement. The statement will act as a summary of the co-creation of value which could be a starting point of agreement building for determining further actions.

How to do?

According to the example of a structure of a collective statement building below, it starts with stating the name of the enterprise 1, and the type of business 2 and 3, in order to build a sense of commitment. Followed by the selection of value captured from the previous phase 4, the agreement of **mutual value** can be identified here. It can lead to a discussion on potential strategies 5. However, it is worth looking back and expanding the value by reflecting on other dimensions 5.1 and determining who are the beneficiaries of that value 5.2. The value here is the value created from the ripple effect of the mutual value. The more expanded values occur, the selective mutual value becomes more meaningful.

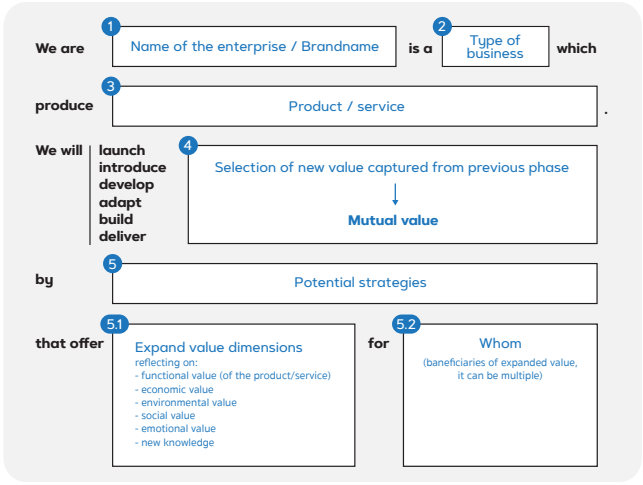


Figure 5.56 The VCo framework version 3.0 (page 12)

Example of the structure in use

Facilitators note:

- The structure of a collective statement is the guideline to help participants agree and be on the same page with others. It can be drawn using a large paper and post-it notes. The structure does not need to be the same but the outcome from 4 to 5 should be determined for the next phase.

Figure 5.57 The VCo framework version 3.0 (page 13)

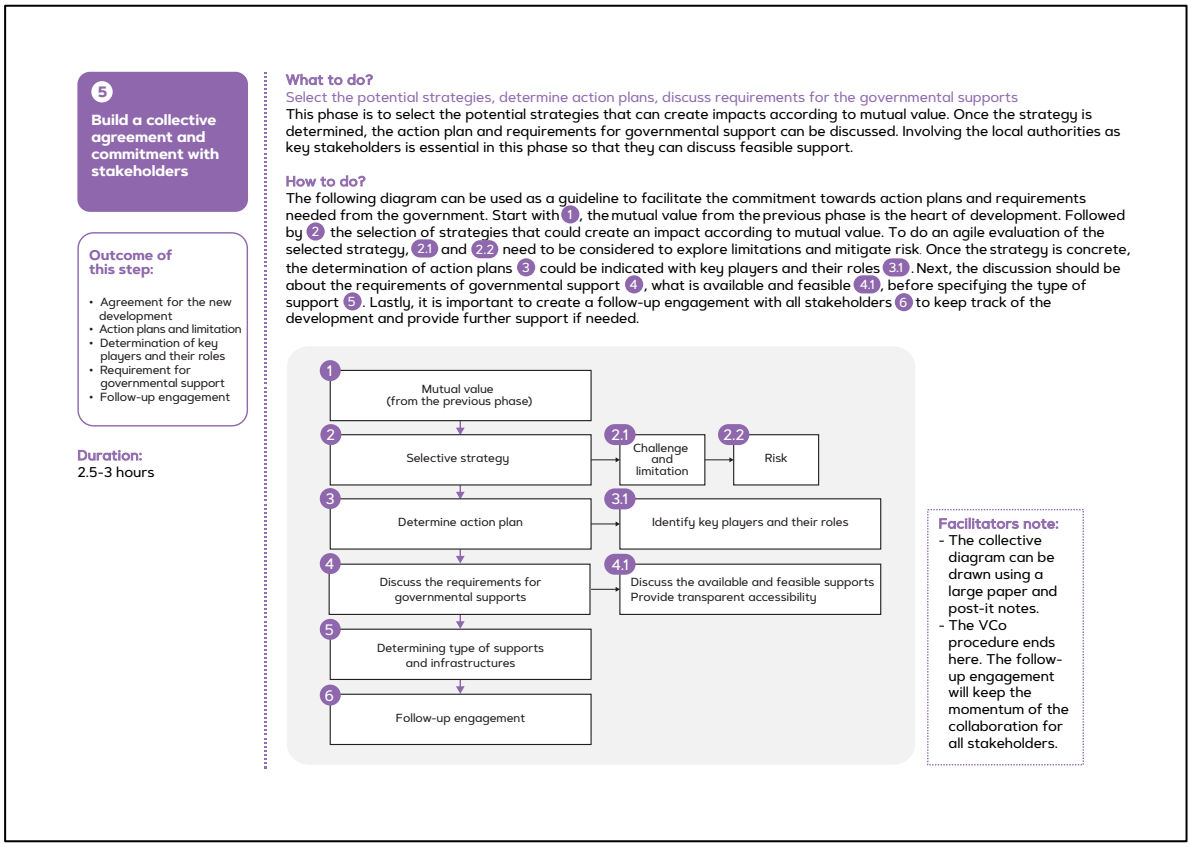


Figure 5.58 The VCo framework version 3.0 (page 14)

5.10 Descriptive Study IV: Stakeholder evaluation interviews with local authorities (IN-5-LA)

Once framework version 3.0 was improved from the user evaluation workshops, descriptive Study IV aimed to validate the framework with key stakeholders that were local authorities under the OTOP programme. Their role was to be leading actors and facilitators of value co-creation. Ideally, the framework should run with all key stakeholders – local entrepreneurs (participants) and local authorities (facilitators) – to co-create value and to co-design the strategic approach for the OTOP service. However, due to limitations and time constraints, the local authorities could not take part in the previous workshops; therefore, Descriptive Study IV aimed to deliver the outcomes of the user evaluation workshops (WS-2-LC, WS-3-LC, WS-4-LE) to local authorities to ask if they had any suggestion regarding framework development as if they were the facilitator. The evaluation criteria of the framework at this stage were (1) the framework's ease of use, (2) usefulness, and (3) applicability and feasibility. The objectives of the study can be listed as follows:

- To evaluate the procedure of the framework
- To elaborate on the last phase of the framework. It needs the local authorities' suggestions related to their working procedure (for instance, to what extent the entrepreneur can co-design the support provided by local authorities)
- To ensure the framework outcomes in relation to the KPI used by the local authorities

Evaluation procedure: The one-to-one semi-structured interviews were conducted using Zoom (an online meeting platform). The total number of participants was five. The interviewees were guided through the process of value co-creation. In each phase, the results from the user evaluation workshops were presented and discussed regarding how the procedure could be improved in order to achieve a better outcome. In terms of facilitation, the participants were asked to identify the framework's elements and guidelines that appeared unclear to them. After the discussion, they were asked to suggest what needed to be improved. Finally, at the end of the interview, the participants were asked to rate the framework's ease of use, usefulness, applicability and feasibility. Data analysis uses thematic analysis to determine the solution for framework development and descriptive statistical analysis with the survey data.

Discussion: The interview results dominantly focused on the suggestions from the local authorities' view. Beginning with the introduction, the interviewees agreed that the introduction gives a clear purpose of the framework. Regarding the overview of the framework, two out of five mentioned that the phases' names were straightforward and allowed them to understand the purpose of each phase quickly. Regarding the framework's structure, all of the interviewees agreed that the 'expected outcomes', 'what to do' and 'how to do it' sections provided a clear explanation to follow with an additional 'facilitator's note' to aid the facilitation. One suggested that if 'what to do' can be attached to the framework overview, it could give an overall activity to allow the facilitators to prepare themselves. After that, the discussion went to each phase of the framework, which can be concluded as follows:

In phase 1, *Understanding value and beneficiary*, the participants agreed that the process was comprehensive. They also commented on the outcomes of the user evaluation workshops, showing that local entrepreneurs understood the concept of value. Two out of five mentioned that exploring the value in various dimensions provides angles from which to think beyond monetary value and concern more social value, which is important for local businesses. They suggested that the value dimension could be highlighted with greater description. The callouts from the example were considered to be more useful and easier to communicate than the list presented in the table.

In the second phase, *Discover the current situation and key areas for development*, all of the interviewees agreed on adding challenge mapping since it could make the process more purposeful and solve the problem that the entrepreneur was facing.

In the third phase, *Explore and co-create new value from value drivers*, some of the participants mentioned that there was a bit of confusion on the transition from the key areas for development to the value driver and to value source. Adding a diagram to show the transition would help with comprehension. When it comes to the value-capturing process, one participant suggested that this process tended to be very fluid. Making sense of the data and choosing the right strategy to explore and co-create value felt quite challenging. Two of them suggested that this process might need external facilitators to aid in the process. For example, in product and service development, a designer or design academic could be able to facilitate this better. For marketing and communication development, a marketing consultant could have more experience in capturing and connecting value. They mentioned that it is quite often that they invite experts in different fields to give a lecture in a seminar; as a result, reaching out for their collaboration is feasible.

In the fourth phase, *Structure mutual value and develop new business strategies*, all of the interviewees agreed that the value building structure was useful for arranging complex ideas; it leads to determining mutual value and development strategies. The ripple effect of the value allows the locals to reflect and underpin value in various dimensions. Two of the participants also said that if an example could be provided here, it would be clearer for facilitators.

Finally, in the fifth phase , *Build a collective agreement and commitment with the stakeholders*, since this phase was not fully tested with all stakeholders (i.e., local entrepreneurs and local authorities) participating in the same workshop, the viewpoints from both sides aimed to be incorporated in order to determine the final recommendations. During the user evaluation workshop, the researcher played a local authority role, as part of the U2T programme, in order to discuss local requirements and to execute them. Consequently, in the interviews with local authorities, the outcomes and results from all user evaluation workshops were delivered and discussed. When it comes to the applicability of using the framework, the participants stated that even though the central government organises the most significant activities, there is the possibility of introducing a new development scheme if it is relevant and creates a measurable impact. A proposal can be made and sent to higher authorities for evaluation. Concerning the feasibility of local entrepreneurs requesting support, the participants mentioned that there is always a budget allocation for developing local enterprises under the OTOP programme. While most of the funds are assigned to specific activities, some are left to the local authorities

to allocate as needed, as long as they follow the main goals set by the central government. Regarding the extent to which local entrepreneurs can obtain what they request, the interviewees stated that locals tend to rely heavily on government funding, which is sometimes only available to support some of them. Therefore, it is important to discuss the matter honestly with them in order to determine how much assistance the government can provide. A better approach would be to suggest helpful resources (e.g., funding, training, product standardisation) from public and private organisations. It is also possible to invite or collaborate with experts for the purpose of transferring knowledge and skills. Additionally, with regard to the key performance indicators (KPIs) of the OTOP service, the interviewees stated that the outcomes of the value co-creation framework could lead to substantial development supporting the enterprise under the OTOP programme, where the impact can be measured using the current evaluation that uses both quantitative and qualitative approaches. In the quantitative analysis, data on sales, new products/collections, expanded production capacity, employment rates, and income levels are considered. A qualitative approach assesses inputs, outputs, outcomes, impact assessment, and social and organisational benefits. All in all, the evidence from the user feedback and stakeholder interviews confirmed that this phase could lead to a profound relationship among stakeholders if the actions are determined together from both sides.

In Table 5.17, the evaluation criteria for the framework are summarised. Overall, the majority of the participants agreed on all the criteria aspects (i.e., ease of use, usefulness, applicability, and feasibility) of the framework. One consideration is the *'easy to carry out'* aspect, which coincides with what the participants reported during phase 3, that in some framework phases, collaboration with external actors could be beneficial.

Table 5.17 Feedback from the stakeholder evaluation surveys

IN-5-LA (N=5)	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Easy to understand					5 (100%)
Easy to follow				1 (20%)	4 (80%)
Easy to carry out				3 (60%)	2 (40%)
Usefulness					
• **For the local entrepreneur and their enterprise**					
Understand the value in various dimensions (e.g., social value, environmental value)					5 (100%)
Expand the new perception of the benefit (e.g., benefit the community they live in)				1 (20%)	4 (80%)
Understand the advantage of having value as the core of developing a strategy				1 (20%)	4 (80%)

Boost up creativity				2 (40%)	3 (60%)
Boost up a level of leadership				2 (40%)	3 (60%)
Work better as a group					5 (100%)
Build agreement from different opinion					5 (100%)
• **For local authorities to work with local entrepreneurs**					
Provide a structural approach to work with local entrepreneurs easier					5 (100%)
Provide a better understanding of local needs				1 (20%)	4 (80%)
Provide a clear goal to work forward				1 (20%)	4 (80%)
Lead to a profound relationship with the local entrepreneurs					5 (100%)
Lead to the sustainable development of the OTOP service					5 (100%)
Applicability and feasibility					
Be able to apply the framework in the working procedure				1 (20%)	4 (80%)
Be able to use across the types of enterprise				1 (20%)	4 (80%)
Be able to use across different stages of enterprise					5 (100%)
Relevant to the organisation's aims and objectives					5 (100%)
The outcomes of the framework leads to achieving the organisation's objectives					5 (100%)

5.11 Improvement of the final framework

As part of the framework's development, all of the data collected, both from the verbal interviews and observations made during the interviews, were organised into themes in order to determine the solutions from the framework development (see Table 5.18).

Table 5.18 Significant statements and observations from the interviews with local authorities

Significant statements and observations from the interviews	Themes	Solutions for framework development
"The process is easy to understand, but I am unsure if I have enough people to run the activity confidently".	Unsure of carrying out the whole procedure	Collaborate with external actors
"Some phases require a specific skill to conduct. Specifically, exploring new value in different key development areas, I think it could be an advantage for entrepreneurs if we invite experts to collaborate with us".		

“As a facilitator, maybe I need to see a clear example of how the canvas is used to be able to facilitate it with local entrepreneurs”.	An example makes the procedures easier to follow.	Provide more examples of how the canvas can be used and present it while in use
“In the last two phases, the structures of the mutual value and collective agreement are really good for constructing complex ideas. It would be easy to follow if you could add the real data from the previous workshop as you presented to me."		
Some of the participants struggled when referring back and forth to the phase's name, so they called out the colour instead.	Need a memorable phase title for easy communication	Rename the phases' titles
“The framework procedure requires a long time to finish all the phases. Can it be selected to execute only some phases? Not from 1-5?"	Framework implementation in smaller chunks	Consider the potential scenarios of the framework that can be used to serve different purposes.
“What if I want to apply the framework to a group of locals who are keen to have a small business for the members in their community? Can this framework apply to them?"	Flexibility of usage	
“Exploring the value in many dimensions is a very nice idea. Perhaps, it could be clearer to provide an explanation of each type of value that the entrepreneur can apply to his or her business."	Value dimension for value exploration	Add a description of the value dimensions
“How do we ask about implicit needs or values in life, enterprise, or community?	Intangible value discussion	Add a list of affirmative questions to the framework
“It might be a bit difficult to summarise the outcomes of the previous phase and apply it to the next step”.	Transition between phases	Add diagrams/information as a conclusion before moving to the next phase

According to Table 5.18, framework development solutions were considered. Adjustments were made to the framework elements, the facilitator's notes, and implementation guides. All of the improvements are listed as follows:

- Collaborate with external actors: Experts' involvement could facilitate more fruitful outcomes in some phases. Their expertise (e.g., design, business, marketing, management) could be matched with the key development areas determined in the second phase.
- Provide more examples of how the canvas can be used and present it in use: Adding examples could help comprehension and interpretation.
- Phase titles were renamed with keywords that describe the phases' procedures (i.e., Understand, Discover, Explore, Construct, Plan). The 'what to do' section was also

added to the framework overview to give a holistic picture of the whole process at first glance.

- Consider the potential scenarios of the framework that can be used to serve different purposes: The scenarios of using it were considered. As a result, the framework provides potential scenarios (i.e., different stages of business development). In addition, the phase numbers (i.e., 1, 2, 3, 4, 5) were replaced with letters (i.e., A, B, C, D, E) in order to decrease the sense of linear order.
- A definition of value terms was added to highlight the value dimension.
- The affirmative questions were gathered from expert evaluation workshops and added to the framework in the Explore phase.
- To help with the transition between phases, diagrams and information were added as a conclusion before moving to the next phase.

As all of the improvements were added to the framework, the next chapter concludes the recommendations of the final value co-creation framework and implementation guide.

Chapter 6 – Recommendations

Recommendations	6.1 Finalisation of the Value Co-creation framework	6.1.1 Framework components and facilitator guidelines
	6.2 Consideration regarding framework implementation	6.2.1 Understand relationships between stakeholders 6.2.2 Role of the implementor 6.2.3 Collaboration with external actors 6.2.4 Types and stages of local business 6.2.5 Impact of the framework 6.2.6 Framework implementation by other support bodies 6.2.7 Limitations of the framework
	6.3 Reflecting on the framework outcomes	

Table 6.1 Overall structure of Chapter 6

The framework was improved after the iterative developments and evaluations with the design experts and key stakeholders (i.e., local entrepreneurs and local authorities). Thus, this chapter discusses the final framework and the facilitator guidelines developed after the evaluation process. It also includes the consideration regarding framework implementation, such as the relationships among the stakeholders, the role of the implementor, the impact of the framework, and reflection on the framework outcomes.

6.1 Finalisation of the Value Co-creation framework

The Value Co-creation (VCo) framework provides a structural approach for local authorities to work with local entrepreneurs under the OTOP programme to support local business development and to improve services. All of the stakeholders collaborate to create value through the VCo framework, translated into potential strategies and action plans, which can be done through five phases of the framework. The phases comprise a set of activities that serve different purposes, but are interconnected as part of an overall solution for the development of business strategies and improve the OTOP services. At the beginning of the process, it will provide local entrepreneurs with a better understanding of the value they, their community, and their customers can gain from the process. On the other hand, later phases will focus on the co-created value, which will be captured and converted into action for both enterprises and local governments. Finally, it will help the support bodies to design and deliver relevant support, which could be the value of the public service. In this way, it can potentially lead to profound development for the locals, and it can establish a type of partnership among stakeholders.

6.1.1 Framework components and facilitator guidelines

Considering that the framework contains many details, it was designed as a booklet to provide necessary information for the facilitator. There are three components to it: (1) introduction, (2) framework overview, and (3) phases of the framework. The following section describes each component in greater details. The full booklet of the final framework presents in Appendix G.

6.1.1.1 Introduction

Before getting started with the framework, the introduction provides the information for the facilitator that briefly explains whom the framework is designed for, what its purpose is, and who can be involved in the process (see Figure 6.1)

For whom?

The framework is designed for local authorities, universities, or other support bodies under the OTOP programme (as well as other grassroots entrepreneurship development services) to use as a framework to approach local entrepreneurs (both new and existing businesses) to work together as partners to achieve mutual value between business stakeholders and local governmental bodies, which will benefit local businesses and strengthen the public service's effectiveness.

Purpose of the framework

The framework is designed to co-create values and structure them to get a better idea about the benefits and beneficiaries.

The collective value would act as a fundamental element which derives from a bottom-up approach to creating plans for local businesses and determining essential support needed from the OTOP service provider.

Who else can be involved?

The framework is designed using the co-design principle. The more people engaged, the more rich data will be obtained. Involving local citizens, academics, designers, design students, business and marketing consultants, NGOs, private sectors, or other public sectors would lead to impactful outcomes.

Figure 6.1 Introduction of the purpose and participants of the VCo framework

Within the introduction, the value dimension is also elaborated in order to give the facilitator a range of possible values that are relevant to the OTOP business. The value dimension can be understood using the spectrum of intrinsic and extrinsic values, it includes emotional value, knowledge, social/reginal/environmental value, functional value, and economic value (see Figure 6.2 and 6.3). Every aspect of the value dimension should be considered while developing the business and it would act as a guideline to determine possible value while in the value co-creation process.

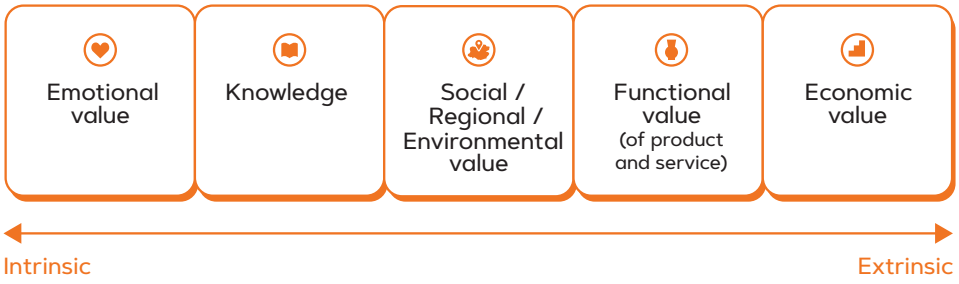


Figure 6.2 Value dimension in the OTOP enterprise

Emotional value
is the personal-perceived value, defined as feelings aroused when associating with doing tasks in relation to the business. For example, satisfaction, pleasure, or ecstasy from doing or achieving something.

Knowledge
is the human-earned value gained from achieving novelty skills or having expertise by practising new knowledge. It can be, for example, leadership, craftsmanship, or management skills.

Social, regional and environmental value
is the value that gives back to the local community. It intends to combine three types of values (social, regional and environmental) as it is straightforward when asking the locals to think about the value of their community. This value enhances social relationships, conserves cultural practice/ tradition, and promotes environmental sustainability.

Functional value (of the product and service)
is the value perceived through the physical attribute and utility of the product and service.

Economic value
can be seen as a monetary value that creates financial support for the enterprise and employment.

Figure 6.3 Description of the values in the value dimension

Furthermore, the participants of the framework are also described in the introduction. As the framework aims to work with local entrepreneurs, the type of enterprise and number of

participants can vary, from a community-based enterprise to a single-owner enterprise. For a community-based enterprise, all of members of the enterprise (which normally has 7-25 members) can join the activities. For the single-owner enterprise, employees or locals that are related to the business can participate in the process. Further, some phases of the framework can be adapted and used with entrepreneurs from different enterprises.

Regarding the facilitator and external actors, the framework needs to be facilitated by a team of local authorities involved in the process as a partner of the business. However, some phases might be more effective if external actors can be involved to facilitate or assist with the process. They can be academics, designers, design students, business and marketing consultants, and community leaders from other communities. Different expertise can help generate a well-rounded outcome for local businesses and the service from local authorities.

6.1.1.2 Framework overview

The next section in the booklet is the framework overview; there are five phases in this framework, as illustrated in Figure 6.4:

A) **Understand** the value and beneficiary
B) **Discover** the current situation and key areas for development
C) **Explore** the new values from the value driver, and connect and capture potential value
D) **Construct** mutual value and develop new business strategies
E) **Plan** through collective agreement and build commitment with stakeholders

Each phase includes a brief description of what needs to be done and what the expected outcomes are. The overview allows the facilitator to view the overall activities at a glance. The phase of the outcomes are presented in a colour-coded manner as an aid when conducting the framework in smaller chunks.

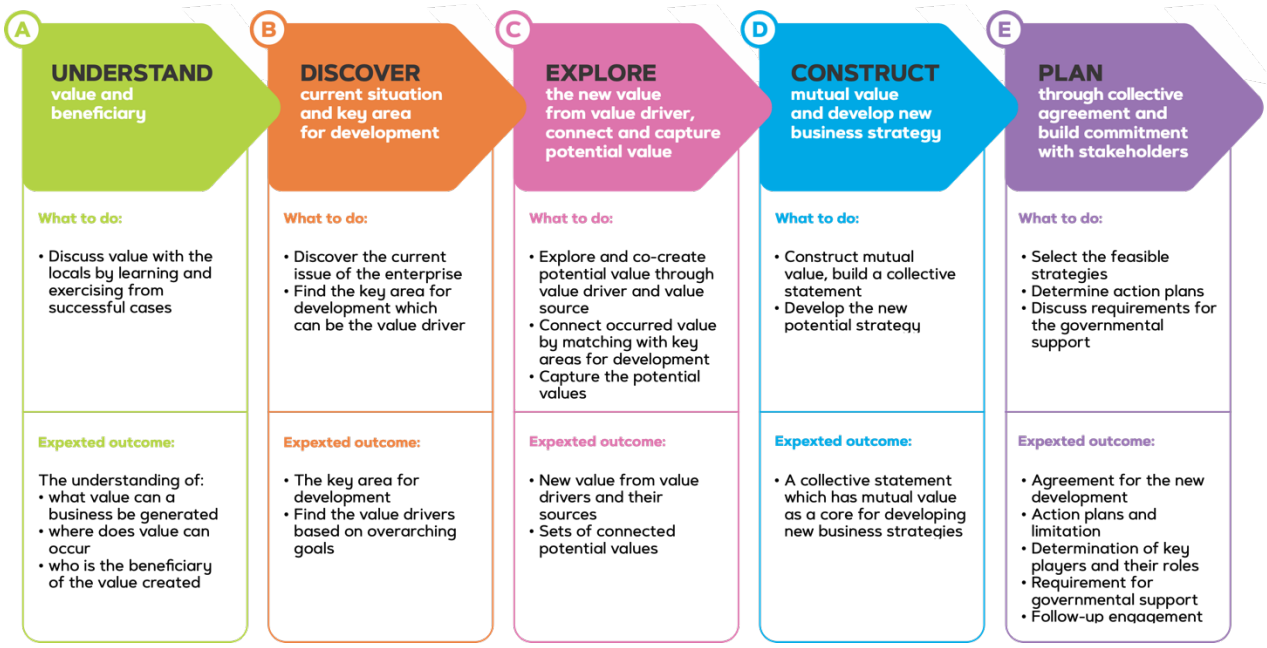


Figure 6.4 Five phases of the framework

All five phases elaborate with further details and facilitator guidelines in the next section. The information in each phase is structured as follows:

- The *'What to do?'* section provides the list of activities that need to be completed.
- The *'Expected outcomes'* states the expected achievement to work towards.
- The '*How to do it?'* describes each step with examples of tools and canvases.
- The '*Workshop duration'* suggests the recommended time frame for each framework phase.
- The '*Facilitator's note'* provides additional details for the facilitator. It was gathered from the researcher's field notes during the testing and evaluation workshops with the users and stakeholders.

6.1.1.3 Phases of the framework

- **Phase A: Understand**

Continually moving forward with the details in each phase. This phase aims to discuss the value with the locals by learning and exercising from successful cases before co-creating value. This phase could help the locals understand what value a business can generate and become familiar with the concept of value and its beneficiaries in their context. The value captured here can be: functional value (of the product and service), economic value, social, regional and environmental value, emotional value, and knowledge. The facilitators can show examples from the cases. The form of the information can be any of the brand's touchpoints,

for instance, an excellent example of social media content with the value presented in text or pictures or a good product or packaging design where the value is well-presented. The facilitator can discuss with the participants in order to point out what value they can witness from the case. Furthermore, the facilitator can also discuss who the beneficiary of that value is in order to expand their perspective to think beyond functional and monetary values (e.g., social value, emotional value, knowledge). Using two to three successful cases for comparison is ideal. The criteria for choosing cases are:

- Same-category enterprise related to the participants (e.g., a food enterprise business with the food enterprise participants) to get the idea from the same type of business
- Cross-category case to expand the understanding of the value in another type of business

Figure 6.5 Examples of value capturing and beneficiaries from successful case

The duration of the phase could last from 60 to 90 minutes. Facilitators should learn the value of successful business beforehand in order to explain and discuss with the participants. Examples of tools to use in this phase are the exercise cards and shout-out value cards for picking and choosing. Both tools can be used together. The shout-out cards can be helpful, especially with some groups of participants (e.g., elderly, illiterate). For the vulnerable group, the facilitators can assist the participants and help them write down what they said.

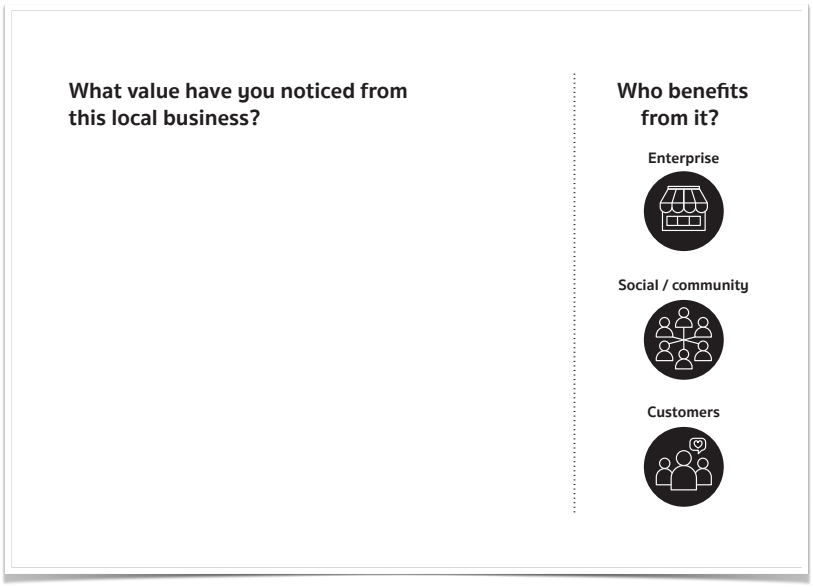


Figure 6.6 Value and its beneficiary exercise card

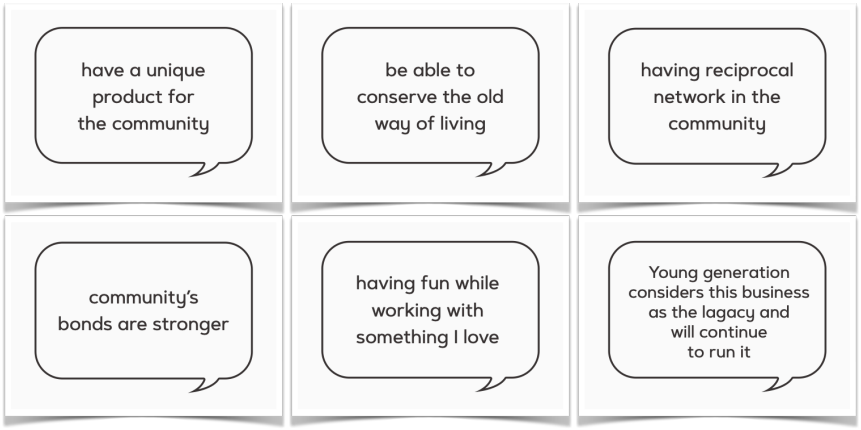


Figure 6.7 A set of shout-out value cards for picking and choosing

For the outcomes of this phase, facilitators can determine whether the participants understand value across the value dimensions by reviewing the exercise cards. Then, the participants can present what value they captured and who benefits from it.

- **Phase B: Discover**

Co-creating value involves understanding the problems and challenges from the entrepreneur's perspective in order to develop new strategies and values to address current issues. The Discover phase aims to discover the current issue of the enterprise, find the key areas for development, and elaborate that into a value driver. At the beginning of this phase, the discussion on the problems and challenges they face usually begins with explicit needs and requirements; however, it could be the latent or tacit needs that they might not realise or be able to express. The facilitator should go through all of the key areas for development (see

Figure 6.8), which can be categorised into (1) product and service, (2) marketing and communication, (3) production and management, and (4) networking and social relationship. There may be a specific development area where the discussion falls; in consequence, the facilitators should also expand into other areas. Furthermore, the facilitators can ask questions that underpin a positive mindset towards business development. A positive mindset can be seen as a foundation of every development area. It can be about, for example, encouraging the locals to support other local businesses and grow together as a part of the community.

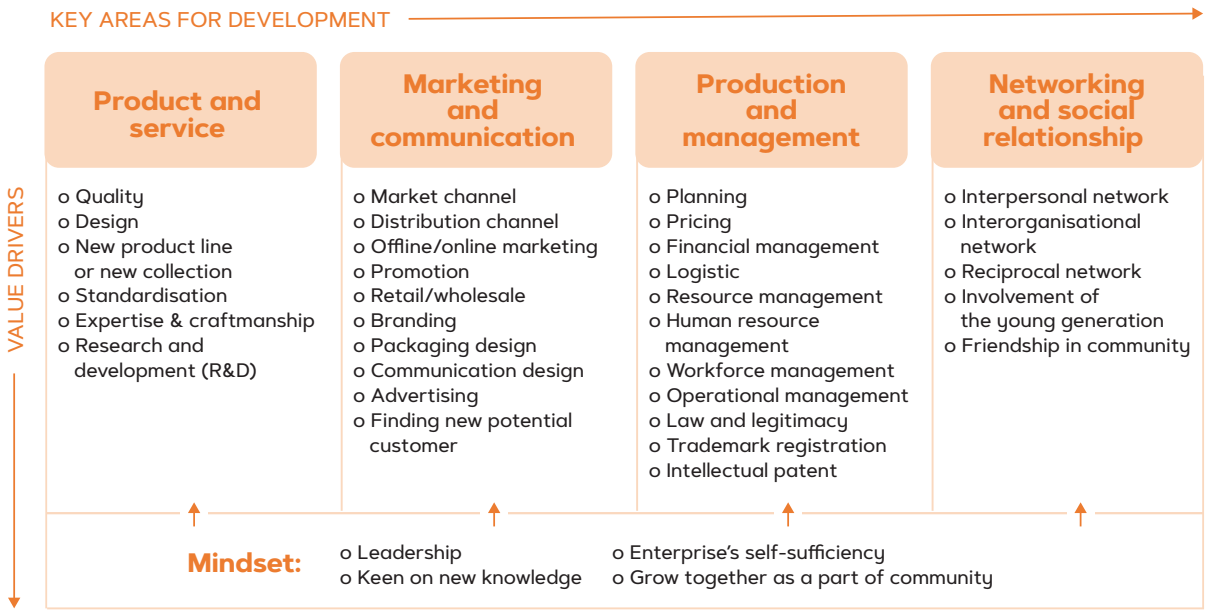


Figure 6.8 Key areas for development associate with value drivers

In order to aid with the conversation, questions to enable the conversation are listed in Table 6.2. The discussion could be recorded through mapping, allowing all of the participants to obtain a holistic picture and to engage better. The canvas structure includes challenges and issues, causes, and agile solutions (see Figure 6.9). The canvas can be hand drawn. The participants can map on the canvas by writing down their opinion on the Post-it notes and arranging them on the canvas. The canvas should be big enough for all of the participants in the group to see. If the VCo is run with a small group of participants (3–10) within the same enterprise, the facilitator could use only one canvas to help people think about their business. Suppose the participants are a group of entrepreneurs from different enterprises. In that case, the facilitator can use more than one canvas, ideally separating the group by types of businesses that could share common issues, namely: food and beverages, home decorations and souvenirs, fabric and fashion accessories, and non-food herbal products. Presentations between the groups can also be helpful in exchanging ideas. The duration of this phase could last between 60 and 90 minutes.

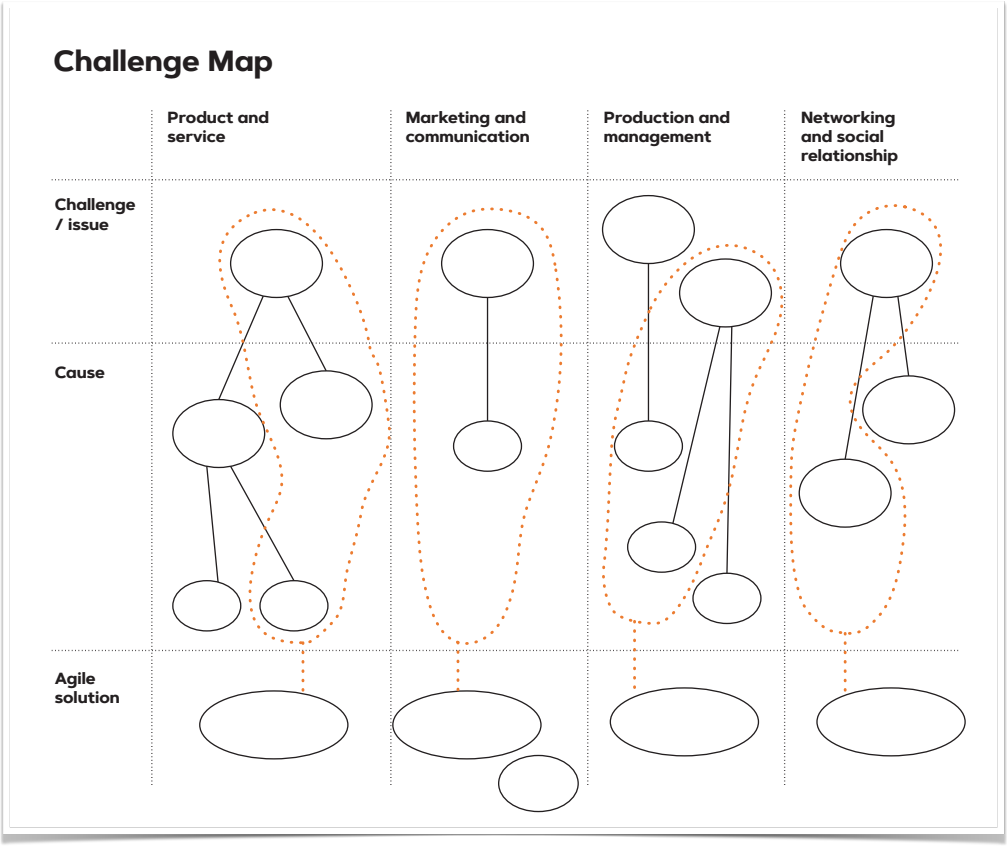


Figure 6.9 The challenge map

Table 6.2 Questions to enable the conversation

Product and service	Marketing and communication
• Who is responsible for designing your product? • What sets your product apart from others in the market? • What is your unique selling proposition? • How frequently do you release new collections? • Does your product meet national or international standards?	• Where can customers access your product? • Do you believe your brand is effectively reaching its target audience?
Production and management	**Networking and social relationship**
• How do you typically manage the workforce within your group? • Do you outsource any materials to produce your product? • How do you handle large orders? • Do you have plans to expand production capabilities? If so, why? • In your opinion, how significant are leadership skills? • What steps do you take to sustain local resources?	• Do you maintain reciprocal relationships with other local businesses? How does this support your enterprise? • What kind of information is shared within your network? • How can your business support other businesses in the community?

Further information to aid with the discussion can be found in Table 6.3. It provides the common issues from the previous discussion with different groups of entrepreneurs categorised by the types of products, namely: (1) the food and beverage group, (2) fabric and fashion accessories, (3) home decoration and souvenirs, and (4) non-food herbal products. Some issues are shared across the group. The facilitator can use this list as a guideline to

learn about possible problems beforehand. The common issues in the list are only examples generated from the brainstorming; however, they might not apply to every enterprise.

Table 6.3 The common issues found in different groups of entrepreneurs

Food and beverages • Agricultural production is limited due to seasoning changes. • Agriculturists' knowledge does not meet the expectations of the enterprise. Outsourcing an extra workforce usually involves apprentices. • The food and beverage enterprise has two main operational directions: large batch production (emphasis on volume) and small batch production (quality/consuming culture). These two groups use different marketing communications, which require different support. The standard/ trademark/certificate for guaranteeing is different between the two groups. • Creating a cluster among producers (to increase negotiating power with buyers/modern trade) is not easy. • Innovation about prolonging shelf-life/packaging • It is difficult to create an outstanding brand when everyone is doing the same thing in the market.	**Home decorations and souvenirs** • Unable to manage the cost and selling price to cover all expenses and get enough profit Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Logistics problems due to fragile products • The customer does not understand the value of the product. • The entrepreneur does not know how to add value to the product. • The entrepreneur does not know how to communicate artistic value. • Lack of craftsmanship skill in the young generation • Lack of knowledge of applying chemicals for product finishing • Lack of negotiation skills when dealing with the customer about the waiting time
Fabric and fashion accessories • Unable to manage the cost and selling price to cover all expenses and to get enough profit Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Lack of machines/tools to shorten the production time • It is difficult to find new and right market/buyers. • Cannot reach the right customer/buyers • Trends and fashion change over time, and it is difficult to keep up.	**Non-food herbal products** • Repetition of the herbs/key ingredients with other local areas that provide the same benefit • Lack of innovation for new product formulas • The image of Thai herbal products is outdated and unreliable. • Confusion about communication of the product's effectiveness and how to avoid overclaimed advertising • The target market is too small, and the entrepreneur does not know how to expand it.

This phase allows the participants to identify the problem, which can be seen as an essential skill for an entrepreneur. The challenge map could be kept to refer to in the following phases. Once the challenge mapping is done, the key development area can be identified, and then value drivers can emerge as the outcomes of this phase.

- **Phase C: Explore**

Once the participants and facilitator learn about the *key development area*, the *value driver* can be determined. Accordingly, the facilitator can introduce *value source* – the subject for discussion – as a starting point for new value exploration (see Figure 6.10). The aims of this phase is to (1) explore and co-create potential value through the value driver and value source, (2) connect values by matching with key areas for development, and (3) capture the potential values. The length of this phase is between 90 and 120 minutes.

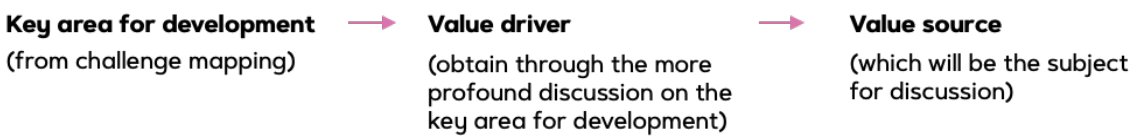


Figure 6.10 The diagram of how the value driver and value source were developed from the key area of development

Exploring new values can be done through thinking, discussion, writing down ideas and mapping to construct the ideas and letting other participants see the whole picture together. The subject for the discussion can be local resources (tangible), or going deeper by using the topics that bring out their tacit thoughts (intangible). Examples of the value driver, the value source and mapping canvas categorised in four main development areas are illustrated in Table 6.4–6.7. The tables list only examples of value drivers, value sources and canvases. Therefore, the canvases can be explored further to be appropriately used in the discussion. Facilitators can adapt the subject of the discussion and canvas according to the value driver. Consequently, the value can be captured in the mapping process or during the discussion. Referring to a challenge map could be useful and purposeful in connecting new values.

Table 6.4 Value driver, value source and examples of the canvas: for product and service development

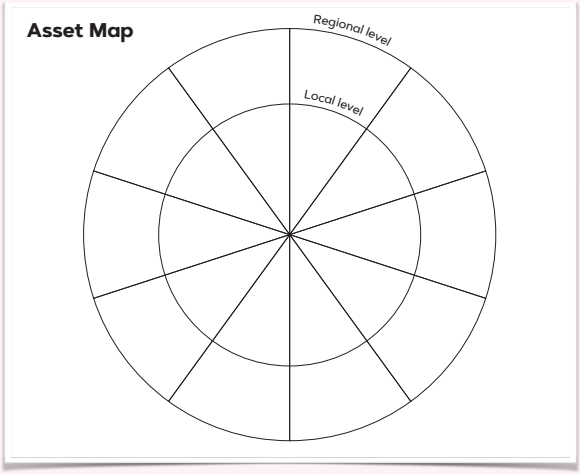
Value driver (from the key area form development)	**Examples of mapping canvas**
Product and service For example: To seek a new product collection / new design	
Value source (subject for discussion) + **Exploring and co-creating technique**	
Community's assets for new inspiration + Asset mapping (e.g., cultural resources, natural resources, places, food)	

Table 6.5 Value driver, value source and examples of the canvas: for marketing and communication development

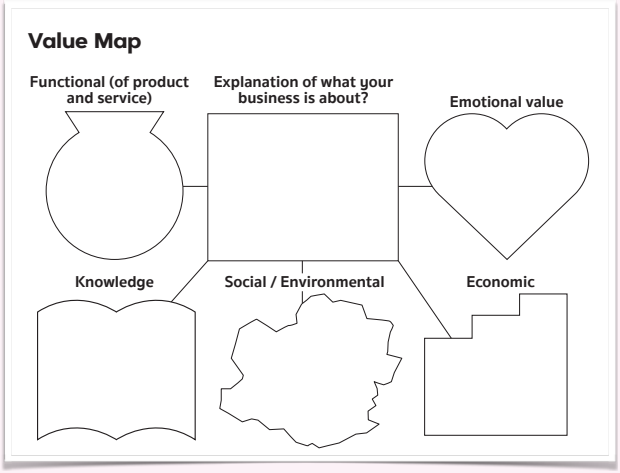
Value driver (from the key area form development)	**Examples of mapping canvas**
Marketing and communication For example: To rebrand and communicate the new brand image, emphasise the local value	
Value source (subject for discussion) + **Exploring and co-creating technique**	
Affirmative questions 1. What are you proud of doing this business? 2. What are you proud of being a member of this community? 3. How does your business offer value to your community and members? + Discussion on the topics, grouping by themes using mind mapping (e.g., social value, emotional value, the value of achieving new knowledge)	

Table 6.6 Value driver, value source and examples of the canvas: for production and management development

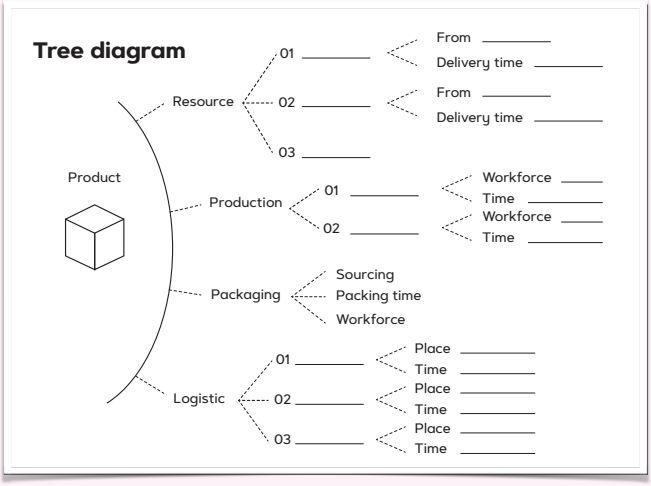
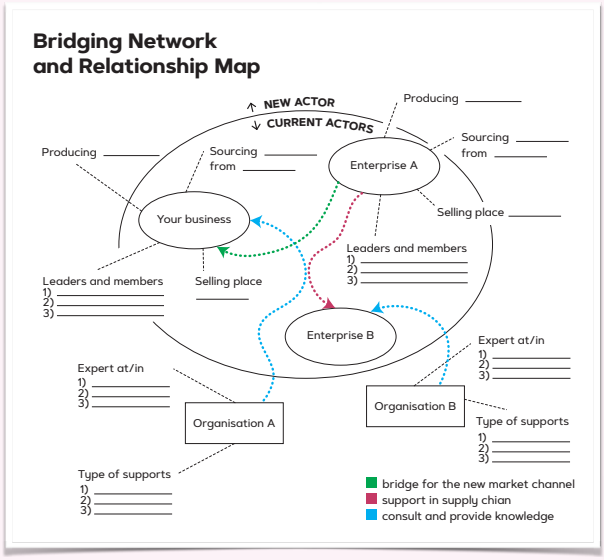
Value driver (from the key area form development)	**Examples of mapping canvas**
Production and management For example: To source and manage resources more effectively	
Value source (subject for discussion) + **Exploring and co-creating technique**	
Unfolding the current resource and discussing how to manage them better + Assembling product parts/resources that have been used and do a supply chain mapping using a tree diagram	

Table 6.7 Value driver, value source and examples of the canvas: for networking and social relationship development

Value driver (from the key area form development)	**Examples of mapping canvas**
Networking and social relationship For example: To expanding, bridging and connect a new reciprocal network	
Value source (subject for discussion) + **Exploring and co-creating technique** Finding the support system from the current relationship with other enterprises or organisations (local/regional/national/international) + Exploring the current and potential new relationships such as B2C (business-to-customer), B2B (business-to-business), B2G (business-to-government), C2C (customer-to-customer)	

Furthermore, the exploring and co-creation process can go beyond the physical aspect. The affirmative questions listed below can help reveal hidden value, both tangible and intangible. Try asking the participants and seeing what they value, and then the facilitator can ask them to elaborate on that.

Examples of affirmative questions

- *What is your community's dream that you would like to see become a reality?*
- *In this community, what do you feel most proud of?*
- *What is the most meaningful thing you have done for this community that you feel proud of?*
- *What do you want to pass on to the young generation?*
- *What would it be if you could promote something positive about your community?*
- *What three words best describe your community?*
- *Do you have any unique characteristics that set your community apart from others?*
- *What is a must-see or must-try in your community?*
- *If you could describe your community's uniqueness in a slogan, what would it be?*
- *What are you proud of being a member of this community?*
- *What legacy have your ancestors left behind?*
- *Compared to living in the city, what are the advantages of living in the country?*
- *What does sustainability mean to you?*
- *What can you do all day without boredom?*

- *What is the unique asset or resource of your area?*
- *Think about what you/your community owns that you would regret losing.*
- *What is your special talent?*
- *In this community, what makes you feel happy?*

Additionally, this phase also provides an example from previous framework testing with a hand-woven community-based enterprise (called Example Case A). The example employs asset mapping to seek a new product collection/new design. The value source or subject for discussion is about the community's assets for new inspiration, which is categorised in Figure 6.11. The topic can be cut and pasted on the map, and the facilitators can open discussion on one topic at a time and make a connection between them.

Figure 6.11 Topics for community asset mapping

Figure 6.12 The asset map (on the left) and while it is in use (on the right)

From Example Case A (the hand-woven fabric enterprise), new value can emerge from matching the result from the asset mapping and challenge mapping, which can be concluded as follows:

- The potential of new fabric patterns emerged from the discussion about the local language, local foods, and the village's name that represents their natural resource.
- Participants draw some design elements during the asset mapping. Then, they apply their knowledge and limitations regarding the weft and warp to the design.
- When they mention the skill they are interested in, 'tie-and-die yarns to create a pattern' is what they want to learn.
- They want their adolescents to take part in the business.
- They see opportunity of developing products for the gift-giving season.

Beginning the process with asset mapping is quite common for community development, as it can be used to explore local resources and make good use of them. The mapping context can be changed to be relevant to the community/enterprise. In addition, asset mapping can potentially connect tangible and intangible resources. Locals can easily engage with it since it is about their community.

As a conclusion to this phase, the facilitator can connect the outcomes from this phase's map (e.g., asset map, value map) with the challenge map. It can be done by grouping, drawing a line, or rearrange the Post-it notes. Both maps can be put on the wall or board for discussion in the next phase.

- **Phase D: Construct**

From the previous phase, new values are captured from the discussion and mapping process. In this phase, the goal is to arrange them into a collective structural statement. In order to accomplish this, the first step is to construct mutual value to build a collective statement. Secondly, a new potential strategy is developed with mutual value as its core. The duration of this phase's activities is 90 to 120 minutes.

In order to aid with the facilitation, the *'mutual value building structure'* provides the structure for building the collective statement. The statement serves as a summary of the co-creation of value, which can be a starting point of agreement building for determining further actions among entrepreneurs and local authorities. According to the structure (see Figure 6.13), it begins with stating the name of the enterprise [1], the type of business [2], and what product they produce [3], in order to build a sense of commitment. Followed by the selection of value

captured from the previous phase [4], the agreement of mutual value can be identified here. This can lead to a discussion of potential strategies [5]. However, it is worth looking back and expanding the value by reflecting on other dimensions [5.1], and determining the beneficiaries of that value [5.2]. The value here is the value created from the ripple effect of the mutual value. The more expanded that the values become, the more meaningful are the selective mutual values.

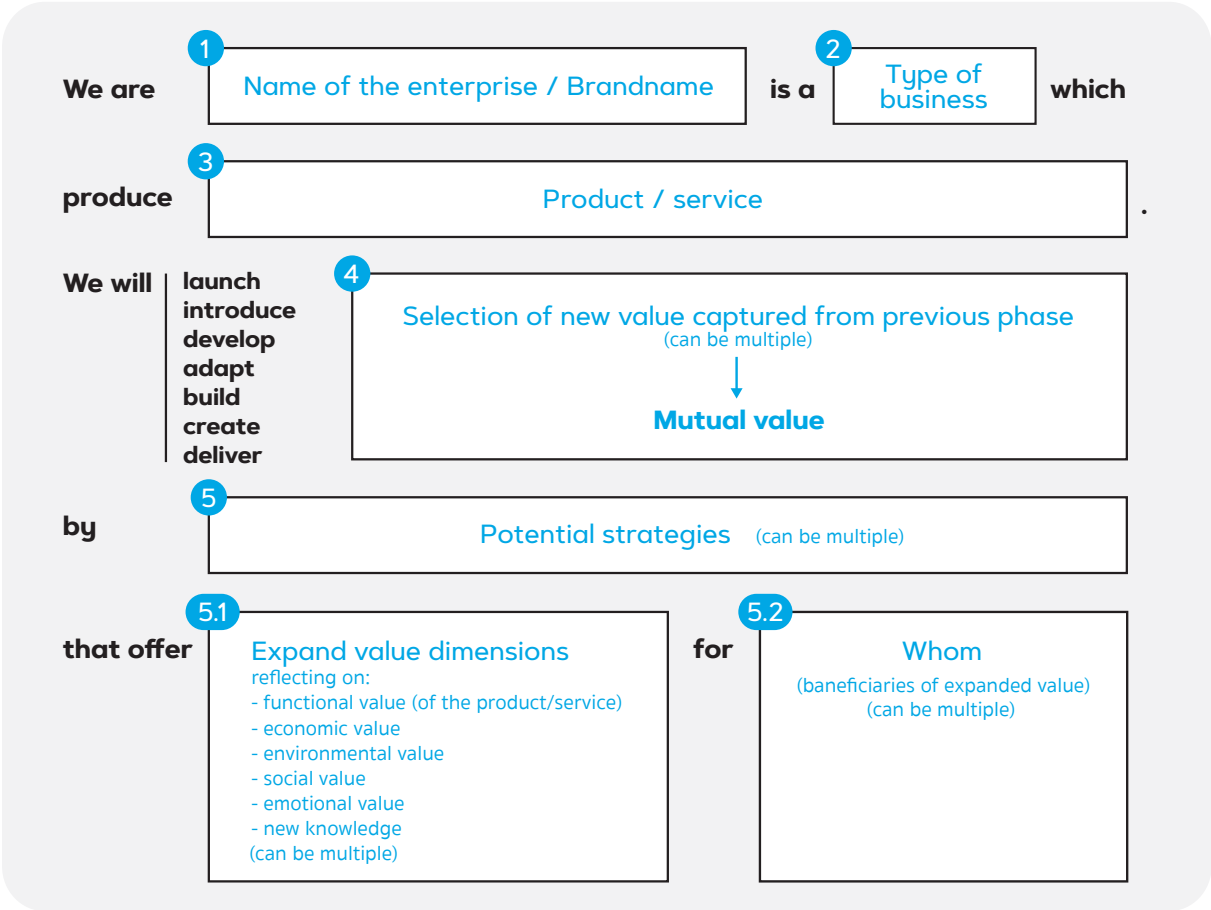


Figure 6.13 Mutual value building structure

Facilitators can use all of the maps and canvases from the previous phases as references. Then, the Post-it can be pulled from the previous canvases and arranged on the mutual value building structure canvas. The structure of a collective statement is the guideline to help the participants agree and to be on the same page with others. It can be drawn using a large piece of paper and Post-it notes. The structure does not need to be precisely the same, but the outcomes from [4] and [5] should be determined for the next phase.

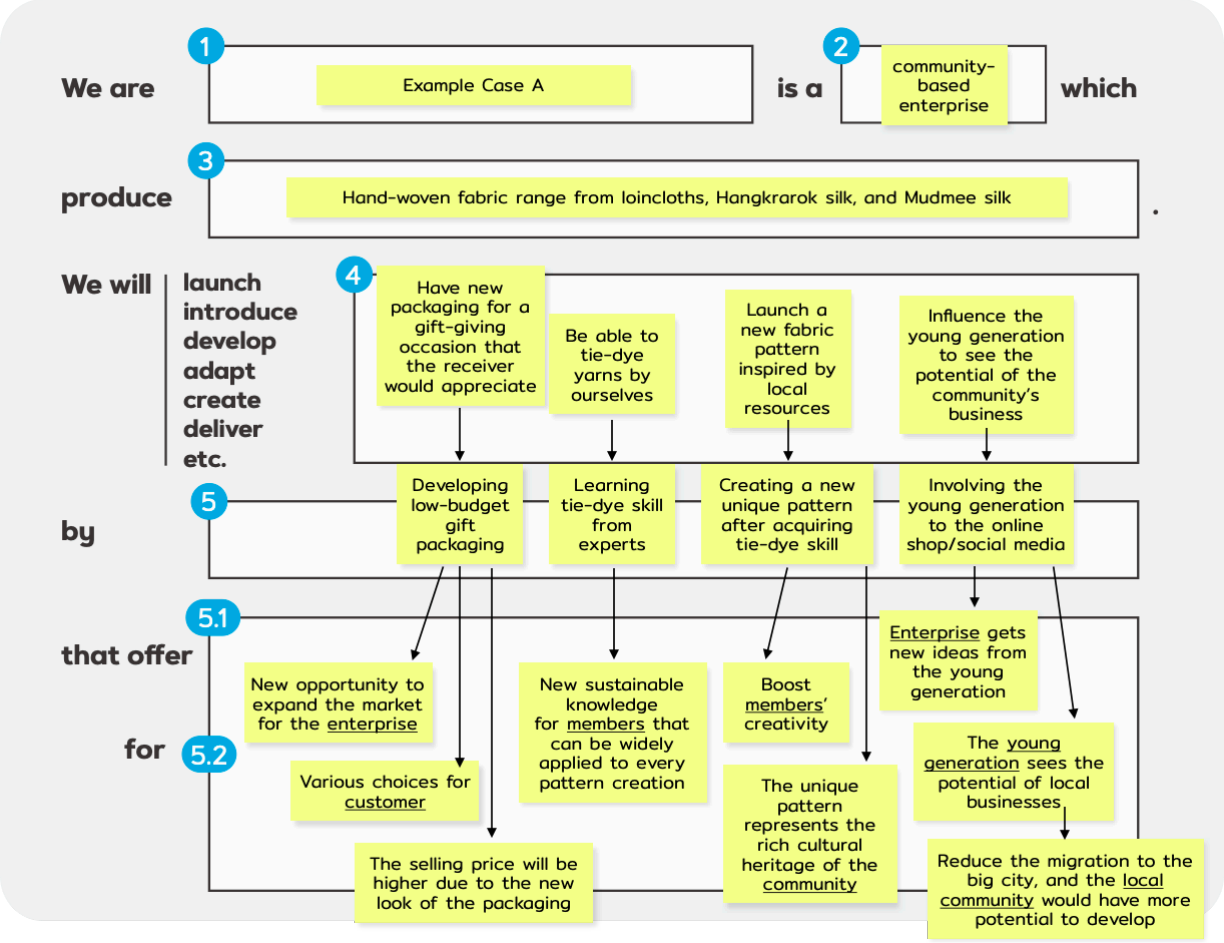


Figure 6.14 Mutual value building structure applied with Example Case A

In the booklet, a practical example of how to apply the 'mutual value building structure' is given to help facilitators gain a better understanding of it. Figure 6.14 shows that the structure was applied with Example Case A (a hand-woven fabric community-based enterprise). The captured values from the previous phase are constructed towards having potential strategies and expanded value dimensions as a ripple effect of the selective strategy.

- **Phase E: Plan**

This phase aims to select the potential strategies that can create impacts according to mutual value. Once the strategy is determined, the action plan and requirements for governmental support can be discussed. Local authorities need to be actively involved in discussing entrepreneurs' needs and providing feasible support. The duration in this phase should last between 120 and 150 minutes. The process can be broken down into steps and constructed as follows:

- Mutual value (from the previous phase)
- The selective strategy indicates challenge, limitation and risk.

- Action plans with key players and their roles
- Requirement for governmental support
- Types of support and infrastructure, as well as suggestions for external support if needed
- Follow-up engagement

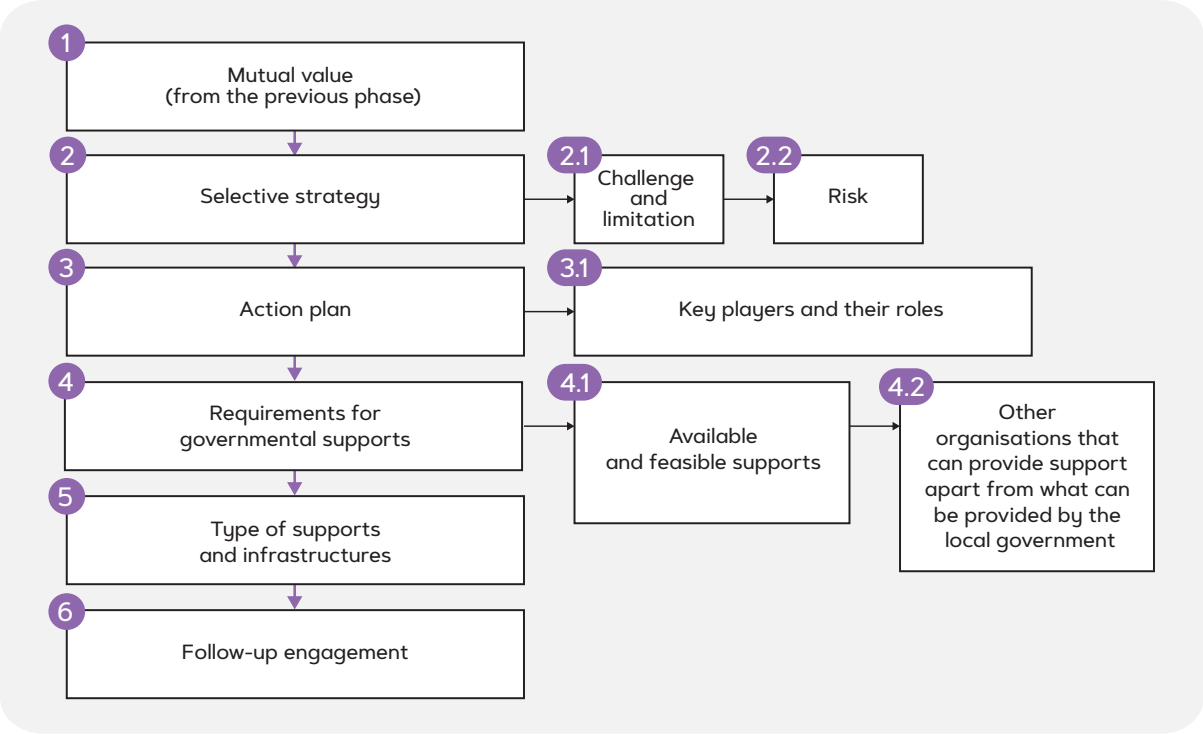


Figure 6.15 Diagram for commitment building

In order to aid with the facilitation, the diagram (see Figure 6.15) can be used as a guideline for structure ideas. It can be drawn using a large piece of paper and Post-it notes. In accordance with the diagram's structure, the process begun with [1] the mutual value from the previous phase is the heart of development. This is followed by [2] the selection of strategies that could create an impact according to mutual value. To do an agile evaluation of the selected strategy, [2.1] and [2.3] need to be considered in order to explore limitations and mitigate risks. Once the strategy is concrete, the determination of action plans [3] could be indicated with key players and their roles [3.1]. Next, the discussion should be about the requirements of governmental support [4], what is available and feasible [4.1], and what is beyond capability [4.2] that might need to be suggested for other support bodies. Finally, the type of support and infrastructure could be determined [5]. Lastly, creating follow-up engagement [6] with all of the stakeholders is essential in order to keep track of the development and to provide further support if needed.

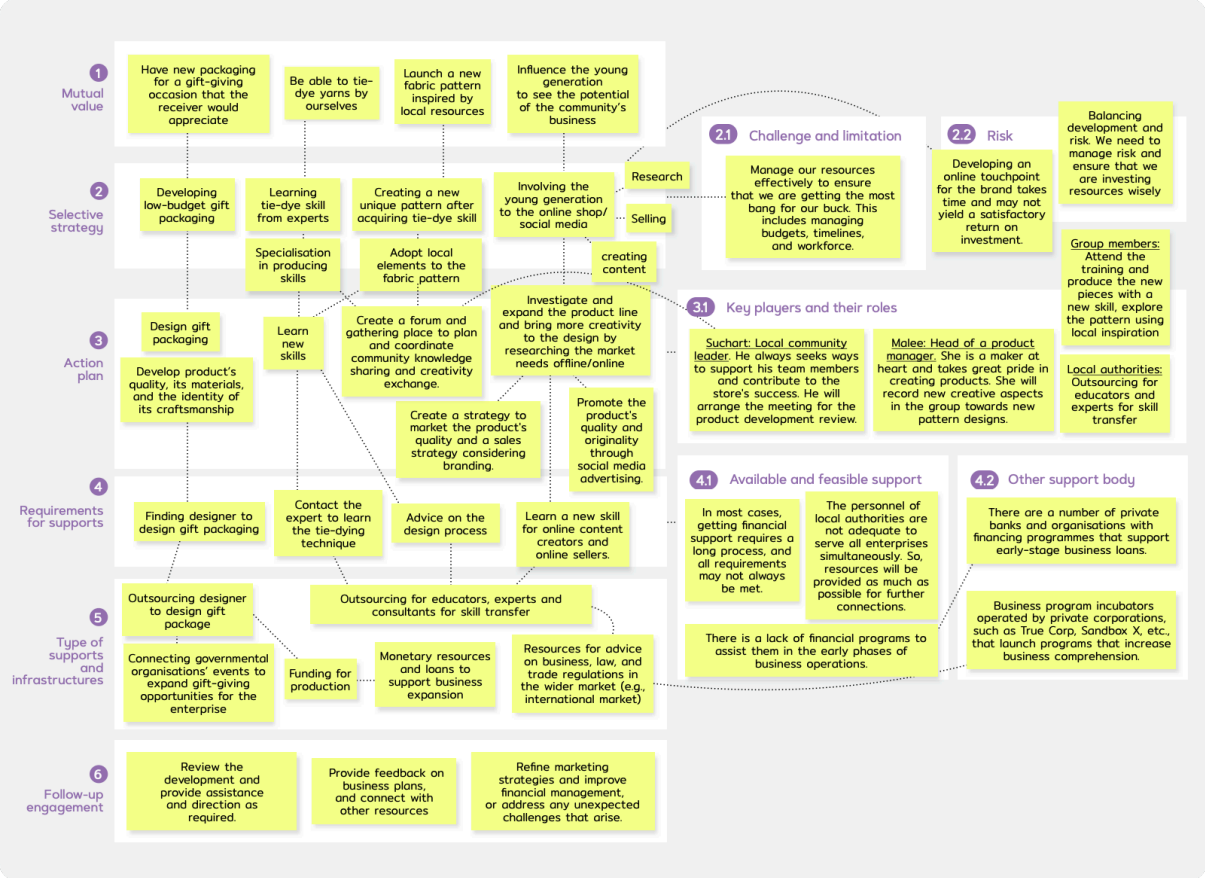


Figure 6.16 Example of diagram for commitment building use with Example Case A

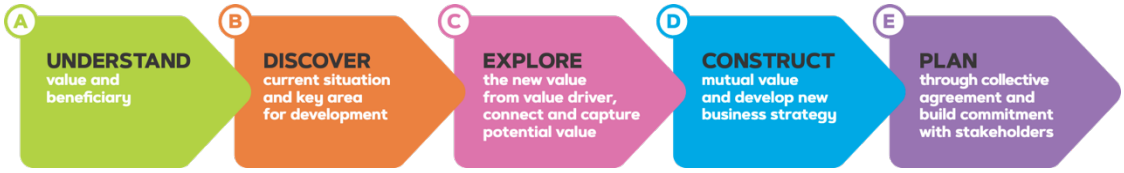
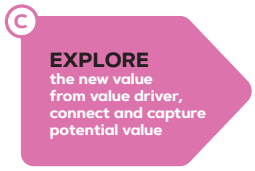
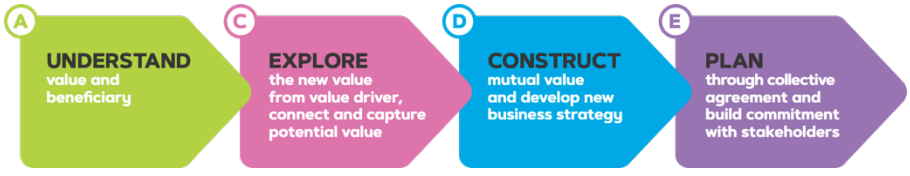
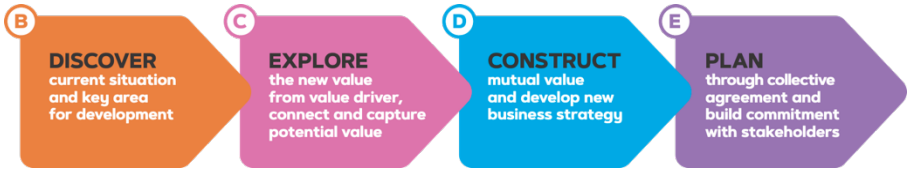
Consequently, this phase could result in a commitment between local entrepreneurs and authorities built through a co-design plan and support scheme. Key players and stakeholders should be able to proceed with the achievement after the activity. The VCo procedure ends here. However, follow-up engagement is necessary in order to retain the momentum and to monitor the development progress. Local authorities should choose a suitable medium and platform for engaging with local entrepreneurs. It could be social media, online messenger (e.g., Line, WhatsApp, Facebook), online group discussion (e.g., Line group, Facebook group), offline meetings, or informal meetings. The engagement could show what value can be gained from accomplishing the goals. As a result, the effective follow-up engagement could lead to a stronger relationship among the stakeholders. Local authorities can monitor and measure the results *via* the engagement platform.

6.1.1.4 Flexibility and adaptability of the framework phase

In term of flexibility and adaptability of the framework, each phase particularly generates different outcomes, some of which can be done separately to serve a specific purpose, and

different types and stages of local enterprises. The potential scenarios can be summarised in following table.

Table 6.8 Potential scenarios of framework usage

1	 The whole-process framework application is ideal for value co-creation. It can be done with a single group of enterprises (i.e., community-based enterprise, single-owner enterprise with employees).
2	 Phase A can be done alone to let the grassroots expand their understanding of business value. It can be done in a small group of participants, or as part of a lecture/seminar for a mass approach.
3	 Phase B can be done with a group of entrepreneurs from different enterprises in order to let them share and learn from other businesses. It can be done in a small group of participants, or as part of a lecture/seminar with a small number of participants.
4	 Phase C can be applied with a group of entrepreneurs that share similar characteristics (e.g., living in the same local area, having similar goals). It can be done with a small group of participants, or as part of a lecture/seminar with a small number of participants.
5	 Phase A and B can be skipped if the entrepreneurs are quite certain about what they want to improve in their business or if they have specified the key areas of development before. It can be done with a single group of enterprises.
6	 Phase B can be skipped if dealing with a grassroots group that never had a business before but is keen to have one. It can be done with a single group of enterprises.
7	 Phase A can be skipped if the local entrepreneurs have done phase A before, or when approached with knowledgeable ones. It can be done with a single group of enterprises.

By listing possible scenarios, the facilitator can determine whether the entire VCo process is necessary or not. Local entrepreneurs can benefit whether the whole process is implemented or only partially. The VCo can be implemented more than once with the same enterprise in order to further develop new strategies for different requirements.

6.2 Consideration regarding framework implementation

This section provides further consideration of the implementation of the framework. The following recommendations refer to the more holistic picture of working with the framework rather than the step-by-step procedures, as in the booklet. Facilitators should consider these factors before using it, while using it, and after completing the framework's activities.

6.2.1 Understand relationships between stakeholders

According to the conclusion in Chapter 4, section 4.3, the exchange relationship among stakeholders, expected achievements and strategic action can be concluded as illustrated in Figure 6.17. The conclusion here can be used when implementing the VCo framework. Although the framework was designed to work with two groups of stakeholders (e.g., local entrepreneurs and local authorities), the OTOP customer group is always considered when co-creating value. The expansion of value perceiving in all value dimensions, therefore, provides benefits for all stakeholders.

Local entrepreneurs and local authorities should develop a partner-like relationship in the VCo procedure. Building it requires sincere commitment, which can begin during the VCo process. Clarifying roles and responsibilities in the last phase of the VCo also makes it easier to set contributions that can be contributed to by both locals and service providers. Trust can be built through commitment and willingness to reach established goals. Trust can also be made by increasing transparency in support provision. Keeping in touch and following up on a regular basis is helpful. Providing the locals with an opportunity to voice their concerns and opinions should result in long-term strengthening of the relationship.

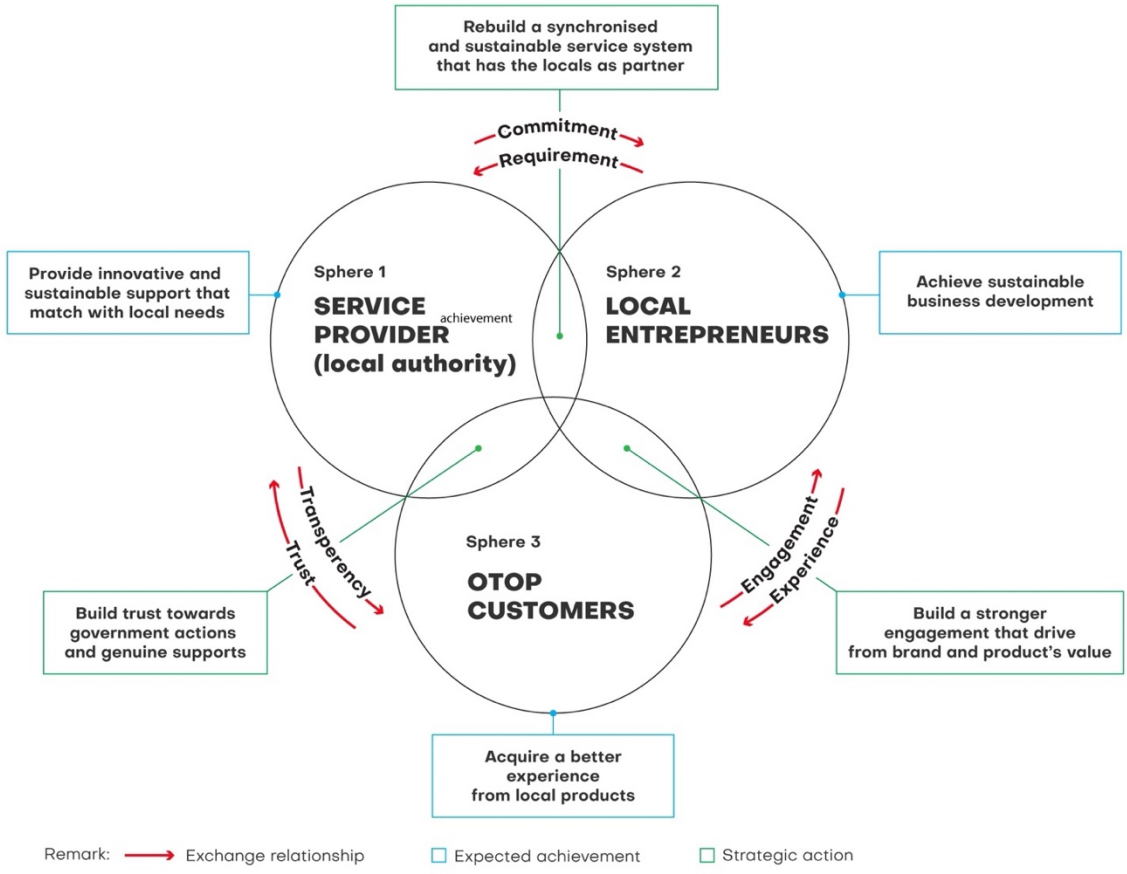


Figure 6.17 The exchange relationship and expected achievement of the OTOP stakeholders

6.2.2 Role of the implementor

Since the VCo framework was designed to be an initiative for co-creating mutual value for local enterprises and co-designing support provided by the local government, the local authorities need to be the main implementor of the process. As the Community Development Department (CDD) is chiefly in charge of the OTOP, the local officers in the department are the ideal implementers. The primary roles of the implementor are to facilitate the activity following the framework phases and to ensure that the outcomes of each phase are achieved. A successful VCo must be followed up with a progression review in accordance with established goals from the VCo process. The impacts of the VCo framework should be measured from an economic and social perspective. Besides the main role, local authorities should empower the locals in positive aspects (e.g., creativity, leadership, innovation, problem-solving and self-reliance), which results in promoting sustainable development for both the business and community. Local empowerment can be done by encouraging local engagement and allowing decision-making from the bottom up, listening to feedback and suggestions for service development, and providing them with support so that they can achieve their goals and make a positive contribution to the local economy. Assistance from

the service provider can be viewed as a way to help locals access funding, resources, and mentorship. Furthermore, the additional role is to foster a sense of community and to encourage local businesses to grow together as a community. A good foundation for social support in OTOP businesses can encourage them to support other local businesses and help each other, which can be done through formal or informal activities.

6.2.3 Collaboration with external actors

Regarding the involvement of external actors, local authorities could play a middle-man role in connecting them to aid with facilitation if needed. In the collaboration process, it is advisable to understand which key areas the enterprise needs to develop first. This is because it is essential to collaborate with experts equipped with the right skill set for a particular task. The external experts can be:

- Other support bodies (e.g., local universities, NGOs, other governmental organisations, private organisations): These actors can collaborate in the VCo procedure and even after implementing the framework for further collaborative development.
- Designers and creative actors: This group can use their expertise (e.g., design thinking, problem solving, creativity) to aid with the VCo process.
- Business consultants: This group can be marketing, management, and business development professionals. Including them in the VCo process can bring diverse perspectives to local enterprise development.
- Community actors: This group can be community leaders, experts in folk wisdom, or community members, as the locals should have the most knowledge of their territory. In addition, getting different generations involved could result in various perspectives that would benefit the enterprise and its community.

Incorporating diverse perspectives and expertise can lead to more innovative and effective solutions. Local authorities should sustain external connections and grow the network. By involving external actors, local authorities can foster a culture of collaboration and innovation, which can lead to the development of more effective and sustainable solutions.

6.2.4 Types and stages of local business

As categorised by the OTOP programme, the vast majority of OTOP entrepreneurs are community-based enterprises (CBEs) (68.8%), followed by single-owner enterprises (31%) and SMEs (2.2%) (Natsuda *et al*., 2012). The VCo framework can be adapted and used with all types of businesses across the different geographical contexts. The whole VCo framework

could be implemented with one enterprise at a time to co-create unique value for the business and tailor action plans and support to fit its requirements. However, with the flexibility of framework application, some phases can be adapted to be used with multiple enterprises (as tested in the user evaluation workshop WS-4-LE with local entrepreneurs from different backgrounds). Regarding the stage of local business, the VCo framework can be applied to those that have never owned a business and those seeking to develop one.

6.2.5 Impact of the framework

The VCo framework can have different impacts at different levels. Initially, the impact centres on local enterprise development, but if done correctly over time, it can lead to a broad range of impacts. Starting from the impact for the OTOP programme and service, the outcomes of the framework can be reflected as new values of the OTOP programme. With more successful enterprises, the OTOP programme becomes more valuable. The framework provides participants with the opportunity to learn and exchange knowledge, including the facilitators from the local authorities. Knowledge gained from the activities helps develop innovative service systems and personnel within the organisation. Services that apply bottom-up methods and a user-centred approach could bring an innovative solution to practice. The bond between the locals and local authorities could be stronger. By enhancing the OTOP programme this way, outsiders could view the government more positively. Regarding the impact on entrepreneurs, the collaborative method used in the VCo framework allows them to involve their perspectives, shape ideas for new strategies, and compromise to make agreements and to work together as a team in order to achieve their goals. The more inclusive acts are, the more that ideas and perspectives can be joined for community initiatives, leading to increased creativity and innovation. The VCo procedure can also develop skills such as identifying problems and problem-solving, allowing an enterprise member to analyse complex situations and have better decision-making. All of this could finally lead to leadership development for an individual, leading to more effective and sustainable solutions. Once the individual is empowered, his or her community could become more resilient. As a result of performing the VCo procedure, the local people can feel a sense of community and contribute to the community's growth, and this could develop into greater social cohesion in the long run.

6.2.6 Framework implementation by other support bodies

As mentioned in Chapter 1, the Community Development Department (CDD), Ministry of Interior, is mainly responsible for the OTOP programme. However, other government agencies and public support bodies are also involved in supporting local enterprises. These support bodies can use the VCo framework to work with local entrepreneurs and generate tailor-made

support in the same way as the local authorities. It also can be applied to grassroots enterprise development outside the OTOP programme.

6.2.7 Limitations of the framework

The VCo framework is a structural and initiative-based approach to working with locals. A VCo procedure without real execution will not have any impact. However, a meaningful impact could be made by accomplishing commitments made collectively during the process. In this regard, phase 5 of the framework is essential for setting clear goals and action plans to move forward. For local authorities, keeping momentum after the VCo procedure is key. Persistence and regular follow-ups could sustain motivation. It is important to note that the framework does not cover or highlight monitoring, assessing, or measuring the impact of development. Therefore, implementers can adapt their current practices or explore new techniques regarding these areas.

6.3 Reflecting on the framework outcomes

The purpose of this section is to revisit the dominant themes that raised from the current implementation discussed in Chapter 4 and to ensure that they are addressed throughout the implementation of the VCo.

- DT1: Promoting inclusivity to build strong commitment: The VCo framework allows inclusive acts from the locals and local authorities to discuss possible strategies and plans together. In this way, the lack of motivation from within is addressed. Setting up goals together could lead to strengthening commitment from both parties.
- DT2: Fostering a new perception of benefits: This theme is addressed in the first phase of the VCo (i.e., Understand phase), where grassroots can expand the understanding of the value in other dimensions and learn possible beneficiaries. The dimension – which includes emotional value, knowledge, social/regional/environmental value, functional value, and economic value – provides a broader perception of value beyond monetary and economic value.
- DT3: Enhancing self-reliance mechanisms: Regarding the concern that the locals heavily rely on support from the government, this issue is taken into consideration while developing the framework. The second phase of the VCo – Discover – addressed this concern by incorporating a challenge mapping procedure to help entrepreneurs learn to identify the problem and solve it, resulting in the development of a problem-solving skill for an individual. The Explore phase also enables the members to explore

other value drivers and sources that can contribute to creating new value for the business. Clear goals and actions for moving forward are also encouraged in the Plan phase, which is the final phase. Locals can then determine what they are capable of doing on their own and what they need help with from outside sources. As a result of performing the VCo with the locals, a holistic view of how the business should be run can be developed, which ultimately results in the creation of self-reliance mechanisms.

- DT4: Rebuilding trust through transparency: The transparency issue can be addressed by exploring possible and feasible support from the government in the fifth phase of the VCo. By following up on engagement, a partner-like relationship with local entrepreneurs can be fostered. When discussing feasible support, it is always important to maintain transparency and honesty. This can be achieved by clearly outlining what kind of support is possible and what is not. It is also important to create a sense of sincerity and trust with all stakeholders involved in the process. By doing so, strong relationships can be built, and everyone can work towards a common goal.
- DT5: Adding value to the OTOP programme: Initiating the VCo to support local businesses could potentially add value to the OTOP programme and its services (as discussed in section 6.2.5). A VCo can create not only economic benefits but also social, regional, and environmental benefits, as well as opportunities for human resource development. In this context, human resource development refers to two things: entrepreneurship development, which could lead to a self-reliance mechanism for local businesses, and the cultivation of innovative personnel within the local government organisation. These efforts could result in new value gained for the OTOP programme and service.
- DT6: Incorporating social value as KPIs: By broadening the value dimension and incorporating it into every process stage, the VCo can collaboratively generate and reinforce multiple values, including social value, for individuals and communities. The framework places mutual value at the centre of strategic decisions for enterprise development, expanding its impact like a ripple effect in strategy creation. The implementers can make a good assessment of this impact by incorporating it into their KPIs. Doing this could result in improved efficiency of the OTOP service, which can then be reported to the higher levels of governance for service evaluation.

The VCo framework addresses these themes through various phases: Understand, Discover, Explore, Construct, and Plan with stakeholders. It ensures that the VCo addresses all of the themes that emerged from the investigation of the current situation and provides solutions for the OTOP programme and service development.

Chapter 7 – Conclusion

Conclusion	7.1 Research summary	
	7.2 Contributions to knowledge	
	7.3 Limitations of this research	
	7.4 Suggestions for future work	

Table 7.1 Overall structure of Chapter 7

This final chapter provides a summary of the research outcomes, including how the research objectives were met. The chapter also highlights the contributions to knowledge, examines the limitations of the research, and presents suggestions for future research.

7.1 Research summary

The overall aim of this research is to propose a value co-creation framework with implementation guidelines based on co-design principles for the local authorities under the OTOP programme to be used as an approach with grassroots communities to promote equal partnerships among them and to overcome barriers from current service implementation. Accordingly, the research question and objectives were identified (in Chapter 1, section 1.4). This section illustrates how the research objectives have been achieved and how the research question has been answered. Table 7.2 presents a comprehensive overview of the objectives, corresponding chapters, and their respective findings.

Table 7.2 Overview of research objectives, corresponding chapters, and their respective findings

Research question	
How can value co-creation with co-design principles help to shape the OTOP programme strategically in order to ensure equal partnerships between the local authorities and grassroots communities to overcome the barriers from current service implementation?	
Objectives	**Chapters and findings**
OB1 To investigate the current relationships among stakeholders (i.e., the different levels of local authorities, local entrepreneurs, local people, and OTOP customers) in order to identify opportunities and barriers	**Chapter 1** - Literature review on the background of the OTOP programme **Chapter 4** - Findings from the in-depth interviews with stakeholders - Findings from questionnaire surveys with OTOP customers
OB2 To explore the current drivers and barriers of the OTOP programme from both economic and social perspectives in order to identify areas for improvement in terms of governmental service support	**Chapter 1** - Literature review on the background of the OTOP programme **Chapter 4** - Findings from the in-depth interviews with stakeholders - Findings from questionnaire surveys with OTOP customers
OB3 To identify the value of the OTOP programme from different stakeholders' perspectives in order to uncover mutual values (especially the potential for social impacts) and to explore how the value co-creation process can be applied to generate mutual value	**Chapter 2** - Theoretical perspective from literature review **Chapter 4** - Findings from the in-depth interviews with stakeholders - Findings from questionnaire surveys with OTOP customers **Chapter 5** - Expert evaluation workshops on the value for local enterprise and community
OB4 To investigate how co-design can engage key stakeholders in the value co-creation process, promoting equal partnerships and contributing to the development of local enterprises and the OTOP service	**Chapter 2** - Theoretical perspective from literature review **Chapter 4** - Findings from the analysis of case studies **Chapter 5** - Co-design framework's flow and activities with design experts - User evaluation workshops with local enterprises - Evaluation interviews with local authorities

OB5	To explore new opportunities to shape the future of the OTOP programme that benefit all stakeholders and their local community	**Chapter 2** - Literature review on the new opportunity for sustainable development **Chapter 4** - Findings from the analysis of case studies - Findings from the in-depth interviews with stakeholders - Findings from questionnaire surveys with OTOP customers
OB6	To analyse data and develop a value co-creation framework and implementation guidelines	**Chapter 4** - Conclusion of the findings from exploration and investigation phases **Chapter 5** - Analysis of dominant themes - Literature review of the co-creation and co-design process and tools - Result from the evaluation workshops and interviews
OB7	To evaluate the framework with key stakeholders and explore its potential impact	**Chapter 5** - Findings from expert evaluation workshops, user evaluation workshops, and evaluation interviews with local authorities
OB 8	To finalise the framework and develop implementation guidelines on how to implement it as a strategic approach for local authorities to use with the local communities	**Chapter 5** - Result from framework evaluations - Development of the facilitator and implementation guidelines based on the researcher's experience as a facilitator during the VCo workshop evaluation **Chapter 6** - Final framework, facilitator and implementation guidelines

The objectives of the research journey were fulfilled using various research methods. The following sections provide details on how each objective was addressed.

OB1, to investigate the current relationships among stakeholders (i.e., the different levels of local authorities, local entrepreneurs, local people, and OTOP customers) in order to identify opportunities and barriers, and **OB2,** to explore the current drivers and barriers of OTOP entrepreneurs from both economic and social perspectives in order to identify areas for improvement in terms of governmental service support

- The first two objectives were addressed in the investigation stage of the research. It was essential to understand these objectives at the outset of the research. In order to gain this understanding, a literature review of the OTOP programme was conducted using previous research (on both OTOP and the original OVOP) and documents archived on the Community Development Department website. This allowed the researcher to gain insight into the programme's operational system, level of governance, government parties involved, types of entrepreneurs under the programme, and the programme's positive and negative impact. After identifying the barriers in the literature, they were mapped out in order to identify opportunities for development, and to gain a deeper understanding of the relationships among the stakeholders, in-depth interviews were conducted with the key stakeholders, including OTOP entrepreneurs and local authority officers at the district and

regional levels. Interviews were also conducted with experts and organisations that work with the community or have experience working with the OTOP programme, including OTOP programme consultants, community leaders, design academics, design agencies, public sectors, and non-governmental organisations. By combining the results of these interviews, the researcher gained a deeper understanding of the relationships among the stakeholders, and the barriers and areas for development.

- With the OTOP customer group, this research employed questionnaire surveys with a quantitative approach to reach a large number of customers. The results revealed the relationship between (1) OTOP entrepreneurs and their customers and (2) the Thai government and OTOP customers. In addition, the perspectives from the OTOP customers provided clarity on the overall perceptions towards OTOP products and identified areas in need of improvement, leading to new opportunities for the OTOP enterprise.

OB3 was to identify the value of the OTOP programme from different stakeholders' perspectives in order to uncover mutual value (especially the potential for social impact) and to explore how the value co-creation process could be applied to generate mutual value; **OB4** was to investigate how co-design can engage key stakeholders in the value co-creation process, promoting equal partnership and contributing to the development of local enterprises and the OTOP service; and **OB5** explored new opportunities in order to shape the future of the OTOP programme that would benefit all stakeholders and their local community.

- This PhD explored three objectives, all of which were in the exploration stage. First, in order to examine the value of the OTOP programme, the researcher conducted in-depth exploration interviews and questionnaire surveys with stakeholders and experts involved in the programme. The programme's values were reviewed, aiming to develop a co-creation framework. The strength of the programme was highlighted when developing the framework, while the weakness of the programme was treated as an issue to address.

- For objectives 4 and 5, the literature review played an essential part in exploring the potential development from the research themes, such as value co-creation, co-design, and public service design. Theoretical perspectives on how value co-creation and co-design can promote equal partnership were developed. Further, cross-national case studies were conducted in order to explore real-world practice in community development, which helped to see how public organisations work with the community, what strategies they use, and how design-led activities could aid in the process. Practical perspectives

were initially constructed, and opportunities to shape the future of the OTOP programme arose in this exploratory stage of research.

OB6 was to analyse the data and to develop the value co-creation framework and implementation guidelines; **OB7** evaluated the framework with key stakeholders and explored its potential impact; and **OB8** finalised the framework and developed implementation guidelines on how to implement it as a strategic approach for local authorities to use with the local communities.

- The last three objectives were addressed during the development and evaluation stages of the research. First, insights gained from the in-depth exploratory interviews, questionnaire surveys, and cross-national case studies were combined to making conclusions about the relationships among the stakeholders, their expectations, and the strategic actions necessary to achieve their goals. The investigation also identified dominant themes, which serve as the requirements of the framework to help determine its main goals. Next, the framework was developed and discussed in three workshops with design experts with experience in local community contexts. The purpose of these workshops was to co-design the initial framework, establish the flow of activities, and to select and tailor tools to aid in facilitation. As a result, an initial version of the framework was created, including selective tools for activities.

- In framework evaluation, this research used an iterative approach following the DRM to test and analyse the results and to implement further development of the framework before testing it again. The evaluations were conducted with two groups of key stakeholders: (1) local entrepreneurs and (2) local authorities.

- For the evaluation with local entrepreneurs, workshops were conducted with two community-based enterprises and 14 entrepreneurs from different backgrounds. After the evaluation with the users, the researcher developed facilitator guidelines from the researcher's field notes and reflections on the outcomes. The framework with the facilitator's guidelines was then evaluated with another group of stakeholders – local authorities – to validate its usage as an approach when dealing with local entrepreneurs. Finally, the comments and suggestions from local authorities were gathered and used to develop the final version of the framework and to determine implementation guidelines. The conclusion of the evaluation delivers recommendations for the PhD research, highlighting the framework's usefulness in engaging key stakeholders in the value co-

creation process, promoting equal partnerships, resulting in local enterprise development as well as OTOP service development.

7.2 Contributions to knowledge

In order to accomplish the goals of this thesis, the research undertook various stages to understand and develop the potential for OTOP service development. These stages include research clarification, exploration, investigation, development, and evaluation in order to contribute to knowledge in the field of value co-creation for public service utilising co-design principles. At the beginning of the research journey, this study drew from previous academic literature to form theoretical perspectives from the value co-creation, co-design, and public service design fields. Then, cross-national case studies and investigations on the current OTOP situation from stakeholders were examined to shape the theoretical contributions and determine potential solutions for the OTOP programme. After that, practical contributions were constructed into the value co-creation framework with step-by-step facilitator guidelines to support bodies in implementing it with grassroots enterprises and communities. Both theoretical and practical contributions are discussed as follows.

- **Unfolding the complex relationships among OTOP stakeholders and barriers of the OTOP programme**

  As the OTOP involves many parties, the complex relationships among stakeholders (i.e., local enterprises, local authorities, and OTOP customers) need to be clarified. This research unfolds the relationships between the following spheres: (1) local entrepreneurs with local authorities, (2) local entrepreneurs with OTOP customers, and (3) OTOP customers with the Thai government. The specific types of relationships that interlace with the three groups of stakeholders result in the different needs that emerge from various stakeholders. By investigating the relationships, barriers to OTOP were examined along with potential strategies to mitigate them. **The key barriers identified include top-down execution, mismatched support, lack of stakeholder involvement, and heavy reliance on external support by locals.** This set of data contributes to a theoretical perspective that can be useful in future research that needs to tackle grassroots enterprise development in the OTOP programme and services in a similar way.

- **Identifying value dimensions and value drivers for grassroots enterprise development and governmental service development**

  Defining value can be difficult, as it is perceived differently depending on the individual. In order to develop a dimension of value tailored to the OTOP context, this study reviewed the value dimension in similar fields of study, such as social enterprise and local business development, and adapted the dimension of value from the literature (Sheth, Newman, and Gross, 1991; Holbrook, 1999; Kim and Lim, 2017). The resulting dimensions of value consist of functional value (of the product and service), economic value, social, regional, and environmental value, emotional value, and knowledge. Developing these categories aimed to help practitioners develop multi-dimensional values in OTOP that would benefit the local enterprise and community positively.

  This study also employed the building blocks of value co-creation (Prahalad and Ramaswamy 2004a; 2004b) and value drivers (Thambar *et al*., 2019) found in the literature. First, the building blocks of value co-creation provide essential components in developing the VCo framework. Transparency, dialogue, access, and risk-benefit were all incorporated into the VCo phases. Second, the value drivers were adapted to suit the OTOP context and were used as the key areas for development (see Figure 6.8, p. 245). The contribution of the identified value drivers can also be used with other local business development programmes outside of the OTOP programme.

- **Value co-creation framework for co-designing a strategic approach as a key element to successfully rebuild OTOP**

  Previous research on value co-creation has mainly focused on the interaction among businesses and customers in the private sector (Prahalad and Ramaswamy, 2004a; 2004b; Lusch and Vargo, 2006; Vargo and Lusch, 2006, 2008; Kozinets, Hemetsberger and Schau, 2008; Vargo, Maglio and Akaka, 2008; Ramaswamy, 2009; Edvardsson, Tronvoll and Gruber, 2011). As a result, practical approaches have been considered to be limited. Therefore, this research builds upon previous literature and presents a practical approach to value co-creation in public services using the case of the OTOP programme in Thailand. Co-design principles were utilised in the VCo process as a medium to interact with key stakeholders in the OTOP programme to create mutual value and work towards collective goals. The use of values in business helps individuals find purpose and learn how to overcome challenges. It can be seen as a foundation for business development. This foundation can then be converted into new possible strategies that all parties agree

upon and work towards. Having a strong foundation when working with local entrepreneurs is a key element in successfully rebuilding OTOP.

- **Value co-creation framework with co-designing a strategic approach can be applied to related schemes in Thailand or other countries**

  The set of activities in the VCo framework can be facilitated not only by local authorities who responsible for the OTOP programme (i.e., Community Development Department officers under the governance of the Ministry of Interior), but also by other governmental agencies (e.g., U2T programme under the governance of the Ministry of Higher Education, Science, Research, and Innovation, or the Department of Industrial Promotion under the governance of the Ministry of Industry). NGOs and other private organisations can also facilitate the VCo framework with local enterprises. Detailed facilitator guidelines also contribute to practice and aid practitioners in following the phases of the framework.

  Regarding the flexibility and adaptability of the framework, practitioners can facilitate the framework at every stage of business (e.g., newcomers or business development), and different steps in the framework can be run separately in order to serve different purposes, as shown in Chapter 6, section 6.1.1.4.

- **Academic contribution from the study**

  This thesis outlines a structure and methodology that researchers, regardless of whether they work in community development or other areas, can apply to advance future research. For example, **involving stakeholders** during the investigation process not only helps the researcher understand their requirements, but also allows for a **deeper understanding of their relationships**. **Involving designers** in the co-design workshop, where the framework is designed before testing it with the local community, **allows them to apply their problem-solving perspective**. This ensures that the framework directly addresses the needs and maximises its benefits. In other academic fields, the VCo framework can be used as a starting point to uncover the value for advancing in any business development research.

7.3 Limitations of the research

The limitations of this research described in this section include: (1) the topic, (2) data collection, (3) validation, (4) the researcher's role, and (5) the real-world impact of the outcomes.

- **The topic**

  This PhD research focuses on the concept of value and explores the various notions that surround it. As value is an elusive concept, developing a clear comprehension of it was challenging. Theoretical perspectives from the literature can only outline potential value for the OTOP enterprise and OTOP service because individuals perceive value differently. Conducting primary research through in-depth interviews and questionnaire surveys shed more light on the potential value by involving ideas from stakeholders and people that have had experience with the OTOP programme. With a better understanding gained, this research provides a systematic approach in the form of the VCo framework and recommendations as the outcomes of this PhD research.

  Another limitation of this research is that it only focuses on the OTOP programme in Thailand. While the OTOP was initially developed from the OVOP in Japan, the OVOP has been applied in many other countries. Therefore, the context of implementation in other countries could differ from the Thai context, for example, in terms of the nature of authorities or local entrepreneurs. In order to address this limitation, secondary research was studied using cross-national case studies to learn from similar community development programmes. However, primary research only involved data collection from Thai participants, which can also be seen as a limitation as the findings only reflect the experiences and expertise of individuals involved in the OTOP programme in Thailand.

- **Data collection**

  This PhD research focuses on grassroots enterprise development. Initially, data collection was meant to be conducted face-to-face in Thailand with OTOP stakeholders. However, due to limitations caused by the COVID-19 pandemic, the investigation stage had to be completed online. The collected data were rich but could have been richer if the researcher could have visited the local community. When the pandemic measures were lifted, the researcher travelled to Thailand to conduct evaluation workshops with local entrepreneurs.

- **Validation**

  Due to time constraints and recruitment limitations, the workshop aimed at testing the VCo framework could not be run in its entirety with all key stakeholders involved (i.e., local entrepreneurs and authorities). Thus, separate workshops and interviews were conducted in order to focus on the different requirements of each group of key stakeholders. The researcher mitigated this limitation by incorporating outcomes from the user group and evaluating them with the local authorities group. In terms of the implementer role, the researcher was involved in the U2T programme (run by the Ministry of Higher Education, Science, Research, and Innovation) and worked closely with the local university. In this way, the local university functions as a service provider, offering assistance on behalf of the local support bodies. These support bodies are similar to local authorities that operate under the OTOP programme. Even though the local authorities were not involved in the evaluation workshops for implementing the framework, the researcher and a local university participated and addressed the actual issue, fulfilling the requirements resulting from the workshops to meet the expectations of local businesses. The workshop procedure and results were discussed with the local authorities in order to ensure that they aligned with their work procedures and were feasible for implementation.

  As the PhD programme had a time constraint, it was not possible to thoroughly evaluate and validate the research outcomes. It would have been beneficial to involve local authorities and enterprises in implementing the VCo framework in real-world scenarios to ensure its effectiveness.

- **The researcher's role**

  The role of the researcher is an additional limitation to this study. The researcher's perspective and positionality could have influenced the research findings and interpretations. During the data collection, the researcher interacted with the participants and facilitated the research activities, such as the interviews and workshops. This cannot be done without the researcher taking part in it. For the workshop activities, the researcher played a crucial role in facilitating the activities and observing participant engagement. Although the researcher did not intervene in how the participants expressed their thoughts, as the workshop facilitator, the researcher needed to lead activities that might influence the outcome. Although efforts were made to minimise the impact of the researcher's positionality, it is still a limitation that cannot be completely eliminated.

- **The real-world impact of the outcome**

  The real-world impact of this research outcome cannot be measured within the limited time frame of this PhD. However, the potential impacts were assessed based on the usefulness of the framework and implementation guidelines. It is important to note that local enterprise development or the impacts (such as the social impact) requires long-term evaluation. Thus, future work can be carried out at a later time.

7.4 Suggestions for future work

The findings and outcomes of this PhD have limitations, as mentioned in the previous section. However, additional suggestions for future research were proposed during the evaluation stage. Therefore, the following are some potential areas of future research based on the contributions of this study:

- **Improvement and further development of the value co-creation framework**

  This research employed a design perspective to construct the set of activities for the value co-creation framework. However, in order to implement the framework effectively, experts in different fields (e.g., marketing, management, finance) should be involved to facilitate the process. Their expertise could result in a new perspective, adding other beneficial dimensions to the framework.

- **The development of the co-design tools to aid with value co-creation framework facilitation**

  This research provides examples of tools that were tailored to aid with the value co-creation procedure. However, there are numerous potential co-design tools that can be selected or created to assist in the interaction. Future research can provide a set of tools that serve specific purposes in each key areas of development (i.e., products and services, marketing and communication, production and management, networking and social relationships) and that could help explore ideas for specific value drivers.

- **Replication of the framework implementation with different enterprises**

  This research tested the value co-creation framework using an iterative approach to analyse the outcomes and to improve it. Two community-based enterprises and 14 single-owner enterprises were involved in evaluating the framework. The framework could be

develop further with an iteration approach, for example, applied with more cases including different types of products (i.e., food and beverage groups, fabric and fashion accessories, home decoration and souvenirs, non-food herbal products) and different stages of business (e.g., new businesses and rebranded businesses). The findings from the iterations could provide more solutions adding the framework development to enhance its effectiveness.

- **Long-term action research to test the framework and its impact**

  As mentioned regarding the limitations, outcomes cannot guarantee the impact on some aspects of local enterprise development (e.g., the enabler self-reliance mechanism, improvement of leadership skill) or on the community development (e.g., social impacts, commucity capacity). Conducting long-term action research would be beneficial in further investigating and evaluating the impacts. Further, local authorities or other support bodies could undertake this using the framework and recommendations provided in this research.

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Appendix

Appendix A: In-depth interview with the OTOP stakeholders

Appendix A01: Semi-structured interview questions

01 **Group one: local authorities (local and regional level)** from Community Development Department (CDD)

Set 01 | Ice breaking questions

a) Could you please tell me about your role and responsibilities in the OTOP programme?
b) Does your job cover any other roles apart from the OTOP programme?
c) How long have you been working in this job?

Set 02 | Current focus

a) Since the OTOP programme has been with Thai communities for almost two decades, how has the OTOP strategy evolved over the past two decades?
b) What is the current focus or direction for the OTOP programme now?

Set 03 | Process of work

Regarding the procedure of OTOP programme

Joining process:

a) Could you please describe the process of participating in the OTOP programme?
b) Are there any different requirements for different types of entrepreneurs, such as CBEs, SMEs, or single-owner entrepreneurs?

Giving support:

a) What kind of support/services are provided to OTOP entrepreneurs? (Ask about the procedure, timeframe, frequency, and evaluation according to the previous answer)
b) How would you describe your approach when giving support? (For example, do you gather people in a large group or provide support to each entrepreneur individually?)
c) Does the approach/support differ from one community to another? (If yes, what factors do you use as criteria for providing different support?)
d) Is the support for each group different according to their level of success? (If yes, how does it differ between different levels?)

Following up:

a) How do you evaluate the effectiveness of the support provided?

Communication:

a) How do you communicate news, training, or workshop information to OTOP entrepreneurs? What method do you use?
b) Normally, how can OTOP entrepreneurs get in touch with you for support or help?
c) Is there a specific platform for this?

Set 04 | Difficulties during working process

a) Is there any difficulty working with OTOP entrepreneurs or local people?
b) Could you please suggest what could be the reasons behind those barriers? (according to the previous question)
c) Have you come across the co-creation process? If so, would it be possible to adopt this approach to support OTOP entrepreneurs?

Set 05 | Value of OTOP programme

a) How would you evaluate the OTOP service provided to the local people?
   (If the answer does not cover both economic and social aspects, ask further to give an evaluation on the remaining aspect)
b) In your opinion/experience, what are the strengths and weaknesses of the program?
c) Regarding the community capacity dimensions listed here (show the list or read out the list), do you think the OTOP service/support improves the community capacity in all dimensions? (giving a score, from 1 to 10)
   - Citizen participation
   - Sense of community
   - Critical reflection (ability to address problems)
   - Access to shared resources
   - Social and inter-organisational networks
   - Skills (planning, decision-making, implementation, and evaluation)
   - Leadership
   - Community power
   - Community values
   - Understanding of community history or legacy

   (If any option from the previous question is uncovered, ask for opportunities and suggestions to develop further)

Set 06 | Possibility for the OTOP future development / Future vision

a) Regarding future development for the OTOP programme, what is the focus or strategy for the near future?
b) Are there any problems/issues learned from previous implementations that you would like to tackle?

02 **Group two: OTOP entrepreneurs** (for CBEs, SMEs and single owner entrepreneurs)

Set 01 | Ice breaking questions + Business background

a) How would you describe your business?
b) What product(s) are you selling, and who are your target group(s)?
c) What is your role in this business?
d) How long have you been in this business, and how long have you participated in the OTOP scheme?
e) Did you receive any support from the local government when you started your business?
(If yes, what type of support?)
(If no, where did you gain knowledge in order to start your business?)

Set 02 | Overall experience

Regarding experience of participating in OTOP programme

Joining process:

a) How do you join the OTOP programme?
b) Are there any difficulties in the joining process?

Receiving support:

a) What are your expectations from joining the OTOP programme?
b) What type of support do you receive from the programme?
c) How often have you participated in trainings/workshops provided by the local OTOP administration?
d) Based on your previous answer, which support do you think is the most beneficial to your business? Why? Which support do you think is not effective? Why?

Communication:

a) If you have a problem or need more advice from the local OTOP administration, can you reach them easily? If so, through which medium?

Local involvement:

a) Regarding your involvement as a local entrepreneur,
Has the local OTOP administration included your opinions or point of view (e.g., feedback from training/workshop sessions, lacking skills that you want to learn, personal interests) to improve the support from the local government?
(If yes, what opinions have you suggested?)
(If no, what do you think could be added to the service procedure?)
b) Regarding knowledge sharing,
How does the OTOP network provide knowledge sharing between people in the community? Through what kind of mechanism?

c) Have you come across the co-creation process? If so, would it be possible to adopt this approach so that OTOP entrepreneurs could influence the overall support structure?

Set 04 | Value / benefit from participating in OTOP programme

a) After taking part in the OTOP programme, how has your business changed?

b) Have you encountered any issues during the OTOP programme? Please provide some recommendations on how to improve them.

c) Can you suggest what the strengths and weaknesses of the programme are?

d) Regarding the community capacity dimensions listed here (show the list or read out the list), do you think the OTOP service/support improves the community capacity in all dimensions? (giving a score, from 1 to 10)

- Citizen participation
- Sense of community
- Critical reflection (ability to address problems)
- Access to shared resources
- Social and inter-organisational networks
- Skills (planning, decision-making, implementation, and evaluation)
- Leadership
- Community power
- Community values
- Understanding of community history or legacy

(If any option from the previous question is uncovered, ask for opportunities and suggestions to develop further)

03 Group three: experts from other organisations

(community leaders, design academics, design agencies, expert from other public sectors and NGOs)

Set 01 | Ice breaking questions + interviewee background

a) Can you tell me about your work experience with the local community? Or could you tell me about your role and responsibilities for their community?

b) What kind of expertise do you use to work with OTOP administration and OTOP entrepreneurs?

Set 02 | Experience working with local community

a) What is the challenge of working with local people?

b) How can you overcome those difficulties?

c) Have you come across the co-creation process? If so, would it be possible to adopt this approach to work with local communities?

Set 03 | Perspective for OTOP programme

a) From your perspective, what are the strengths and weaknesses of the programme?

b) According to your previous answer,
what factors contribute to the programme's strengths?
What factors contribute to the programme's weaknesses?

c) With regards to weaknesses, how could they be solved or done in a better way?

d) Do you think the OTOP programme provides sustainable development for the local community?
If yes, in which dimension?
If no, what do you suggest for improving sustainable outcomes?

e) Based on your experience in OTOP trainings or workshops as a consultant/adviser/designer, can you evaluate how effective they were?

f) How does that benefit the local OTOP entrepreneurs?

g) Regarding the community capacity dimensions listed here (show the list or read out the list), do you think the OTOP service/support improves the community capacity in all dimensions? (giving a score, from 1 to 10)

- Citizen participation
- Sense of community
- Critical reflection (ability to address problems)
- Access to shared resources
- Social and inter-organisational networks
- Skills (planning, decision-making, implementation, and evaluation)
- Leadership
- Community power
- Community values
- Understanding of community history or legacy

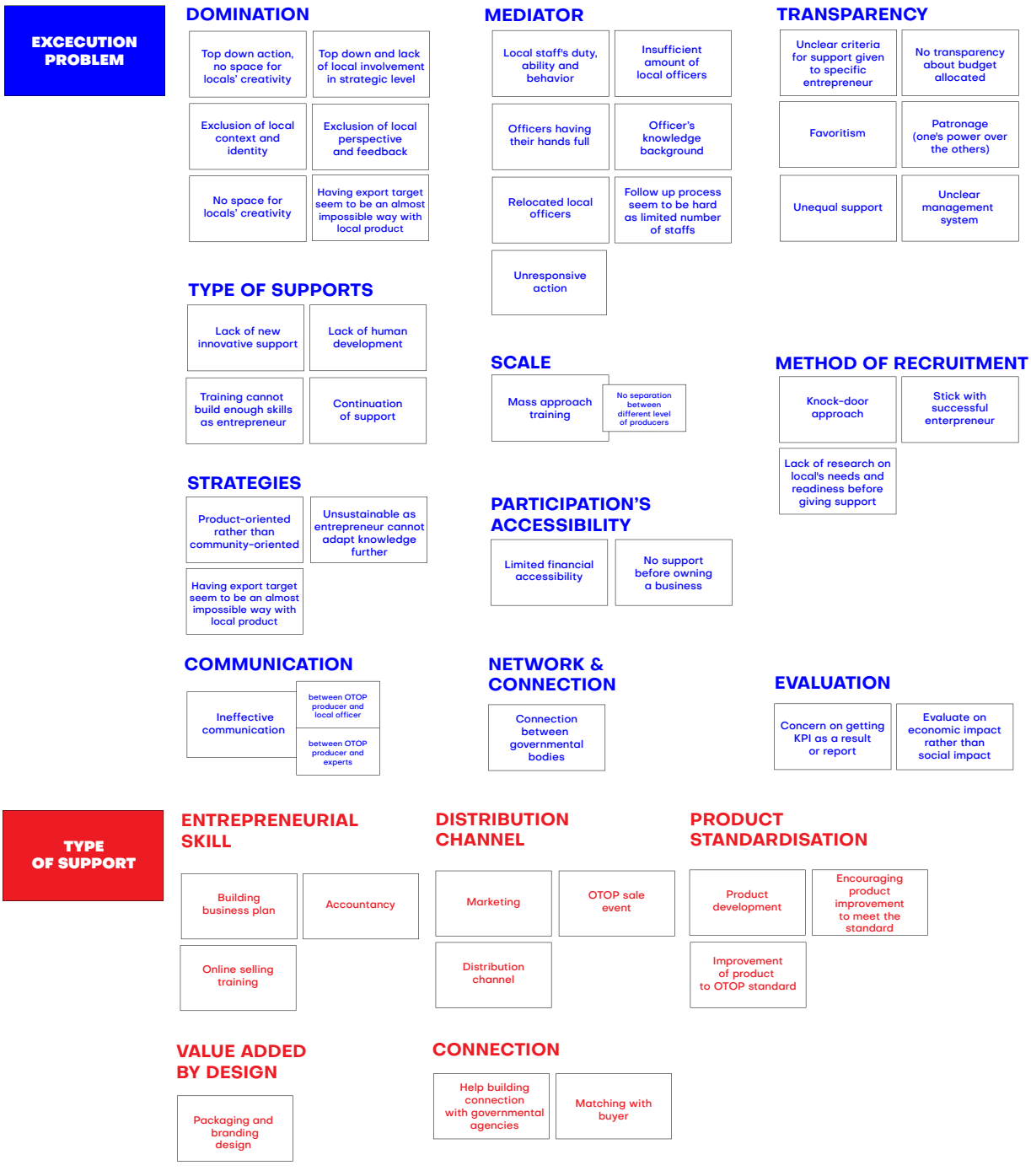
(If any option from the previous question is uncovered, ask for opportunities and suggestions to develop further)

Set 04 | Possibility for the future

a) What could be the future direction/focus for the OTOP programme?

b) Why do you think it would benefit the local community? (Refer to previous answer)

Appendix A02: The labels of incidents form interview analysis



NATURE OF OTOP BUSINESS

LIVELIHOOD

- OTOP as a second job (no treat it as a first priority lead to less commitment)
- Prioritise on secure job that make ends meet
- Time is a value asset

WORKFORCE

- Limited workforce
- Outsourcing for extra job

MANAGEMENT

- Workload and income management
- Role of entrepreneur (doing everything)

NETWORK

- Reciprocal network in the community
- Knowledge and information sharing through informal network
- Social media platform
- Informal meeting in the local area
- Learning insight from informal activity (e.g. having dinner together)

ENTREPRENEUR'S OBSTACLE MINDSET

- Benefit comes first
- Rely on external support
- Lack of motivation from within
- Passively act without taking control
- Unaware to grow together as a whole community
- Me too culture
- Locals do not support their local product
- Patriotism cannot be translated to product or brand value as Thais welcome and absorb different culture to their own

LEADERSHIP TOWARDS SUSTAINABILITY

VISION

- Tuning mindset and attitude to see the holistic picture together by explaining with a clear and reasonable picture or example
- Having empathy with people to build trust with them
- Focusing on feasible solution first and taking small step at a time
- Having strong mutual commitment
- Embracing problem and shift it as the new opportunity
- Bringing community unique value to tighten community's tie

RESPONSIBILITY

- Managing people' roles
- Community holistic management by fully understanding community mechanism and background
- Seeking the new way of exchanging not just focus on monetary value
- Reducing risk for disagreement
- Preparing for change and unprecedented event
- Balancing competitiveness and reciprocity

NETWORK & CONNECTION

- Connecting with network from outside
- Partnership with people with different expertises
- Building reciprocal network from linking one business to another

INCLUSIVENESS

- Creating space for people to share their voices
- Connecting people within the community and strengthen the relationship
- Encouraging and empowering young people
- Inclusion of vulnerable people

BUILDING TEAM

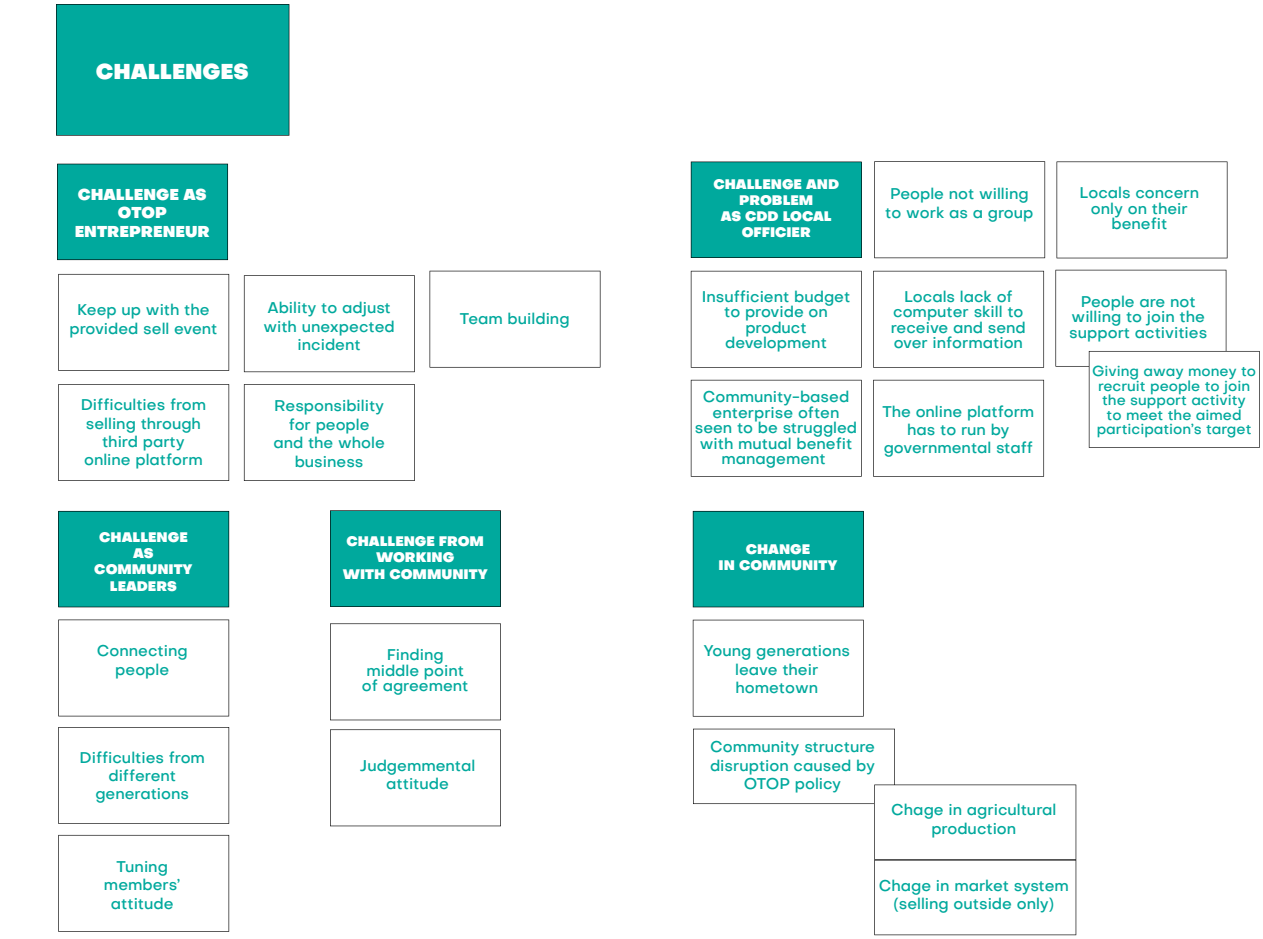
- Building team by equipping community member with essential skill to become the future leader

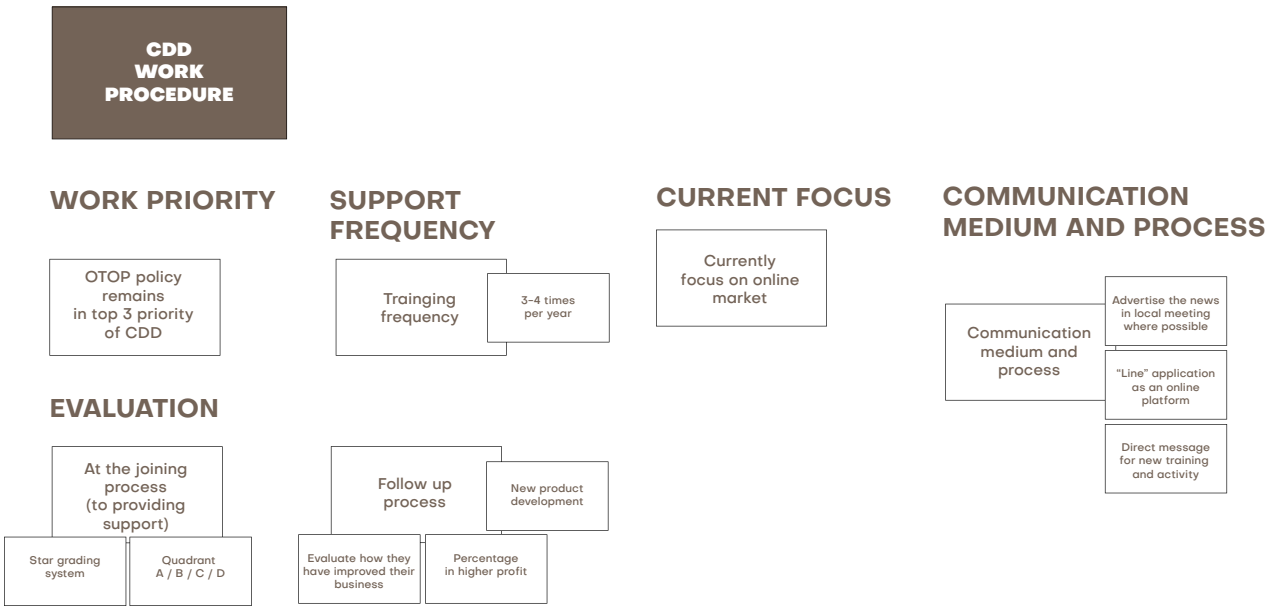
INSPIRE PEOPLE

- Driving people with mutual benefits
- Encouraging people to learn from successful cases
- Seeking new opportunity and engaging members to explore new territory

EMPOWER PEOPLE

- Raising awareness to grow as community, give back to community whenever they can
- Empowering self-reliance community (in order to let the locals produce, use, sell and support within community)


CHALLENGES
CHALLENGE AS OTOP ENTREPRENEUR
Keep up with the provided sell event
Ability to adjust with unexpected incident
Team building
Difficulties from selling through third party online platform
Responsibility for people and the whole business
CHALLENGE AND PROBLEM AS CDD LOCAL OFFICIER
People not willing to work as a group
Locals concern only on their benefit
Insufficient budget to provide on product development
Locals lack of computer skill to receive and send over information
People are not willing to join the support activities
Giving away money to recruit people to join the support activity to meet the aimed participation's target
Community-based enterprise often seen to be struggled with mutual benefit management
The online platform has to run by governmental staff
CHALLENGE AS COMMUNITY LEADERS
Connecting people
Difficulties from different generations
Tuning members' attitude
CHALLENGE FROM WORKING WITH COMMUNITY
Finding middle point of agreement
Judgemmental attitude
CHANGE IN COMMUNITY
Young generations leave their hometown
Community structure disruption caused by OTOP policy
Chage in agricultural production
Chage in market system (selling outside only)


CDD WORK PROCEDURE
WORK PRIORITY
OTOP policy remains in top 3 priority of CDD
SUPPORT FREQUENCY
Trainging frequency
3-4 times per year
CURRENT FOCUS
Currently focus on online market
COMMUNICATION MEDIUM AND PROCESS
Communication medium and process
Advertise the news in local meeting where possible
"Line" application as an online platform
Direct message for new training and activity
EVALUATION
At the joining process (to providing support)
Star grading system
Quadrant A / B / C / D
Follow up process
New product development
Evaluate how they have improved their business
Percentage in higher profit

LIMITATION OF POLICY EXECUTION

NATURE OF GOVERNANCE

- Discontinuity after one's governance (4-year period)
- Layout the plan from the central authority

PROJECT RESTRICTION

- Structure, budget and KPI are very restricted
- Limited timeframe and budget
- Project approval need a measurable outcome

CO-OPPORATION BETWEEN GOVERNMENTAL BODIES

- Projects are hard to co-operated between ministries as it would effects the current work paradigm
- Rely on outsiders' expertise and effect on collective suggestions (not connectedly well-rounded)

INVOLVEMENT OF LOCAL ORGANISATION

- College, University
  - 1 local university with respondsible for 1 district
- Local foundation

BUDGET ALLOCATION

- Budget allocated accord to the proportion of entrepreneur type

EXPECTATION

RELATIONSHIP

- Bonding between local officers and local people
- Negative
  - Losing trust
  - Reluctant act / afriad if not involve
- Positive
  - Family relation
  - Building trust between OTOP producers and OTOP customer

BEFORE JOINING THE PROGRAMME

- More income
- Exploring from others business
- Expand market channal
- Product development
- Gain new knowledge
- Selling product for OTOP producer as a middleman
- Funding
- Build connection

AFTER JOINING THE PROGRAMME

- One stop service
- Quick communication and fast action
- Wider connection
- Seamless linkage between governmental bodies
- Funding allocate to the actual need
- Human development

SUGGESTION FOR SERVICE DEVELOPMENT

STRUCTURE OF AUTHORITY

- Local development should has a versatile headquarters (as a new merged Ministry of Higher Education, Science, Research and Innovation)

NEW STRATEGY

- Policy development should involve expert in different expertise to shape the strategy together
- Reorganise PLACE for OTOP
- New market organisation
- Set up OTOP's strategy with OTOP sustainable brands scheme
- Rearrange encourage new product types to serve customer's demand
- Social enterprise might not be a right time
- Economic value together with social value

TUNING MINDSET

- Build strong committment together (even locals treat their business as a second job)
- Refocus on perception of benefit
- Empower self-reliance

TYPE OF SUPPORT

- Providing tools that help people earning money, not provide money
- Focus on foundation
- Focus on sustainability on the value chains
- Acknowledge the local to find the different stand point
- Equip the local with essential entrepreneurial skill
  - Marketing
  - Financial Literacy
  - Management

COLLECTIVE IDEAS FOR STRONGER COMMITMENT

- Co-creation could bring the insight and learn from all stakeholders
- Drive with shared value (for both CDD and local producers)
- Set goal together to raise more commitment
- Creating same picture / commitment together with the locals
- Avoiding to command. Asking questions and initiating conversation. Concluding possible solution together with OTOP producers.
- OTOP buddy (connect newjobbers, local academic with local entrepreneur) having shared value for strong committment
- Collaboration will be more successful if stakeholders are profitable

TIME & SCALE

- Analysis needs case by case
- Focusing on long term development and teach the locals to have perseverance
- Use long-term validation and evaluation (3-year project) with the incubator concept
- Implement the policy in a small scale, then scale up later

TRAINING PEOPLE

- Building strong community leaders according to thier expertise
- Train the trainers and local officers
- Build the institute/school for grassroots business from local level to national level

SUSTAINABLE FACTOR FOR LOCAL BUSINESS

- Social entreprise as solution for local business
- The resilient machanism from local unit that can run and continue the development by itself
- Translate the valuable culture into the product or brand advantage
- Advocacy system drive from bottom-up
- Building a stroung sense of Patriotism
- Provide foundation knowledge that the locals can build up on it

PROJECT EVALUATION

- Develop analytical tool for CDD staff to use with local business
- Capacity building

INCLUSIVENESS

- Focus on the involvement of young generation
- Develop a new scheme as the experiencing of the sign of the less participation in OTOP scheme
- Encouraging young generation to involve in the scheme

CANVAS OF CONNECTION

- Connect with buyers or private sector and get to know their demand for new opportunity
- CDD should act like a middle man and provide the connection seamlessly
- Expert needs to connect with people from different expertise as community development needs a well-rounded knowledge
- Integration between governmental bodies according their expertise
- Have a central service hub for specific requirement (e.g. packaging design, business model buidling, financial service)
- Local product could serve local people in the same area during the Covid-19 pandemic

RELATIONSHIP

- Building family-like relationship to earn trust

EQUALITY

- Distributing the support equaly for the new comer

COMMUNICATION

- Setting up the key success for the project (visualise possible outcome to guide the project)
- Clear focus and vision on the contribution in each stages
- Visualise the potential and set up the clear goal
- Training should translate into easy steps for real practice and following up on how people utilise that knowledge.

TOOLS & METHODS

- Approach a new business development methodology for supporting activity (e.g. google design sprint)

RESEARCH THE AREA

- Observing the real need before allocating the budget
- Understand the way of life (both producers and customers)
- Frequently visit the local community during the project (may be some online tool for helping follow up process)
- Guideline needs to follow a fullly-understand local circumstances

EVALUATION

CDD should use social impact as a new KPI

Communicate result of evaluation can be led to transparency

Introduce the social impact as a KPI instead of star-grading system

Introduce the social impact as a KPI instead of star-grading system

FACILITIES & INFRASTRUCTURE

Public funds need to give tangible public solutions. Not just one group of people.

Build basis infrastructure (e.g. health, financial)

Strengthen livelihood and provide job security

KNOWLEDGE TRANSFER

Create a role model entrepreneur to pass on business knowhow

Encouraging people to learn from successful cases

THE USE OF TECHNOLOGY

Platform for back-end business management

Encourage to use digital commerce and develop the central platform for OTOP entrepreneur

Use of digital platform (Entreprise Resource Management) to track progress, improvement, growth

Small order online platfrom

Co-production platform for direct support between outsider and community (not via government)

Build OTOP big data (for searching and sourcing)

CONTINUITY IN THE WHOLE VALUE CHAIN

Focusing on entire process (look ahead for consequences)

Allocate supporting budget for product development

Focus on sustainability on the value chains

DESIGN ROLES

For ideageneration

Design is just not refer as styling or aesthetic of the product

Designer is a solution provider

- Reduce cost / time
- Value added to the product
- new innovation

For facilitation

Design tool for idea generation

Tool for idea generation and blend it together

Generalise ideas as it from the group not from a person

Turn probelm into expectation

Need / Want / Dream

Value can be extract from setting an achievement and asking why

Empathy by sharing the perspective towards the same thing

Set goal together to raise more commitment

For communication

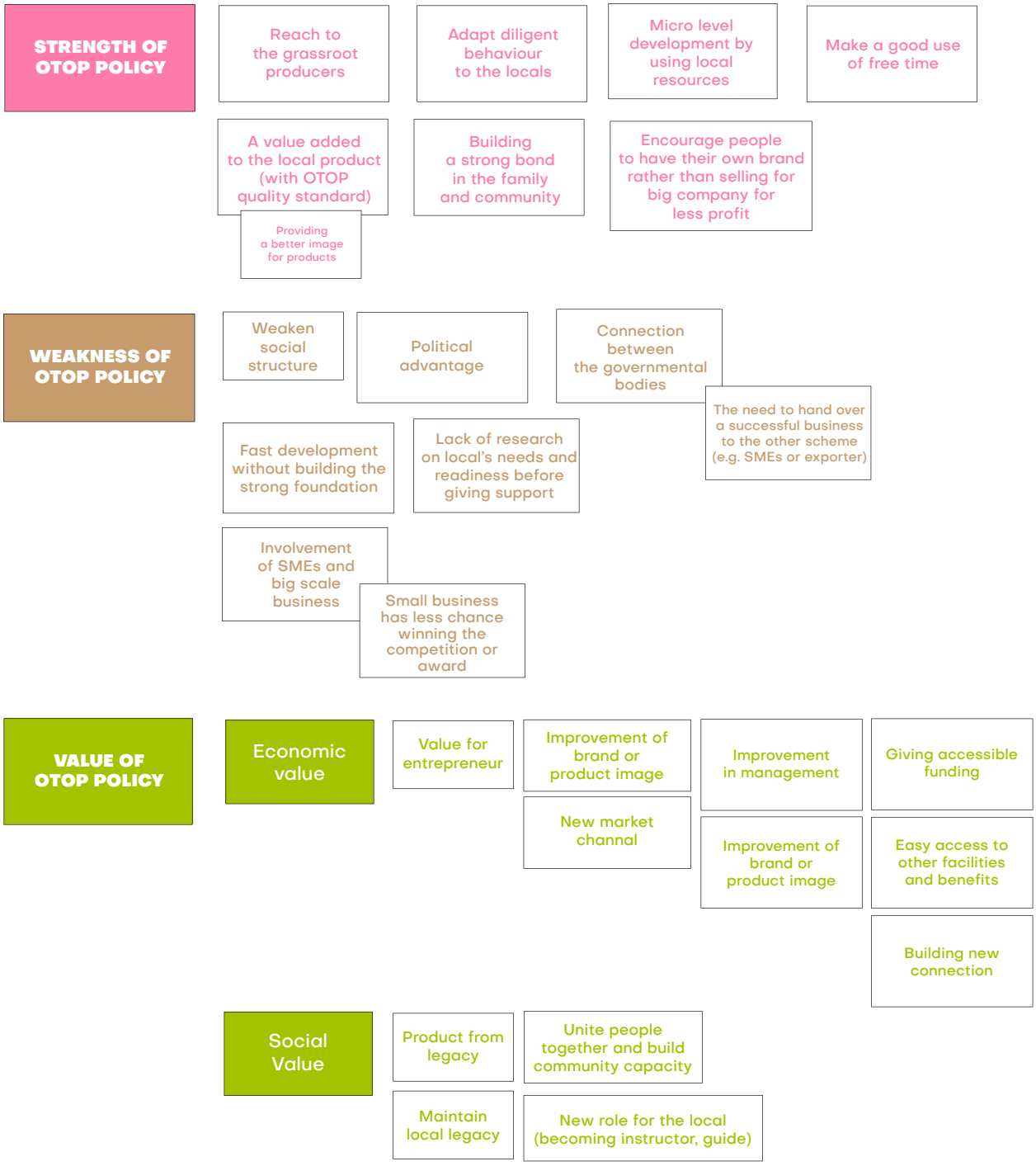
Visualise the new opportunity

Break the same-old routine to the new emergence

Experts who work with community need to level down thier egos and treat locals as expert that have their expertise

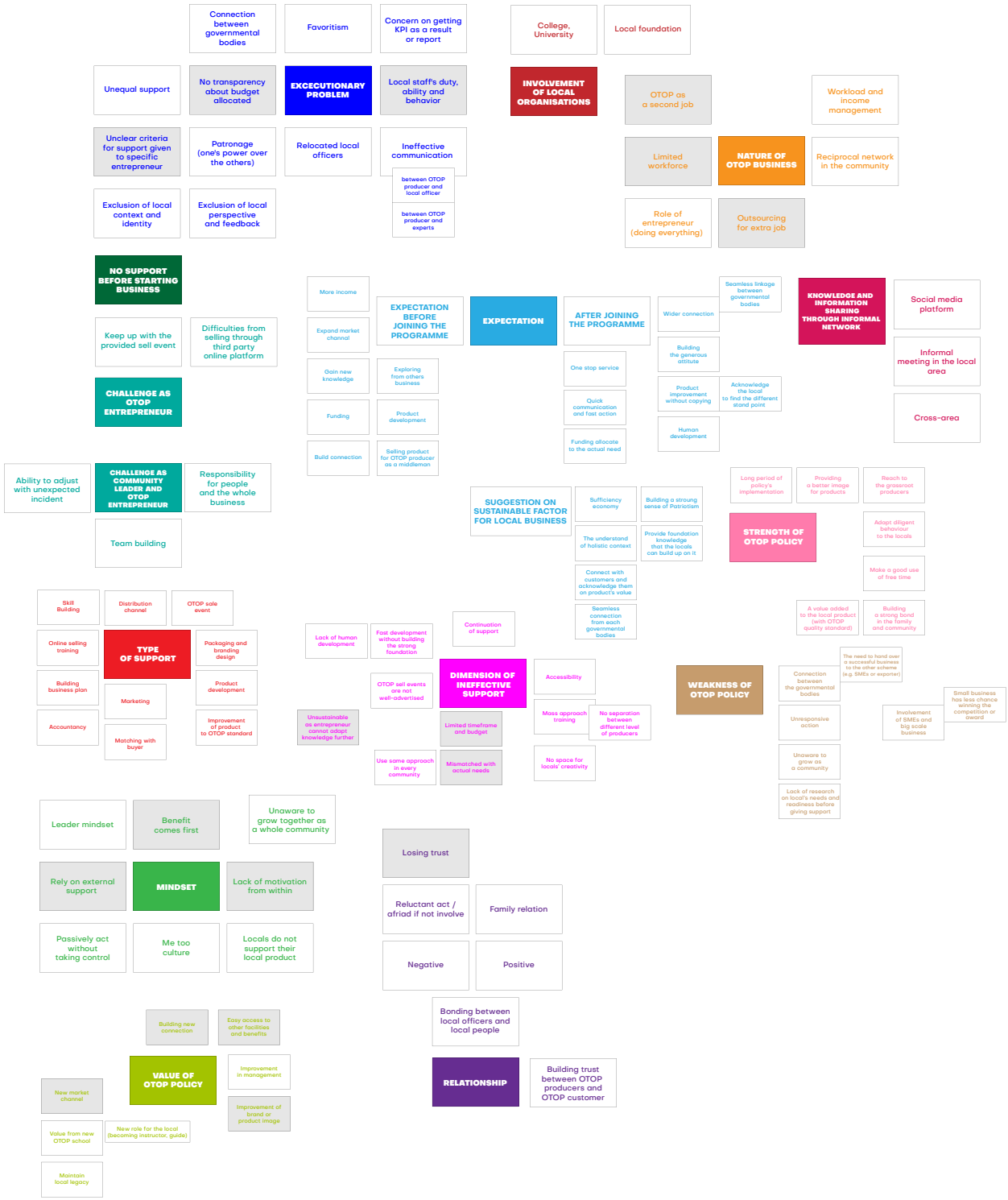
For finding hidden potential

Observation skill with empathy

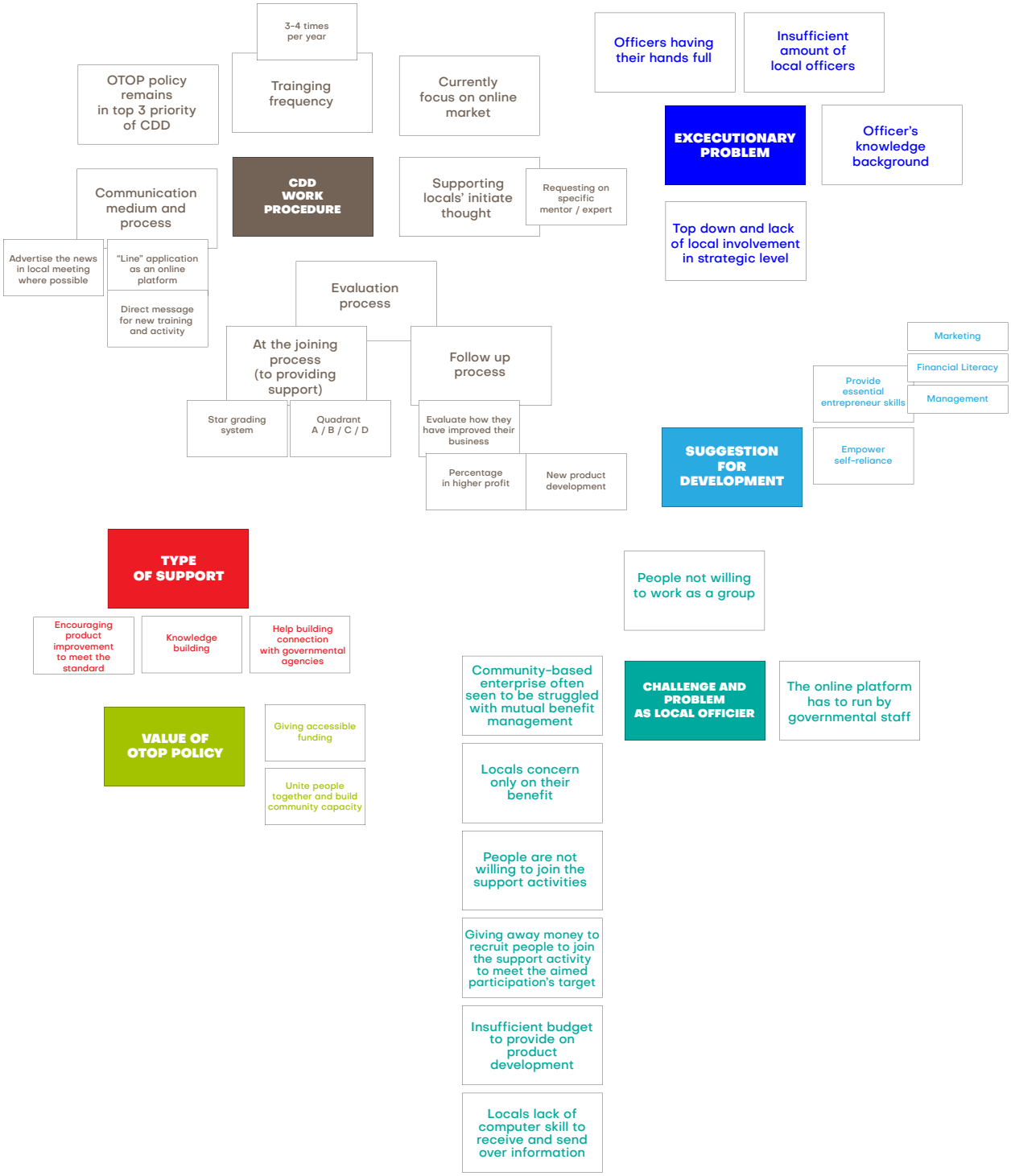

STRENGTH OF OTOP POLICY
Reach to the grassroot producers
Adapt diligent behaviour to the locals
Micro level development by using local resources
Make a good use of free time
A value added to the local product (with OTOP quality standard)
Providing a better image for products
Building a strong bond in the family and community
Encourage people to have their own brand rather than selling for big company for less profit
WEAKNESS OF OTOP POLICY
Weaken social structure
Political advantage
Connection between the governmental bodies
The need to hand over a successful business to the other scheme (e.g. SMEs or exporter)
Fast development without building the strong foundation
Lack of research on local's needs and readiness before giving support
Involvement of SMEs and big scale business
Small business has less chance winning the competition or award
VALUE OF OTOP POLICY
Economic value
Value for entrepreneur
Improvement of brand or product image
New market channal
Improvement in management
Improvement of brand or product image
Giving accessible funding
Easy access to other facilities and benefits
Building new connection
Social Value
Product from legacy
Maintain local legacy
Unite people together and build community capacity
New role for the local (becoming instructor, guide)

Appendix A03: The labels of incidents categorised by group of participants

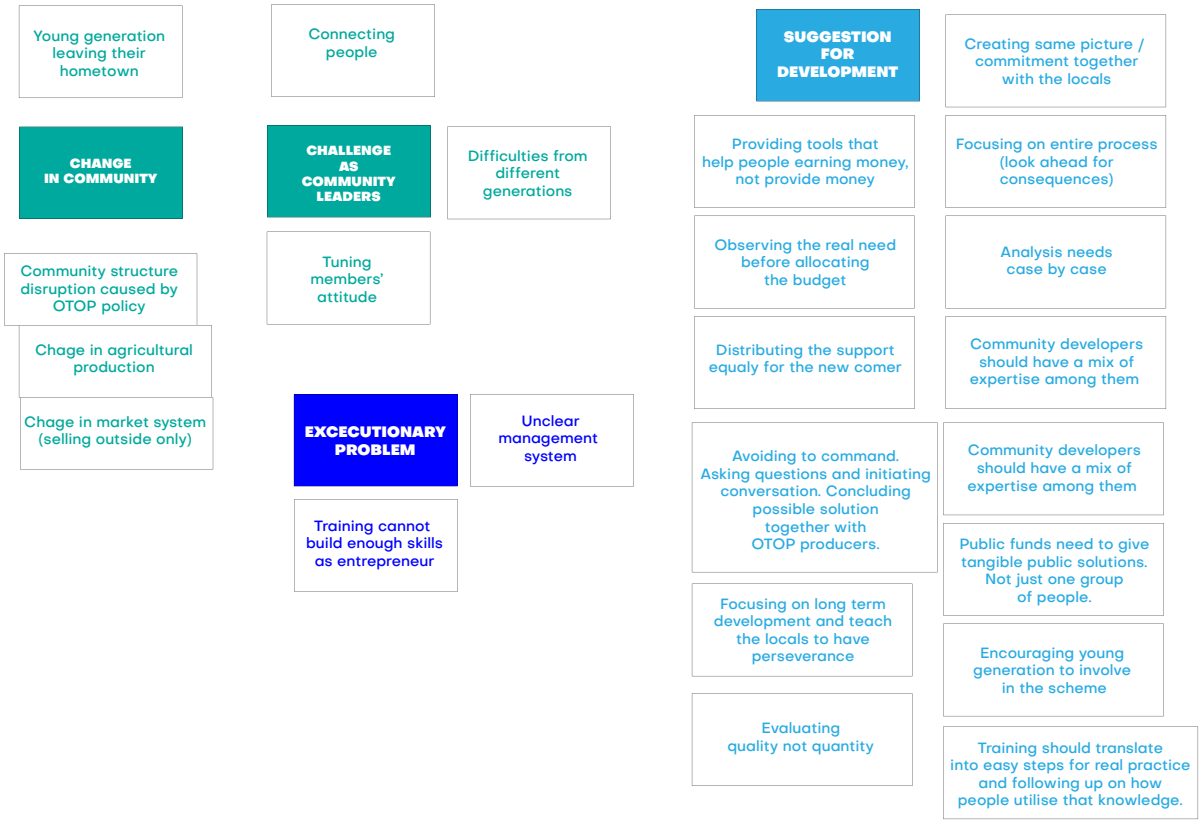
Group 1: OTOP entrepreneurs



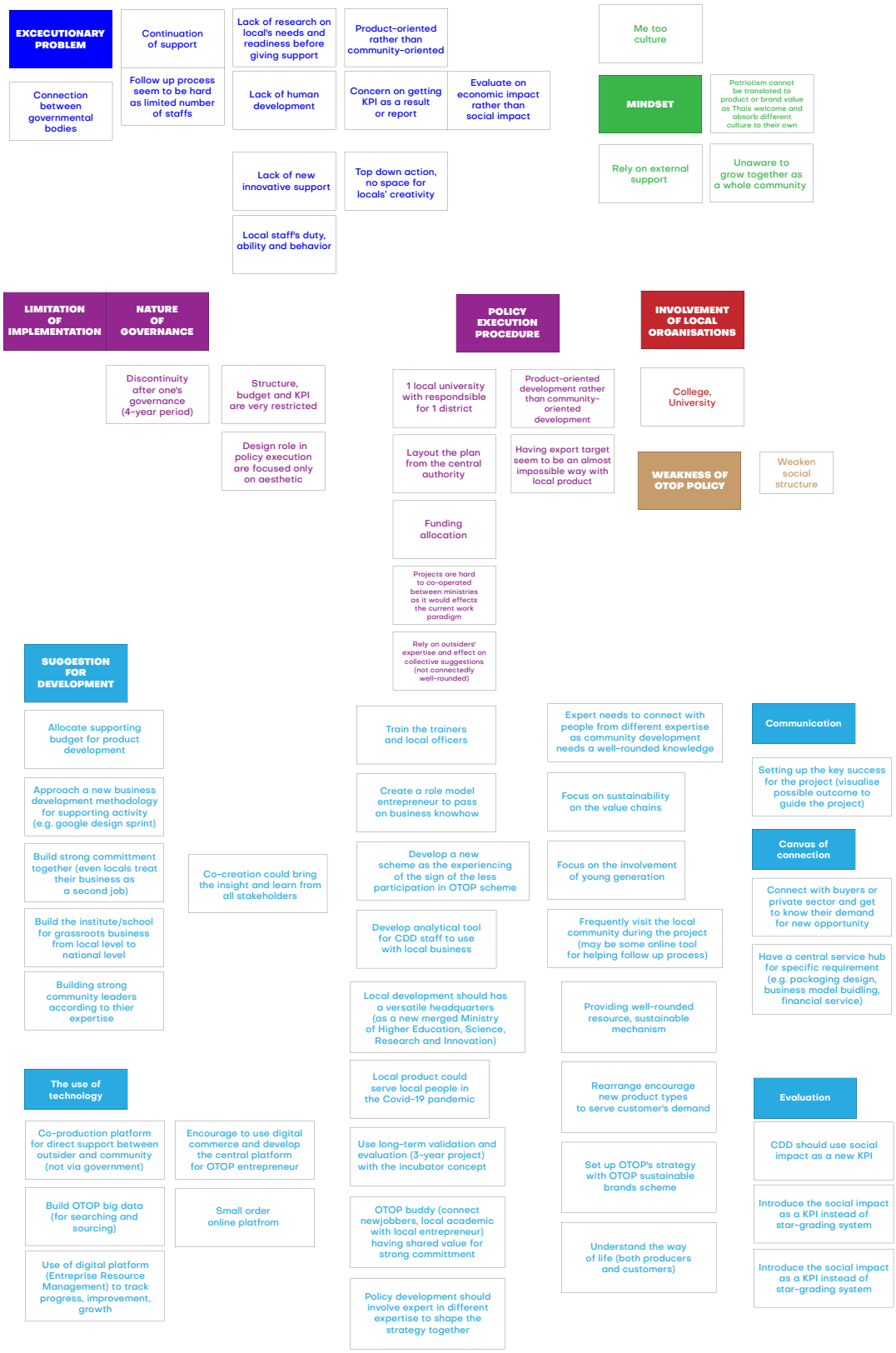
Group 2: Local officers



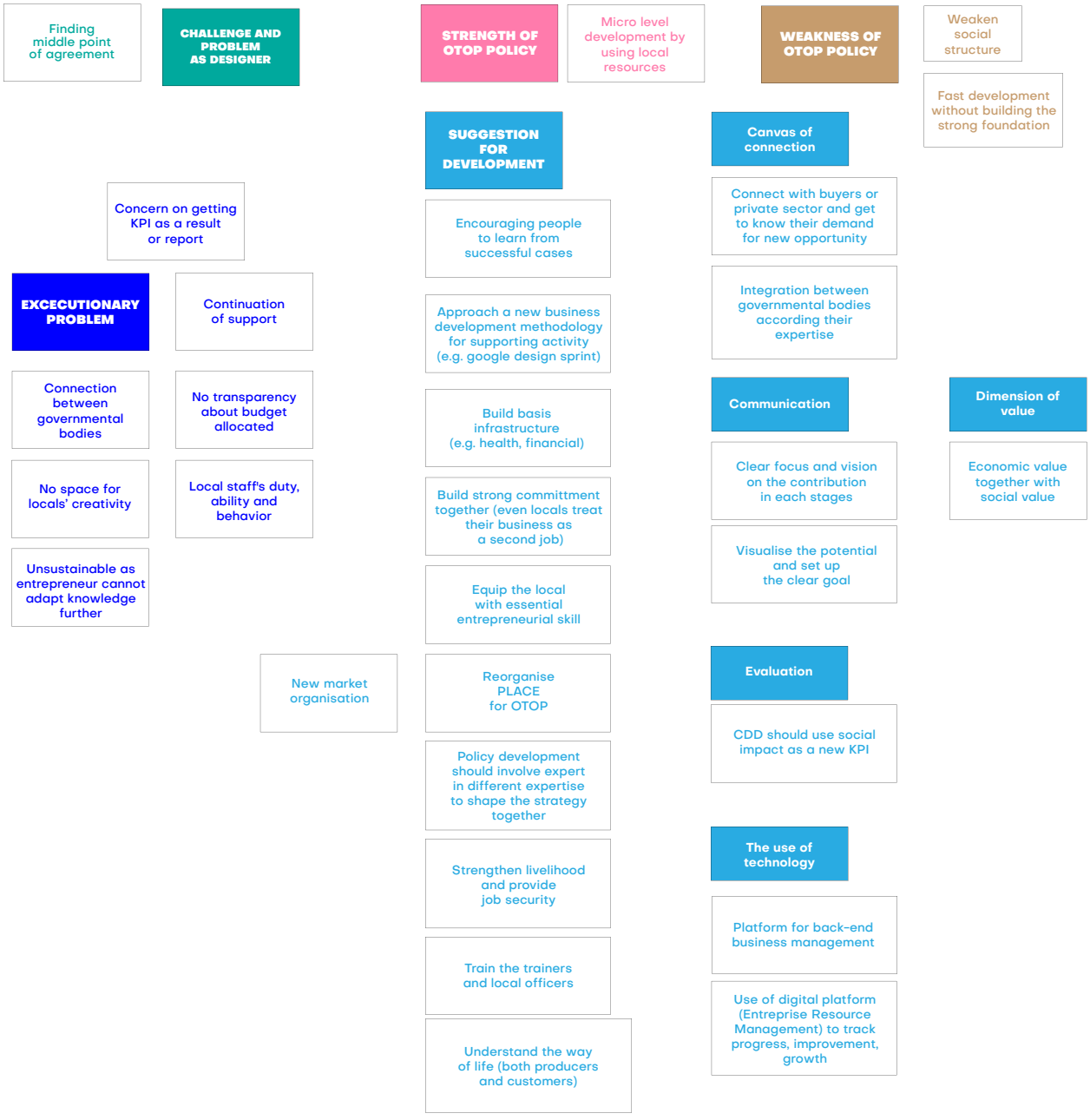
Group 3: Community leaders



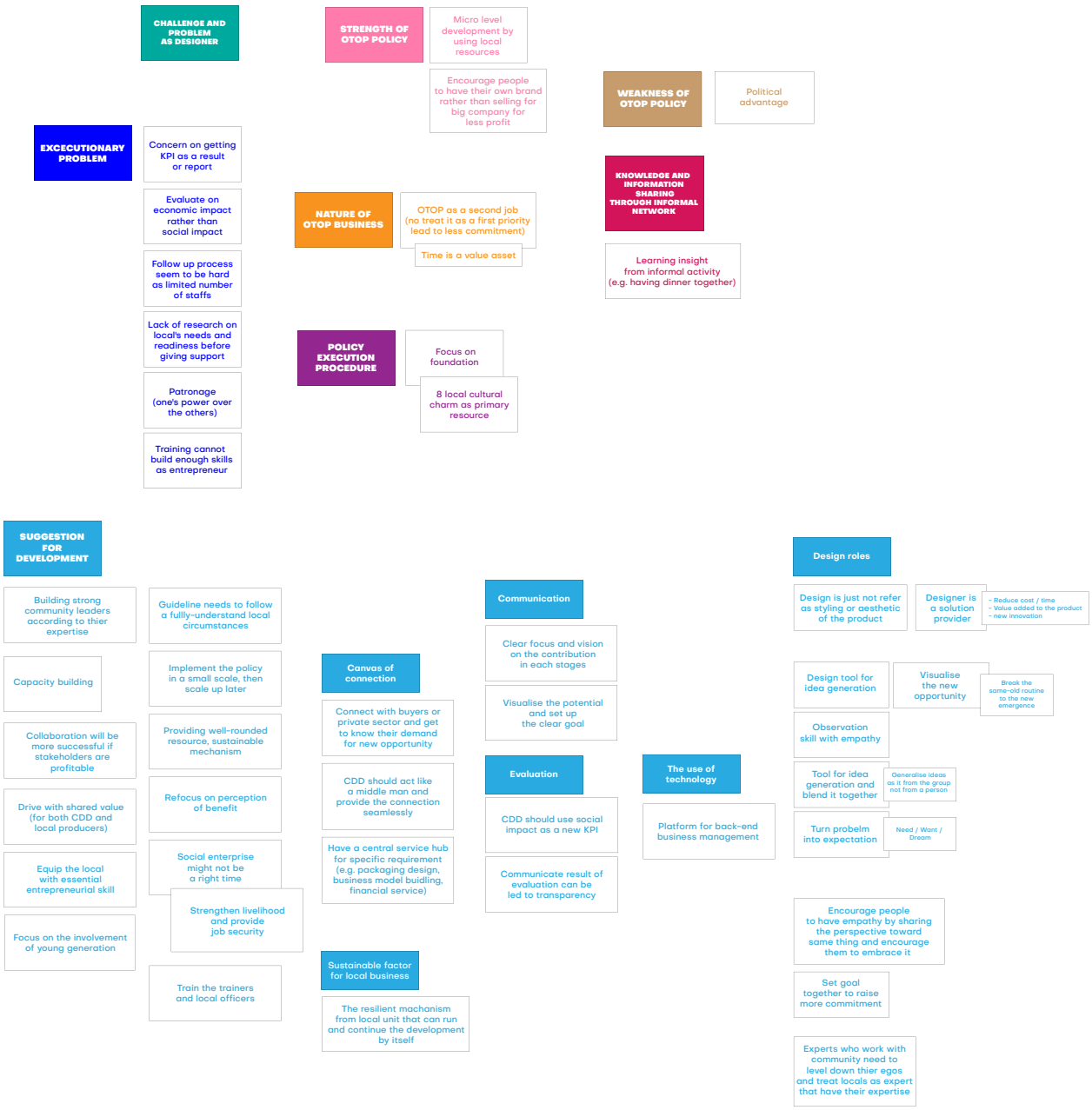
Group 4: Policy analysts / OTOP programme consultants



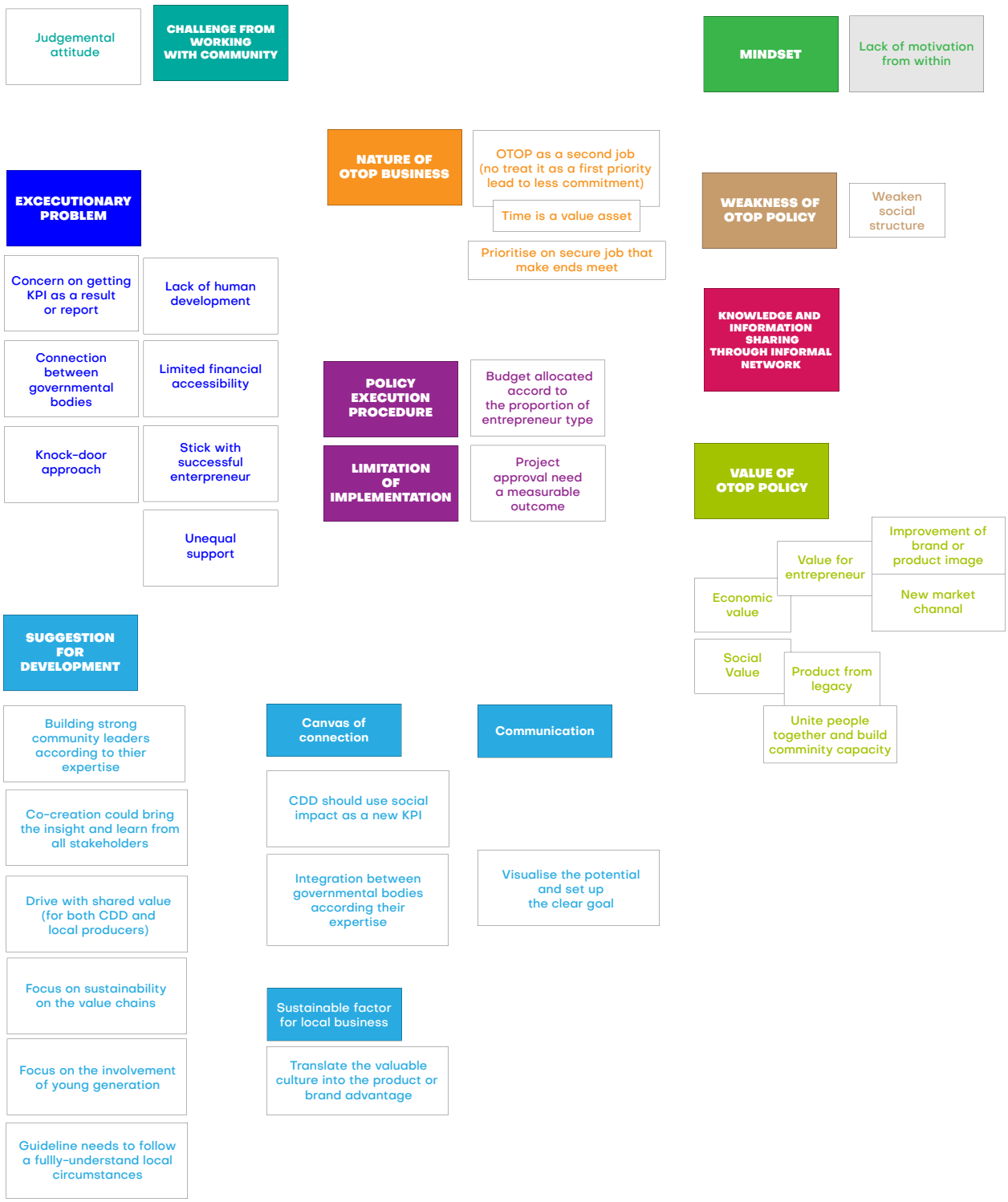
Group 5: Design academics



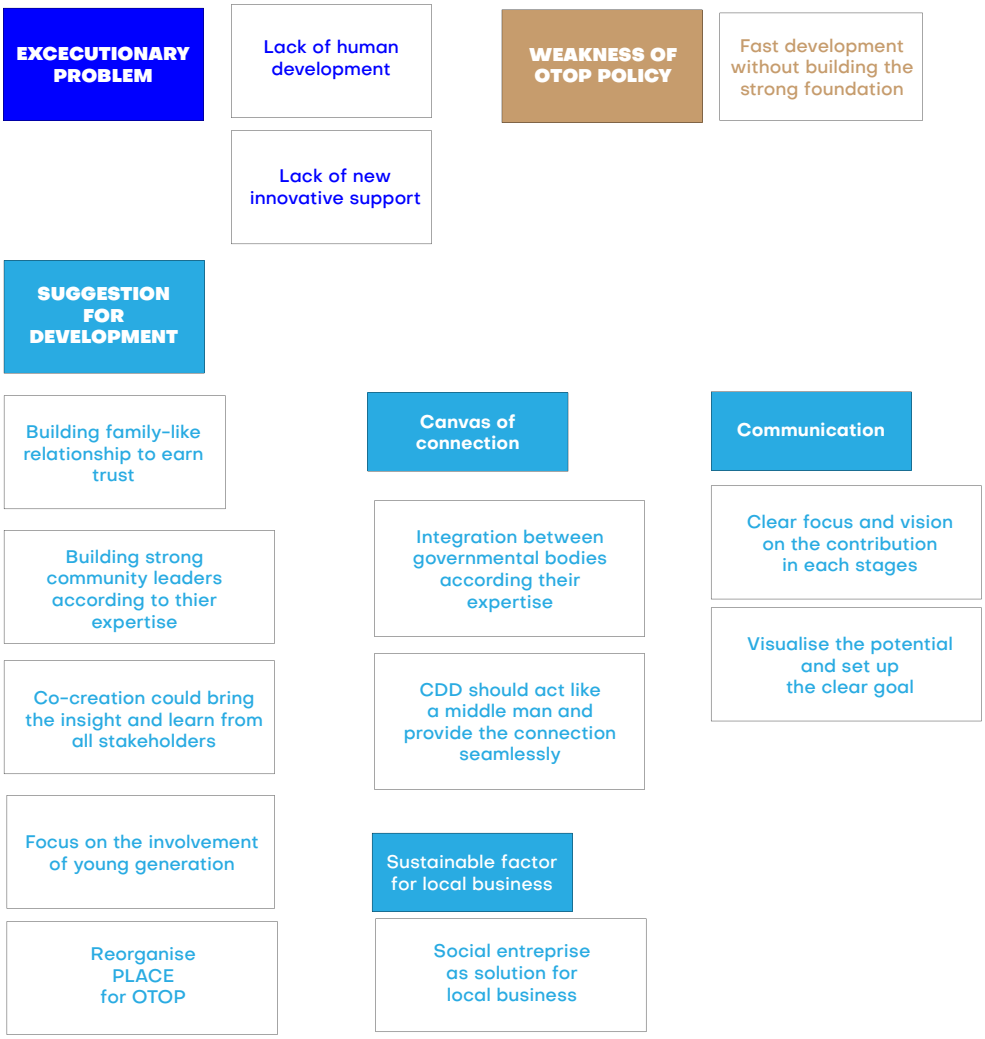
Group 6: Design agencies



Group 7: Public sector



Group 8: NGOs


EXCECUTIONARY PROBLEM
Lack of human development
Lack of new innovative support
WEAKNESS OF OTOP POLICY
Fast development without building the strong foundation
SUGGESTION FOR DEVELOPMENT
Building family-like relationship to earn trust
Building strong community leaders according to thier expertise
Co-creation could bring the insight and learn from all stakeholders
Focus on the involvement of young generation
Reorganise PLACE for OTOP
Canvas of connection
Integration between governmental bodies according their expertise
CDD should act like a middle man and provide the connection seamlessly
Sustainable factor for local business
Social entreprise as solution for local business
Communication
Clear focus and vision on the contribution in each stages
Visualise the potential and set up the clear goal

Appendix B: Questionnaire with OTOP customers

Demographic background

1. **Age**

   (18-25, 26-35, 36-45, 46-60, more than 60)

A1: Customer's attitude towards the OTOP products

2. **Do you know OTOP products / brands?**

   (Yes / No)

3. **How often do you buy the OTOP products?**

   (Every week, Every month, Several times in a month, Several times in a year, Only when I go to the OTOP event)

4. **What is your attitude towards OTOP products?** (scale strongly agree - strongly disagree)

   Products are always in good quality

   Products are reliable

   Products are local initiated

   Products are encourage the use of local resources (both human and natural resources)

   Products are bargain

   Products are easy to find

   Products serve my demand

   Products are innovative

   Products are new and trendy

   Products are repetitive from one to another

   Products are appropriated and ready for export

5. **Do you think that OTOP products are different from other local products?**

   (Yes, No)

6. **If yes, why?**

   OTOP products are better quality and more reliable compare to local non-OTOP products

   OTOP products are lower quality and less reliable compare to local non-OTOP products

   I do not think the quality is significantly different

   Other (Please specify) _____

A2: Customer's perception towards the OTOP programme

7. **How do you understand and perceive the word "OTOP"?** (Please select the top 3 answer that you think it is)

   The support for local initiated products

   The grassroots economy development

   The local community capacity development

The grassroot entrepreneurial development

The government programme that related with political patronage

A populism political approach

A3: OTOP product's accessibility

8. **Where do you usually buy OTOP products?** (be able to choose more than one)

OTOP fair / event

From the shopping mall or market (small kiosk or shelf)

From its original place

From OTOP distribution hub in the big city

From services along side of the road when travelling

Online through an official OTOP website (www.thaitambon.com)

Online through third party website (e.g. Shopee, Lazada)

Online through brand own website or social media

Others (Please specify) _____

9. **What is your preference place to buy OTOP products** (be able to choose more than one)

OTOP fair / event

From the shopping mall or market (small kiosk or shelf)

From its original place

From OTOP distribution hub in the big city

From services alongside the road when travelling

Online through an official OTOP website (www.thaitambon.com)

Online through third party website (e.g. Shoppee, Lazada)

Online through brand own website or social media

Others (Please specify) _____

A4: Customer perspective on the OTOP standard mark

10. **Do you notice the OTOP brand's logo on the packaging before buying?**

(Yes / No)

11. **Do you notice the stars on the OTOP logo?**

(Yes / No)

12. **If yes, what does it mean to you?** (scale strongly agree - strongly disagree)

It helps to ensure the quality of the products

It acts like a standard mark for local products

It confirms that it is a local produce

It confirms that this products are supported by the government

It confirms that this brand has joined the OTOP programme

It confirms that this product initiated from a strong community

13. **How does the OTOP logo on the product affect your buying decision? (Positive/negative)**

(multiple-select)

Yes, I would love to buy it more because I can be sure about the quality

Yes, I would love to buy it more because I feel like I support the local produces

No, it doesn't really matter whether it has the OTOP logo or not

No, the logo did not confirm the quality that much

Others (Please specify) _____

A5: Buying decisions towards local products

14. **What are your buying decisions towards local products?** (Prioritise to see the rank)

Product quality or good function

Product price is approachable

Product is well-known and have a good review

Product is easy to find and access

To try something new

To help support the local economy

Because you fascinated by local wisdom and local culture

Because you want to be a part of legacy conservation

15. **When you buy local products, do you pay attention to the origin of it?**

Yes, because I am interested in local production and where it produced

No, it does not matter for me as long as it is what I want

16. **If there are the same products available on the shelf, would you pick the OTOP product over the non-OTOP product?**

Yes, because I believe in OTOP standard

No, because I do not believe in OTOP standard

It does not matter, I would pick any of them if it can serve me well

A6: Customer expectation for OTOP products

17. **Please prioritise your expectation towards the OTOP products?**

(Prioritise to see the rank)

Quality

Consistency

Newness / Innovation

Authenticity

Bargain price

Easy to find

Discount or good promotion

The use of natural local resources

The participation of local community

Their ethic towards nature and community

A7: Brand value perception and the effectiveness of brand touchpoints

18. **Which is the best channel do you think the brand could pass on their value and stories to the customer?** (scale strongly agree - strongly disagree)

Social media

Website

Word of mouth

Prints

Packaging

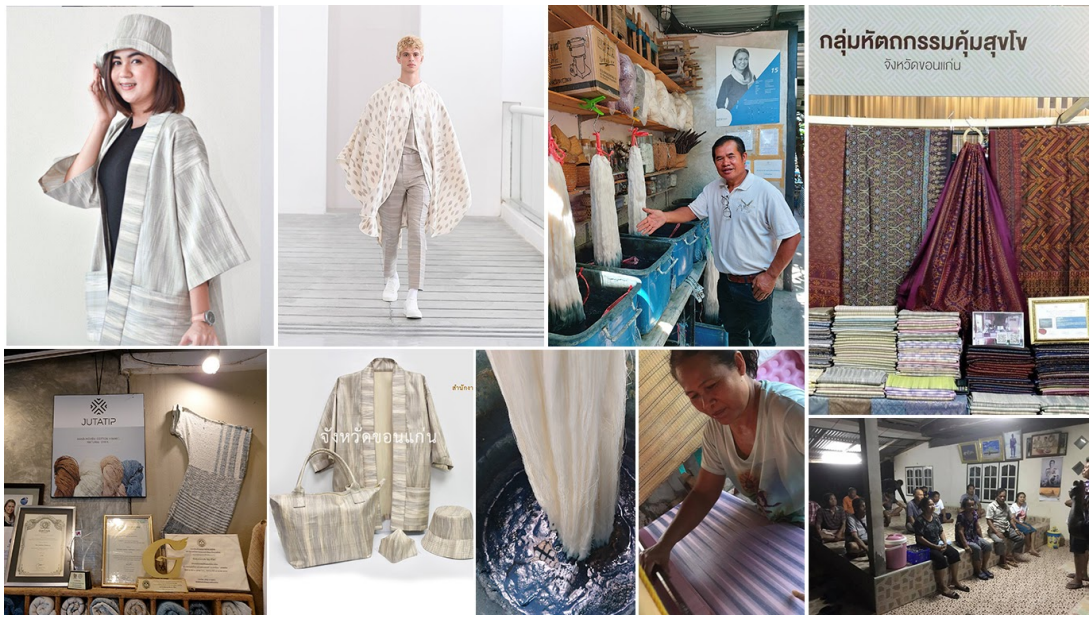
Email

Store

Sales representative

Brand A

Brand B



19. **The pictures above show the social media posts from two brands, which one would you tend to buy, Brand A or B?**

(Brand A, Brand B)

20. **What is the reason for choosing that brand?** (be able to choose more than one option)

The products look better in quality

The products suit me better

Products look better when they were worn by a model

The range of products are wider

The story of their product is easily to connect

It represents their hometown better

The prizes and awards they have got helps ensure the product quality

Their booth or kiosk are more well-decorated

They obviously show the community participation

The craftsmanship appears to be more delicate

It gives you a sense that you can be a part of supporting the local community

21. **Which brand represents the place of origin better?**

Brand A

Brand B

Both of them shows equal level

22. **Which brand communicates their product/brand story better?**

Brand A

Brand B

Both of them shows equal level

23. Which brand do you think they encourage in people empowerment better?

Brand A

Brand B

Both of them shows equal level

None of them

24. Which one of them presents a strong sense of community?

Brand A

Brand B

Both of them shows equal level

None of them

25. Which one of them shows more pride in their local wisdom?

Brand A

Brand B

Both of them shows equal level

None of them

26. In which way do you think social media can help in communicating brand value?

(scale strongly agree - strongly disagree)

The content and pictures can tell brand story

Value can be communicated through the making process

The process can ensure the quality of making

People involvement in the picture can translate into strong sense of community

A8: Customer opinion and feedback for the OTOP brand and product

27. If you can share your thoughts and feedback to the local brand that you bought in order to include your perspective in their development, would you like to do so?

(Yes, No)

28. If yes, through which channel you prefer?

Email

Brand's website

Brand's social media

In person (at the sale event or community visit)

29. Why do you think that local brands should involve the customer's perspective to their development? (be able to choose more than one option)

To understand customer's needs

To understand customer journey better

To provide a better product that engage with customers

To create a better customer experience

To look for an opportunity for a new product

To help spot the areas of inefficient

It gives a sense that brand does really care for customer

To build a strong relationship with customers

To build trust with customers

To increase customer loyalty

A9: Opinion on co-design process between OTOP producer and the local government and how to increase transparency in providing support

Since the OTOP entrepreneurs are supported by the government, would you like to see how the support goes?

(Yes, No)

31. If yes, in which way? (scale strongly agree - strongly disagree)

I would like to see the process of the support

I would like to see how the government mentoring the local entrepreneurs

I would like to see the outcome of the support

I would like to see how them truly work together with the locals

I want to know how they allocate budgets

As this research approach is to encourage the OTOP programme to use a co-creation process with the locals to provide support that matches with their needs...

32. What kind of local involvement activities do you think could inspire you, as a customer, to appreciate the value of local involvement?

(be able to choose more than one option)

Training

Brainstorming

Meeting

Designing things together

Product development

Trial and error

33. How would you like to see the evidence of this process?

(be able to choose more than one option)

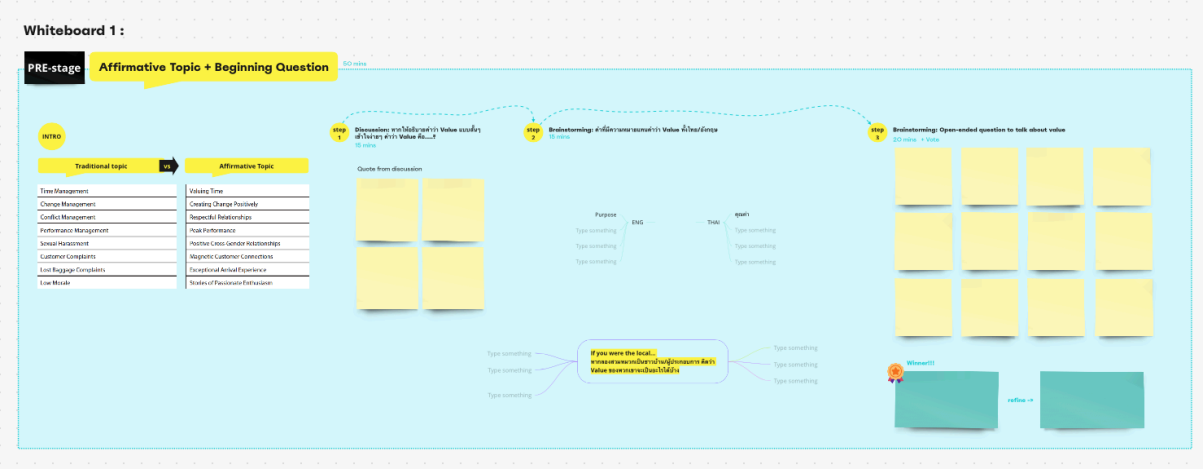
It should communicate on brand's social media or website

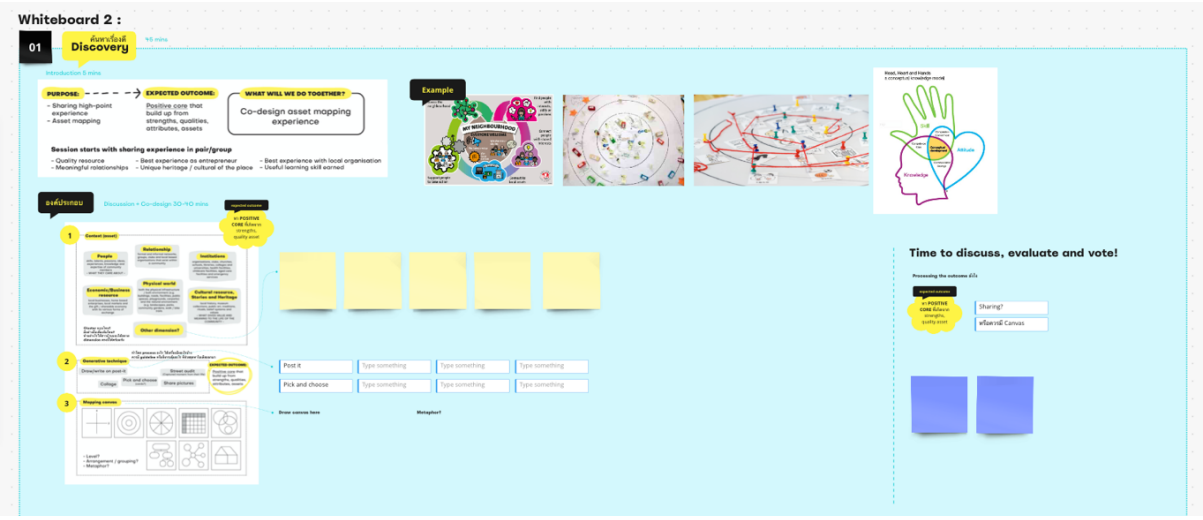
Through the product's leaflet or packaging

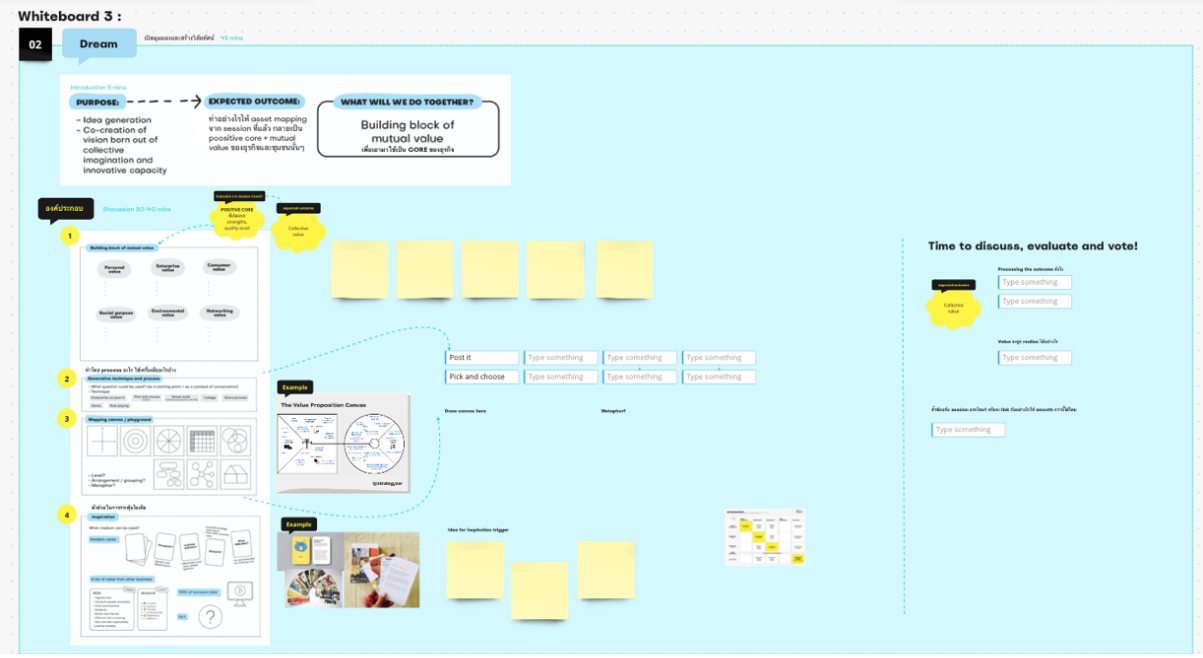
On the local government website

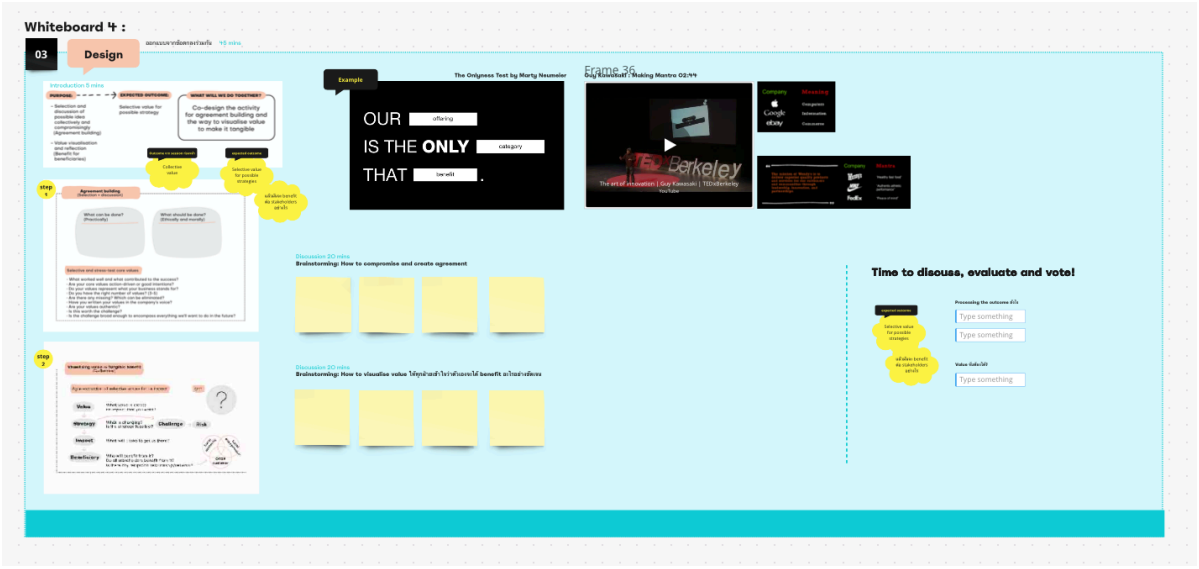
Others (Please specify) _____

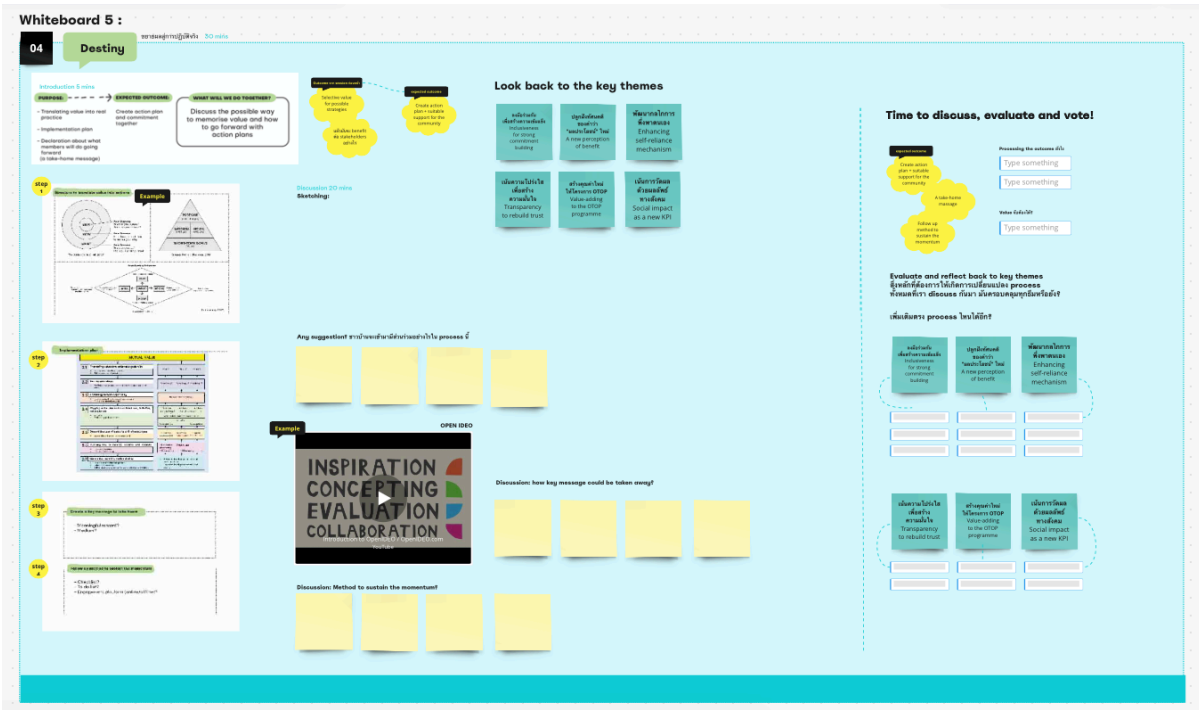
Appendix C: Miro boards for online collaboration with design experts








Whiteboard 4 :
03
Design
Introduction 5 mins
Co-design the activity for agreement building and the way to visualise value to make it tangible
Example
The Onlyness Test by Marty Neumeier
OUR offering
IS THE ONLY category
THAT benefit .
Frame 36
Guy Kawasaki: Making Mantra 02:44
The art of innovation | Guy Kawasaki | TEDxBerkeley
Discussion 20 mins
Brainstorming: How to compromise and create agreement
Discussion 20 mins
Brainstorming: How to visualise value
Time to discuss, evaluate and vote!
Type something
Type something
Type something


Whiteboard 5 :
04
Destiny
Introduction 5 mins
Discuss the possible way to memorise value and how to go forward with action plans
Look back to the key themes
Enhancing self-reliance mechanism
Transparency to rebuild trust
Value-adding to the OTOP programme
Social impact as a new KPI
Example
Discussion 20 mins
Sketching!
Any suggestion? ยากับจะเข้ามาดีต่างกลยุทธ์ไหน process นี้
OPEN IDEO
INSPIRATION
CONCEPTING
EVALUATION
COLLABORATION
Discussion: how key message could be taken away?
Discussion: Method to sustain the momentum?
Time to discuss, evaluate and vote!
Type something
Type something
Type something
Evaluate and reflect back to key themes
Enhancing self-reliance mechanism
Transparency to rebuild trust
Value-adding to the OTOP programme
Social impact as a new KPI

Appendix D: Follow up questionaire for user evaluation workshops

Appendix D01: Questionnaire for user evaluation workshop WS-2-LC and WS-3-LC

Please rate your experience and indicate to what extent you agree with the following aspects.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Did you find the activity easy to understand?					
Did you find the activity easy to follow?					
Practicality and usefulness					
Did the activity enhance your creativity?					
Did the activity help you comprehend the benefits of exploring business value?					
Did the activity lead to the creation of new business value?					
Did the activity provide a new perspective on benefits?					
Did the activity foster agreement building?					
Did the activity encourage reflection on intrinsic value?					
Did the activity facilitate the analysis of business needs?					
Did the activity support sustainable development?					
Overall, were you satisfied with the activity?					

Appendix D02: Questionnaire for user evaluation workshop WS-4-LE

Please rate your experience and indicate to what extent you agree with the following aspects.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Did you find the activity easy to understand?					
Did you find the activity easy to follow?					
Practicality and usefulness					
Did the activity enhance your creativity?					
Did the activity help you comprehend the benefits of exploring business value?					
Did the activity lead to the creation of new business value?					
Did the activity provide a new perspective on benefits?					
Did the activity facilitate knowledge exchange?					
Did the activity aid in problem identification and problem-solving?					
Did the activity facilitate the analysis of business needs?					
Did the activity support sustainable development?					
Overall, were you satisfied with the activity?					

Appendix E: Semi-structured interview questions and questionnaire with local authorities for framework evaluation

Session 1:

Framework presentation incorporated with the results from interaction with local enterprises

Phase 1

- Do you have any suggestions for the development of the framework based on the presentation's first phase?
- Are there any ideas you would like to add to improve its outcomes?
- Is there any element or instruction that appears unclear to you?

Phase 2-5

- Do you think the transition between this phase's activities and the previous one is well-connected?
- Do you have any suggestions for the development of the framework based on the presentation's this phase?
- Are there any ideas you would like to add to improve its outcomes?
- Is there any element or instruction that appears unclear to you?

Session 2:

Feasibility and acceptability

- Do you think this framework has the potential for use by your organization to approach local entrepreneurs?
- How do you think this framework and facilitation guidelines will help you work better with the locals?
- Do you believe that you and your colleagues can implement this framework with local entrepreneurs?
- If you implement this framework, what obstacles do you anticipate?
- Does the framework align with your working procedures?
- Can the framework help achieve results that align with your evaluation criteria?

Session 3:

Questionnaire for overall evaluation of the framework

Could you please rate the framework following this aspect?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Ease of use					
Do you find the framework and facilitator guidelines easy to understand?					
Do you find the framework and facilitator guidelines easy to follow?					
Do you find the framework and facilitator guidelines easy to carry out?					
Usefulness					
• **For the local entrepreneur and their enterprise**					
Do you agree that the framework can help the locals to:					
- Understand the value in various dimensions (e.g., social value, environmental value)					
- Expand the new perception of the benefit (e.g., benefit the community they live in)					
- Understand the advantage of having value as the core of developing a strategy					
- Boost creativity					
- Boost leadership skills					
- Work better as a group					
- Build agreement from different opinions					
• **For local authorities to work with local entrepreneurs**					
Do you agree that the framework can:					
- Provide a structural approach to work with local entrepreneurs easier?					
- Provide a better understanding of local needs?					
- Provide a clear goal to work forward?					
- Lead to a profound relationship with the local entrepreneurs?					
- Lead to the sustainable development of the OTOP service?					

Applicability and feasibility					
Do you agree that the framework can:					
- Be applied in the working procedure?					
- Be used across the types of enterprise?					
- Be used across different stages of enterprise?					
- Be relevant to the organisation's aims and objectives?					
- Lead to achieving the organisation's objectives?					

Appendix F: The VCo framework version 3.0

The Value Co-Creation (VCo) Framework and facilitator guidelines

Introduction

Value is essential for local businesses. Having value as a core of development can lead to meaningful actions, whether it be the value that a business can offer to a customer, the value that can give back to the community, or value for the members of the enterprise. Value creation is helpful in local business development, whether in the initial stage (for a new business) or the transformation stage (for a business that needs to adapt or transform).

Yet, the process of value creation for business can be done alone by an enterprise leader; however, the value created might valid for some stakeholders. As the support bodies, encouraging the locals to create value for their business can lead to meaningful actions in the long run. This is where value co-creation (VCo) comes into play. The VCo framework is designed with the co-design principle to let participants express what is meaningful to them/to their business. Participants of the VCo can be stakeholders involved in doing business: members of the enterprise and governmental support bodies. At the beginning of the procedure, it will enable participants to create value that could benefit them, their community and their customers. The latter of the procedure will emphasise the co-created value that is captured and developed into actions for both enterprise and local government to determine the agreement and commitment of all stakeholders. Finally, it will help the support bodies to design and provide relevant support, which could be the value of the public service.

For whom?

The framework is designed for local authorities, universities, or other support bodies under the OTOP programme to use as a tool to approach local entrepreneurs (both new and existing businesses) to work together as partners to achieve mutual value between business stakeholders and local governmental bodies, which will benefit local business and also strengthen the effectiveness of the OTOP service.

Purpose of the framework

The framework is designed to co-create values and structure them to get a better idea about the benefits and beneficiaries.

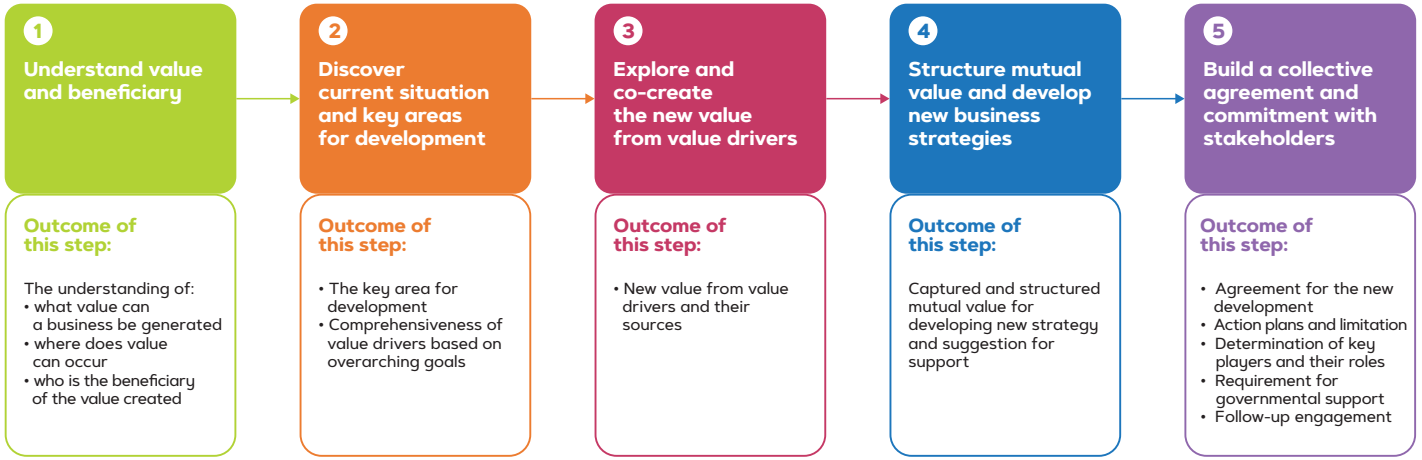
The collective value would act as a fundamental element, which derives from a bottom-up approach, to create plans for local businesses and determine essential support needed from the OTOP service provider.

Who else can be involved?

The framework is designed using the co-design principle. The more people engaged, the more rich data will be obtained. Involving local citizens, academics, designers, design students, business and marketing consultants, NGOs, private sectors, or other public sectors would lead to impactful outcomes.

Overview of the VCo framework

The VCo framework comprises five phases. The diagram below shows all five of them with the expected outcome of each phase for the facilitator to note when doing the procedure.



The following pages will focus on the guideline for each step and examples of tools that can be used during the facilitation. The structure of each step includes: (1) an expected outcome, (2) what to do, (3) how to do it, (4) examples of tools, (5) facilitator note.

The number of participants can be varied. The VCo procedure can be used with **a single community-based enterprise** or **a group of entrepreneurs** from different enterprises.

1

Understand value, its beneficiary and explore the new value

Outcome of this step:

The understanding of:
- what value can a business be generated
- where does value can occur
- who is the beneficiary of the value created

Duration:
1-1.5 hours

What to do?

Discuss about value with the locals by learning and exercising from successful cases

The concept of value might be intangible and vague for the locals. Before co-creating the value, it is beneficial to let them learn from successful case. It helps the locals to understand what value a business can be generated and get familiar with the concept of value and its beneficiaries in their context. The value captured here can be the **functional value of the product and service, economic value, environmental value, social value, emotional value, and knowledge.**

How to do?

A facilitator can show examples from the cases. The form of information can be any of the brand's touchpoints. For example, a good example of social media content with the value presented in text or pictures, a good product or packaging design that value is well-presented. The facilitator can discuss with participants to point out what value can they witness from the case. Furthermore, facilitator can also discuss who is the beneficiary of that value to expand their perspective to think beyond the functional value and monetary value (e.g., social value, emotional value, knowledge).

Examples of value from successful cases

1) "Pean Yod Tarn" (organic palm sugar producer): the discussion about this local business can be about the value and beneficiaries as the table shows below.

The values are:	**Type of value**	**The beneficiaries are:**
Cherishingly and sustainably treat the natural resource	- Environmental value - Social value	- Members of the community (having sustainable resources) - Enterprise (having sustainable resources)
Using the old traditional technique to produce palm sugar	- Social value - Functional value	- Community (folk wisdoms are preserved) - Customer (be able to help preserve the local heritage)
Using organic preservation from wood barks instead of chemical preservative	- Functional value	- Customer (get the organic product without any chemicals)

เพียรหยดตาล
August 16 at 12:10 PM ·

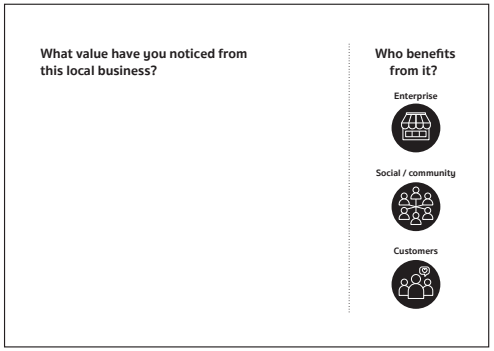
❓"น้ำตาลมะพร้าวก็หวานมากพอจนไม่น่าเสียง่าย แต่ทำไมบางเจ้ายังต้องใส่สารกันบูดกันอีก?"
คำถามจากลูกค้าท่านหนึ่ง และเราเชื่อว่าหลายๆท่านก็มีความสงสัยแบบเดียวกัน
...
จริงๆแล้วเป็นความเข้าใจถูกต้องบางส่วนแล้วค่ะ 😀

น้ำตาลที่เคี่ยวเสร็จเรียบร้อยจะเก็บได้นานเป็นปี จึงไม่จำเป็นต้องใส่สารกันบูดเลย แต่ที่ว่าใส่สารกันบูดกันนั้นจะเป็นส่วนของขั้นตอนการเก็บน้ำตาลใส
น้ำตาลใสที่หยดออกมาจากงวงตาลลงในกระบอกนั้นจะเสียง่ายมาก ตรงขั้นตอนนี้ต่างหากจึงจำเป็นต้องใช้สารกันบูด ซึ่งถ้าเป็นตามแบบวิถีดั้งเดิมก็จะใช้เศษไม้พะยอมหรือไม้เคี่ยมแทนสารกันบูดแบบเคมี

functional value of the product: using organic wood barks to preserve the sugar syrup

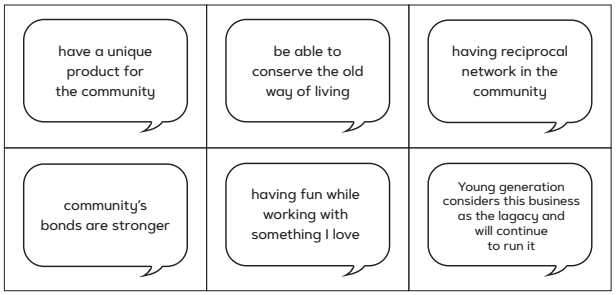
Examples of tools to use with the activity

E1: Value and its beneficiary exercise card

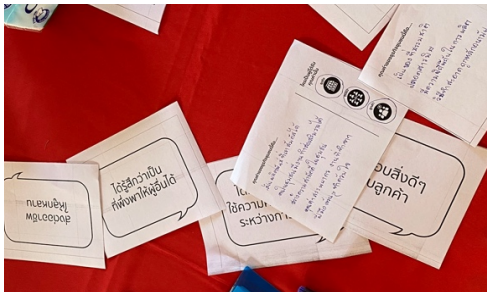


Example of tools while implementing

E2: A set of shout-out value cards for pick and choose



Example of tools while implementing



Facilitators note:

- Using 2-3 successful cases for comparison is ideal. The criteria of choosing cases are: (1) a same category enterprise related to the participants (e.g., food enterprise case study with a food enterprise participant) to get the idea from the same type of business, (2) a cross-category case to expand the understanding of value in another type of business.
- Tools E1 and E2 can be used together especially with participants that unable to write. Facilitator can assist participants and help them write down what they said.

2

Discover current situation and key areas for development

Outcome of this step:

- The key area for development
- Comprehensiveness of value drivers based on overarching goals

Duration:
1-1.5 hours

Facilitators note:
The value drivers are subdivided into subsidiary topics listed on the right. The facilitator can use this as a guide or checklist of overall need from participants.

What to do?

Discover the current issue of the enterprise and find the key area of development which can be the value driver

The second step of the VCo is to get to know what they are facing to scope the area of development. It often starts with their explicit needs and requirements; however, it could be latent or tacit needs that they might not realise or be able to express. The expected outcome of this step is to understand the value driver from the key area of development.

How to do?

To get started, interviewing by asking the question to enable the conversation is helpful (see the example of questions below). The value drivers are the key areas for development which can be categorised into: (1) product and service, (2) marketing and communication, (3) production and management, and (4) networking and social relationship. However, the conversation might fall into one area of development; therefore, the facilitator can also ask about other areas to get the latent needs.

Furthermore, the facilitator can ask the questions that underpins the positive mindset towards business development. The positive mindset can be seen as a foundation of every area of development. It can be about, for example, encouraging them to support other local businesses and grow together as a part of the community or letting them think about sustaining their local resources.

Value driver: key areas for development

Product and service	Marketing and communication	Production and management	Networking and social relationship
o Quality o Design o New product line or new collection o Standardisation o Expertise & craftmanship o Research and development (R&D)	o Market channel o Distribution channel o Offline/online marketing o Promotion o Retail/wholesale o Branding o Packaging design o Communication design o Advertising o Finding new potential customer	o Planning o Pricing o Financial management o Logistic o Resource management o Human resource management o Workforce management o Operational management o Law and legitimacy o Trademark registration o Intellectual patent	o Interpersonal network o Interorganisational network o Reciprocal network o Involvement of the young generation o Friendship in community

Mindset:
o Leadership
o Keen on new knowledge
o Enterprise's self-sufficiency
o Grow together as a part of community

Facilitators note:
The facilitator should ask the question to enabler the conversation which should covers all key areas. Then, try to scope down to what is the dominant value driver.

Example of questions to enable the conversation:

Product and service
- Who designs your product?
- Does your product have a national or international standard?

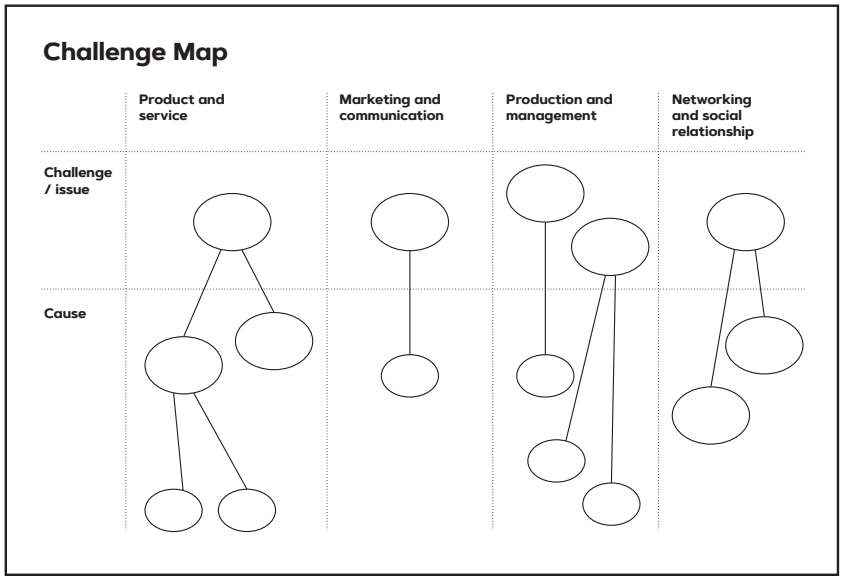
Production and management
- Who designs your product?
- How do you handle a large-amount order?
- In your opinion, how important is to have leadership skill?
- What can you do to sustain local resources?

Marketing and communication
- Where can the customers access your product?
- Do you think your brand communicates to the right target group?

Networking and social relationship
- Do you have reciprocal relationship with other local enterprises? How does it support your enterprise?
- What kind of information shared in your network?
- How can your business support other business in your community?

To aid the conversation, mapping on canvas allows all participants to see the holistic picture and engage better in the discussion. Participants can write down on the post-it note and arrange them on the canvas. The structure of the canvas includes the current issues and the cause of the issues. Once the mapping is done, the key area of development can be concluded, and it can be the value driver for the next step of the VCo.

Example of collaborative canvas:



Facilitators note:
The canvas can be hand-drawn. Participants can involve in mapping on the canvas by writing down their opinion on the post-it note and arrange them on the canvas. The canvas could be big enough for all participants in the group to see. If the VCo runs with the small group of participants (3-10) within the same enterprise, facilitator could use only one canvas to let people help thinking about their business. If the participants are a group of entrepreneurs from different enterprises, facilitator can use more than one canvas, ideally separated the group by types of business that could share the common issues. Presentation between the groups can also be useful.

Challenges identified by different types of local enterprises from the previous study

The table below shows the common issues from the previous discussion with each group of entrepreneurs, namely: (1) food and beverage group, (2) fabric and fashion accessories, (3) home decoration and souvenirs, and (4) non-food herbal products. Some issues are shared across the group. The facilitator can use this list as a guideline to learn possible issues beforehand.

Food and beverages • Agricultural production is limited due to seasoning changes. • Agriculturists' knowledge does not meet the expectation of the enterprise. Outsourcing an extra workforce usually involves apprentices. • Food and beverage enterprise has two main operational directions: large batch production (emphasise volume) and small batch production (quality/consuming culture). These two groups use different marketing communication, which requires different support. Standard/trademark/certificate for guaranteeing is different between the two groups. • Creating a cluster among producers (to increase negotiating power with buyers/modern trade) is not easy to happen. • The innovation about prolonging shelf-life/packaging • Hard to create an outstanding brand when everyone is doing the same in the market	**Home decorations and souvenirs** • Unable to manage the cost and selling price to cover all expenses and get enough profit. Appropriate pricing is the issue. • Deficient batch production due to the number of makers • The logistics problem due to the fragile product • The customer does not understand the value of the product • The entrepreneur does not know how to add value to the product • The entrepreneur does not know how to communicate artistic value • Lack of craftsmanship skill in the young generation • Lack of knowledge of applying chemicals for product finishing • Lack of negotiation skills when dealing with the customer about the waiting time.
Fabric and fashion accessories • Unable to manage the cost and selling price to cover all expenses and get enough profit. Appropriate pricing is the issue. • Deficient batch production due to the number of makers • Lack of machine/tool to shorten the production time • It is hard to find the new and right market/buyers • Cannot reach the right customer/buyers • Trends and fashion change over time, and it is hard to keep up	**Non-food herbal products** • Repetitive of the herbs/key ingredients with other local areas which gives the same benefit • Lack of innovation for new product formula • The image of Thai herbal products is outdated and unreliable • Confusion about communication the product's effectiveness and how to avoid overclaim advertising • The target market is too small, and the entrepreneur does not know how to expand it

Facilitators note:

- The list in the table is only the examples generated from brainstorming, however, it might not be applicable with every enterprise.

3

Explore and co-create the new value from value drivers

Outcome of this step:

- New value from value drivers and their sources

Duration:
2-2.5 hours

What to do?

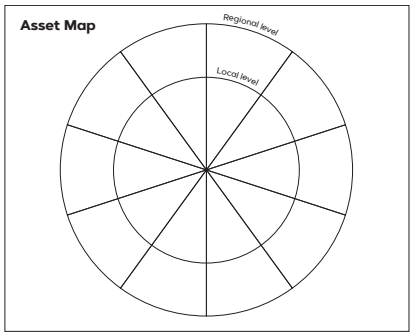
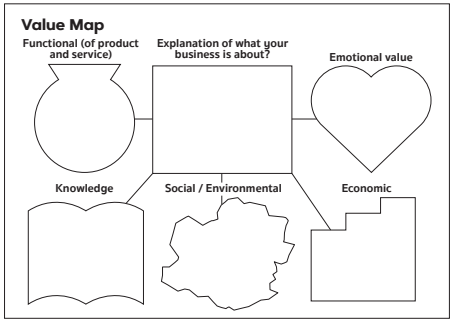
Explore and co-create potential values through value drivers and value source

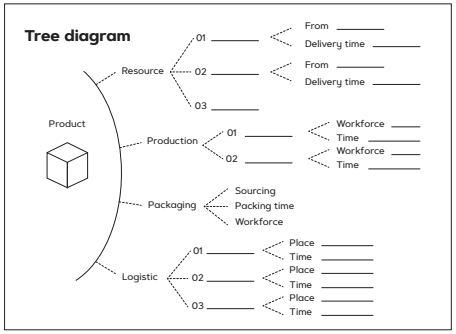
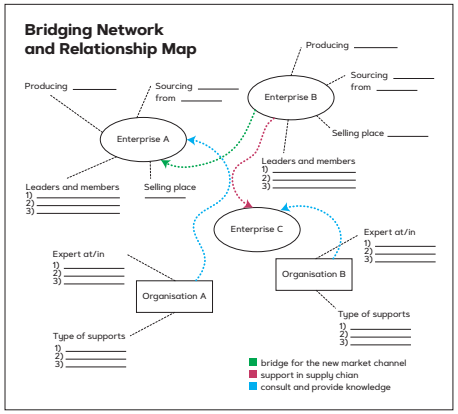
Once the facilitator has learnt what the key area of development is, the **value driver** can be determined. Accordingly, the facilitator can introduce **value source** which is the *subject for discussion* as a starting point of new value exploration.

How to do?

The exploration of new value can be done through thinking, discussion, writing down ideas and mapping out to construct the ideas and let other participants see the whole picture together. The subject for the discussion can be local resources (tangible), or it can go deeper by using the topics that bring out their tacit thoughts (intangible).

Value driver and value source

Value driver from key area of development)	**Value source** and technique for exploring and co-creating new value	**Example of canvas for mapping**
Product and services development (For example: to seek a new product collection / new design)	**Value source** (subject for discussion): Community's asset for new inspiration **Suggested technique:** - Asset mapping (e.g., cultural resources, natural resource, places, food)	
Marketing and communication development (For example: to rebrand and communicate the new brand image emphasise on local value	**Value source** (subject for discussion): - What are you proud of doing this business? - What are you proud of being a member of this community? - How does your business offer value to your community and members? **Suggested technique:** Discussion on the topics, grouping by themes using mind mapping (e.g., social value, emotional value, value of achieving new knowledge)	

Value driver (from key area of development)	**Value source** and technique for exploring and co-creating new value	**Example of canvas for mapping**
Production and management development (For example: to source and manage resource more effectively)	**Value source** (subject for discussion): Unfolding the current resource and discussing on how to manage them better **Suggested technique:** Supply chain mapping using tree diagram, assembling by product's parts	
Networking and social relationship development (For example: to bridging and connect a new reciprocal network)	**Value source** (subject for discussion): Finding the support system from current enterprises or organisations (local/regional/national/international) **Suggested technique:** Demand mapping (using local and regional map)	

Facilitators note:

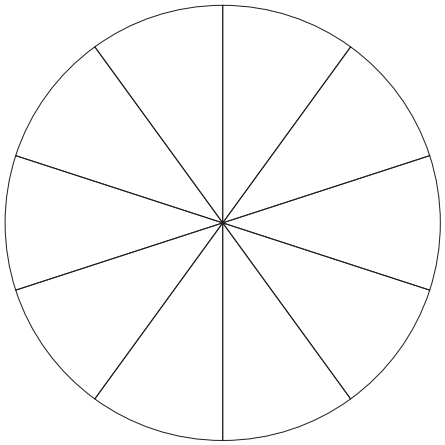
- The lists in the table are the example of value driver, value source and canvas. Facilitator can explore new canvas according to the subject for discussion. Value can be captured in the mapping process or during the discussion.
- The next page will illustrate the example from the real case study using asset mapping.

Example A: Hand-woven fabric enterprise

Value driver: To seek a new product collection / new design
Value source: Community's asset for new inspiration
Topics for mapping:

คน People	สถานที่ Place	องค์กร Organisation	ทรัพยากรธรรมชาติ Natural resource	ทรัพยากรวัฒนธรรม Cultural resource	กิจกรรม Activity	อาหาร Food	รางวัลและชื่อเสียง Award & recognition
• คนมีชื่อเสียง • คนที่มีความสามารถเด่น • คนที่มีความสัมพันธ์ที่ดีกับคนในชุมชน	• ที่รวมตัวกัน • ที่สังสรรค์ • ที่เกี่ยวข้องกับวัฒนธรรมประเพณี • ที่เกี่ยวข้องกับศาสนา • พื้นที่ออนไลน์	• องค์กรรัฐ/เอกชน • สถาบันการศึกษา • ศูนย์เรียนรู้ • สหกรณ์	• ธรรมชาติ • ภูเขา / น้ำไม้ / ทะเล • ทรัพยากร • วัตถุดิบ	• เรื่องราวที่น่าบอกต่อจากอดีต • ความเชื่อ • ศิลปะวัฒนธรรม • ภูมิปัญญา	• ประเพณี • กิจกรรมที่ทำ • กิจกรรมยามว่าง • กิจกรรมที่ร่วมมือกัน	• อาหารท้องถิ่น • ร้านดัง • อาหารเด่น	• รางวัล • สิ่งเดนที่ทำให้คนนอกรู้จักเรา

Example of canvas:



Captured value: new potential design for a new fabric collection that co-created during the mapping process. The new collection sparked from the discussion about their heritage, local food, and local language.

4

Structure mutual value and develop new business strategies

Outcome of this step:

Captured and structured mutual value for developing new strategy and suggestion for support

Duration:
1.5-2 hours

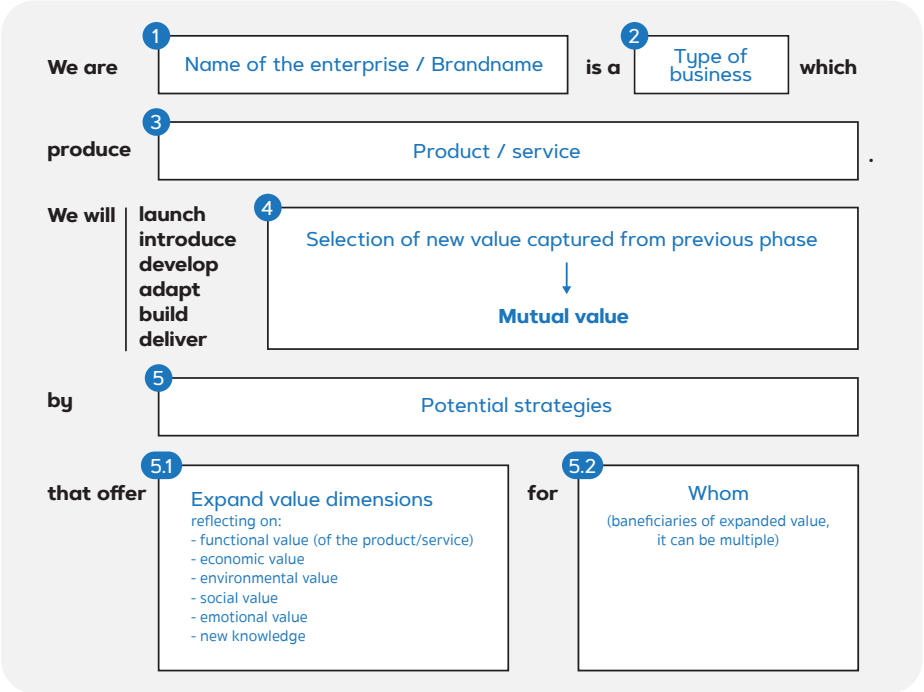
What to do?

Structure mutual value, build a collective statement, and develop new potential strategies.

From the previous phase, new values are captured from the discussion and mapping process. In this phase, the goal is to arrange them into a collective structural statement. The statement will act as a summary of the co-creation of value which could be a starting point of agreement building for determining further actions.

How to do?

According to the example of a structure of a collective statement building below, it starts with stating the name of the enterprise (1), and the type of business (2) and (3), in order to build a sense of commitment. Followed by the selection of value captured from the previous phase (4), the agreement of **mutual value** can be identified here. It can lead to a discussion on potential strategies (5). However, it is worth looking back and expanding the value by reflecting on other dimensions (5.1) and determining who are the beneficiaries of that value (5.2). The value here is the value created from the ripple effect of the mutual value. The more expanded values occur, the selective mutual value becomes more meaningful.



Example of the structure in use

Facilitators note:

- The structure of a collective statement is the guideline to help participants agree and be on the same page with others. It can be drawn using a large paper and post-it notes. The structure does not need to be the same but the outcome from 4 to 5 should be determined for the next phase.

5

Build a collective agreement and commitment with stakeholders

Outcome of this step:

- Agreement for the new development
- Action plans and limitation
- Determination of key players and their roles
- Requirement for governmental support
- Follow-up engagement

Duration:
2.5-3 hours

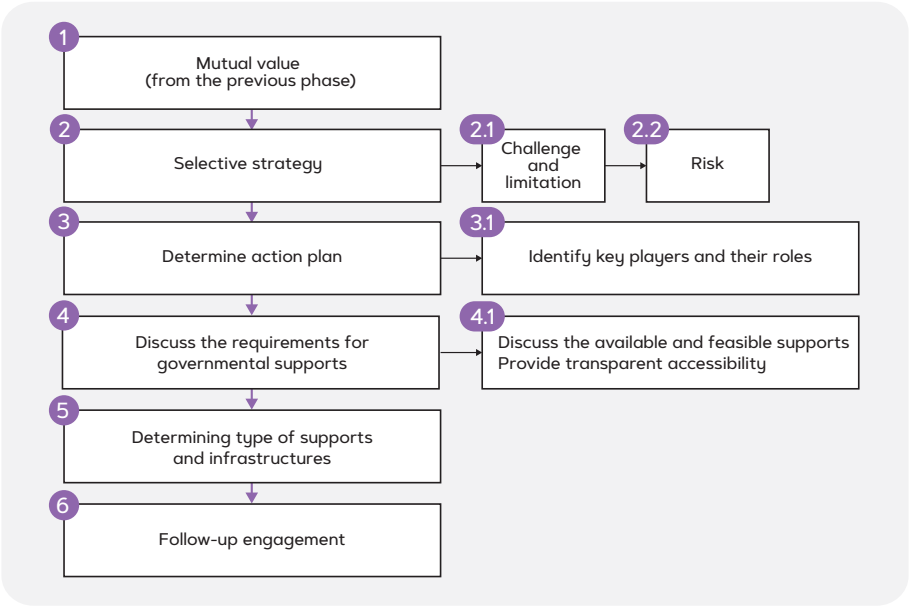
What to do?

Select the potential strategies, determine action plans, discuss requirements for the governmental supports

This phase is to select the potential strategies that can create impacts according to mutual value. Once the strategy is determined, the action plan and requirements for governmental support can be discussed. Involving the local authorities as key stakeholders is essential in this phase so that they can discuss feasible support.

How to do?

The following diagram can be used as a guideline to facilitate the commitment towards action plans and requirements needed from the government. Start with 1, the mutual value from the previous phase is the heart of development. Followed by 2 the selection of strategies that could create an impact according to mutual value. To do an agile evaluation of the selected strategy, 2.1 and 2.2 need to be considered to explore limitations and mitigate risk. Once the strategy is concrete, the determination of action plans 3 could be indicated with key players and their roles 3.1. Next, the discussion should be about the requirements of governmental support 4, what is available and feasible 4.1, before specifying the type of support 5. Lastly, it is important to create a follow-up engagement with all stakeholders 6 to keep track of the development and provide further support if needed.



Facilitators note:

- The collective diagram can be drawn using a large paper and post-it notes.
- The VCo procedure ends here. The follow-up engagement will keep the momentum of the collaboration for all stakeholders.

Appendix G: The final VCo framework

The Value Co-Creation [VCo] Framework

and facilitator guidelines
for grassroots entrepreneurship
development programme

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Introduction

Local businesses thrive on the concept of value. Making value a central part of development can result in meaningful actions, whether by providing value to customers, contributing to the community, or creating value for business members. Value creation is crucial for local business growth, whether at the beginning stages of a new enterprise or during the transformation phase of an existing one.

Creating value for a business is not a task that can be accomplished by an enterprise leader alone, as the value created might only be relevant to specific stakeholders. Therefore, encouraging and supporting local communities to co-create value for their businesses can lead to significant outcomes. This is where value co-creation comes into play. The Value Co-creation framework (VCo) is designed with the co-design principle, allowing participants to express what is meaningful to them and their business and ultimately achieve mutual value. Stakeholders involved in doing business, such as enterprise members, governmental support bodies, and external experts, can all participate in the VCo.

The VCo framework provides a series of workshops. At the start of the process, it enables participants to understand and co-create value that benefits themselves, their community, and their customers. Later in the process, the emphasis is on capturing co-created value and developing it into actions that determine the agreement and commitment of all stakeholders, including both enterprise and local government. Finally, the framework helps local authorities design and provide relevant assistance, adding value to the public service and creating profound support for the locals.

For whom?

The framework is designed for local authorities, universities, and other support organisations participating in the OTOP programme, as well as other grassroots entrepreneurship development services. It serves as a guide for approaching local entrepreneurs, including new and existing businesses, to establish collaborative partnerships. This approach is aimed at creating mutual value between business stakeholders and local governmental bodies, which will enhance the effectiveness of public services and benefit local businesses.

Value dimension

Adopting typologies and definitions of value from various researchers (Sheth, Newman and Gross, 1991; Holbrook, 1999; Kim and Lim, 2017), combined with the nature of OTOP business, the value dimensions can be categorised into five dimensions, ranging from intrinsic to extrinsic value: (1) emotional value, (2) knowledge, (3) social, regional and environmental value, (4) functional value of the product and service, (5) economic value. Every aspect of the value dimension should be considered while developing the business, serving as a guideline to determine possible value during the value co-creation process.

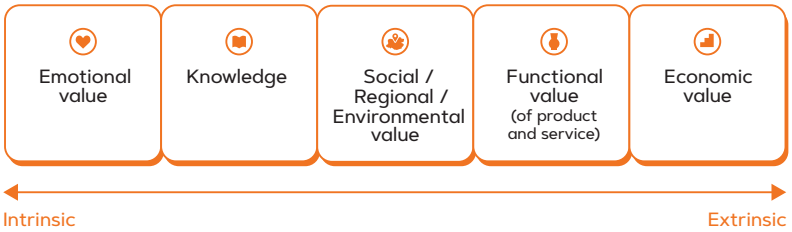
Purpose of the framework

The framework is designed to co-create values and structure them in a way that provides a better understanding of the benefits and beneficiaries.

The collective value serves as a fundamental element derived from a bottom-up approach to creating plans for local businesses and identifying the essential support needed from the OTOP service provider.

Who else can be involved?

The framework is designed using co-design principles, emphasising the importance of engaging as many people as possible to obtain rich data. Involving local citizens, academics, designers, design students, business and marketing consultants, NGOs, private sectors, or other public sectors would lead to impactful outcomes.



Emotional value
is the personal-perceived value, defined as feelings aroused when associating with doing tasks in relation to the business. For example, satisfaction, pleasure, or ecstasy from doing or achieving something.

Knowledge
is the human-earned value gained from achieving novelty skills or having expertise by practising new knowledge. It can be, for example, leadership, craftsmanship, or management skills.

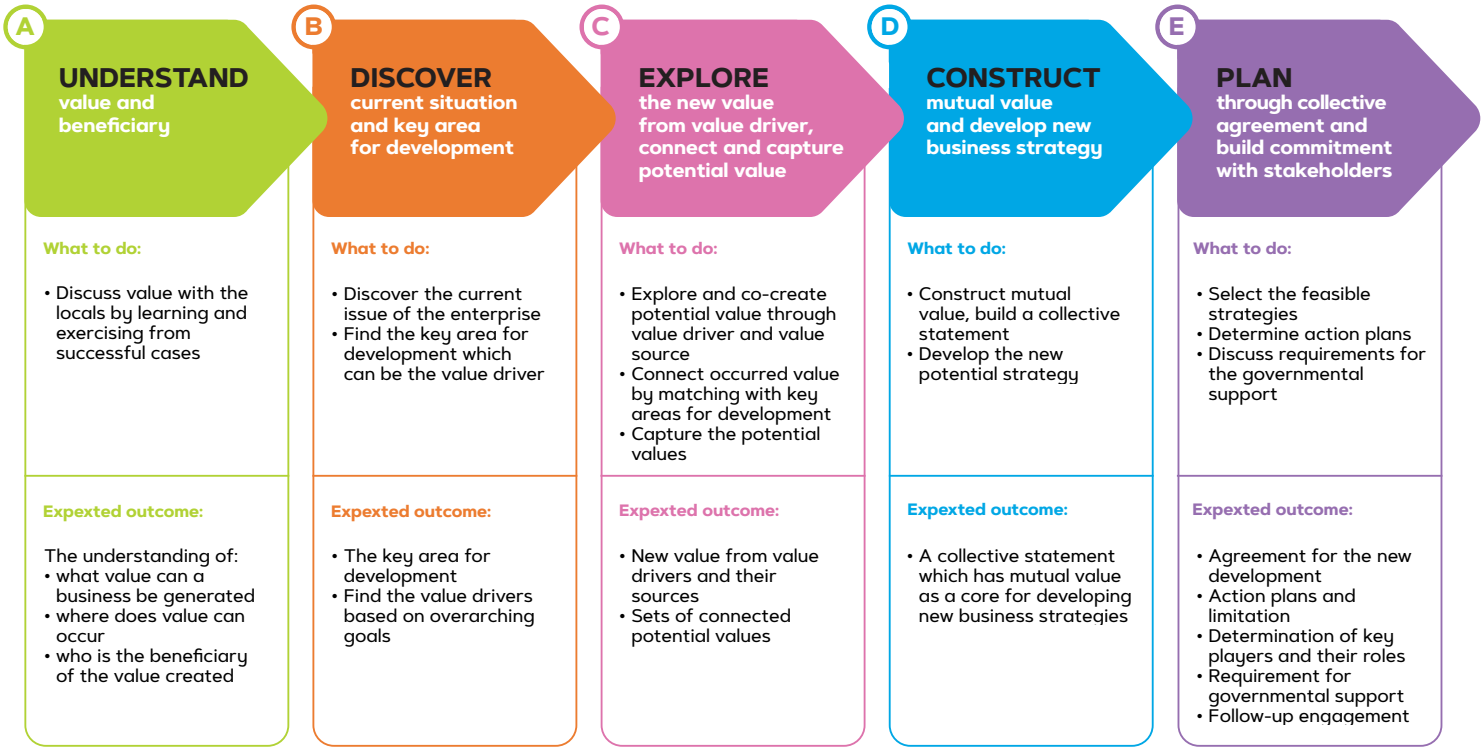
Social, regional and environmental value
is the value that gives back to the local community. It intends to combine three types of values (social, regional and environmental) as it is straightforward when asking the locals to think about the value of their community. This value enhances social relationships, conserves cultural practice/ tradition, and promotes environmental sustainability.

Functional value
(of the product and service)
is the value perceived through the physical attribute and utility of the product and service.

Economic value
can be seen as a monetary value that creates financial support for the enterprise and employment.

Overview of the VCo framework

The VCo framework comprises five phases (as illustrated below). All phases are indicated with **'what to do',** and their purposes are indicated as **'expected outcome'** for the facilitator to note during the procedure.



The framework phases are designed to be flexible to use in small chunks to serve a different purposes. For example:

- Phase A can be done alone to let the grassroots expand their understanding of business value.

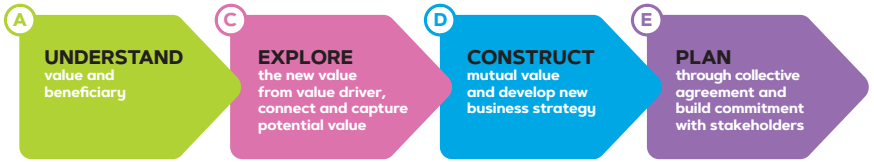
  (whether with a small group of participants or a large-scale approach)

- Phase B can be done with a group of entrepreneurs from different enterprises to learn from other businesses.

  (whether with a small group of participants or a large-scale approach)

- Phase B can be skipped if dealing with a grassroots group that has yet to have a business before but is keen to have one.

  (with a single group of entrepreneur)



Participants

The VCo framework is designed to be used with different types of enterprises, whether community-based or single-owner. The number of participants in the VCo procedure can vary. For a community-based enterprise, all enterprise members (which typically has 7-25 members) can participate in the activities. For a single-owner enterprise, employees or locals who are related to the business can join in the process. Some phases of the framework can be adapted and used with entrepreneurs from different enterprises.

Facilitator and external actors

The principal goals of the framework are to use co-design to develop local businesses and services provided by local support bodies. The framework requires facilitation by a team of local authorities to be involved in the process as a partner of the business. However, some phases might be more effective if external actors are involved in facilitating or assisting the process. These actors can be academics, designers, design students, business and marketing consultants, and community leaders from other communities. Different expertise can help generate a well-rounded outcome for local businesses and the services provided by local authorities.

Framework structure

The following pages provide guidelines for each phase. The structure of each phase includes the following:

(1) the expected outcome
(2) workshop duration
(3) what to do
(4) how to do it
(5) examples of tool/canvas
(6) a facilitator note.

A

UNDERSTAND
value and beneficiary

What to do:

- Discuss value with the locals by learning and exercising from successful cases

Expexted outcome:

The understanding of:
- what value can a business be generated
- where does value can occur
- who is the beneficiary of the value created

Duration:

60-90 mins

The concept of value might be intangible and vague for local communities. Therefore, before co-creating value, it is beneficial to let them learn from successful cases. This helps the locals understand the value a business can generate and become familiar with the concept of value and its beneficiaries in their context. The value captured here can include the following:

- Functional value (of the product and service)
- Economic value
- Social, regional and environmental value
- Emotional value
- Knowledge

How to do?:

Facilitators can provide examples from the brand's touchpoints to illustrate the value presented in the cases. This information can take the form of text, pictures, product design, packaging, or social media content. During the discussion, the facilitator can point out the value witnessed in the case. Moreover, the facilitator can encourage discussion on who benefits from the value created, to expand participants' perspectives beyond functional and monetary values (e.g., social value, emotional value, knowledge).

In order to effectively guide and engage participants, it is important for facilitators to have a clear understanding of successful business practices beforehand.

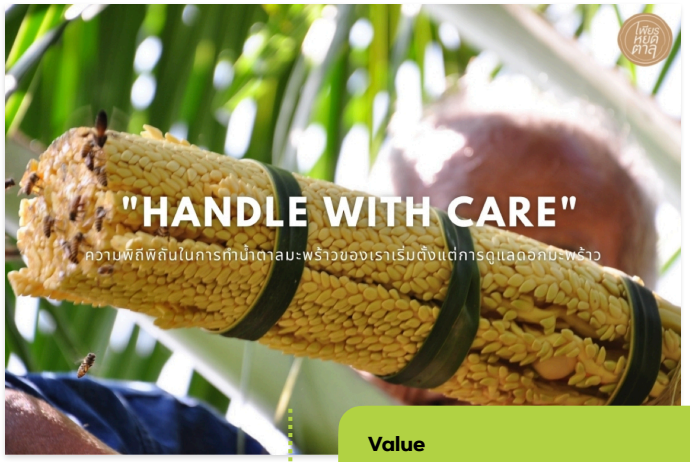
Facilitators note:

It is ideal to use 2-3 successful cases for comparison. The criteria for choosing cases are:
1. Choose a same-category enterprise related to the participants (e.g. a food enterprise business with a food enterprise participant) to gain insight into the same type of business.
2. Choose a cross-category case to broaden the understanding of the value of another type of business.

Examples of value from successful case

Plean Yod Tarn
(organic palm sugar producer)

The discussion about this local business can be about the value and beneficiaries, as shown in the green boxes.



(Pleanyodtarn, 2022a)

Value

Cherishingly and sustainably treat the natural resource

Value dimension

Environmental value

Beneficiaries

- Members of the community (having sustainable resources)
- Enterprise (having sustainable resources)

(Pleanyodtarn, 2022b)

Value

Using the old traditional technique to produce palm sugar

Value dimension

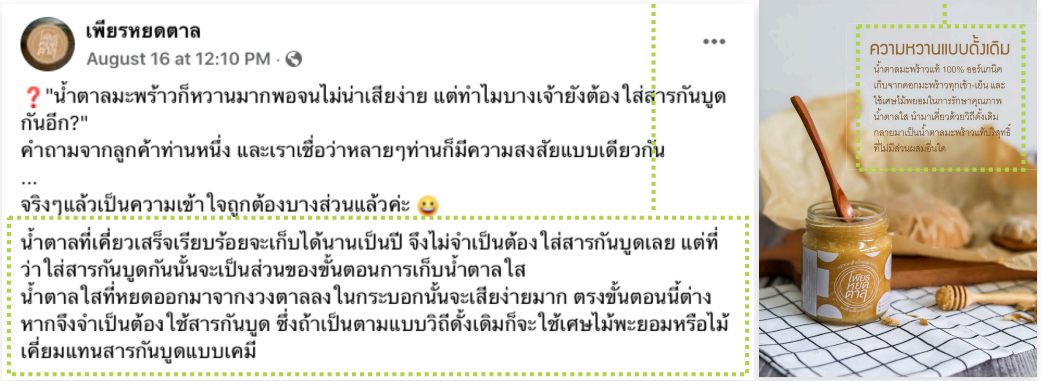
Social value

Functional value

Beneficiaries

- Community (folk wisdom is preserved)
- Customer (be able to help preserve the local heritage)

Examples of value from successful case



(Pleanyodtarn, 2022c)

Value

Using organic preservation from wood barks instead of chemical preservatives

Value dimension

Functional value

Beneficiaries

- Customer (get the organic product without any chemicals)

(Pleanyodtarn, 2022d)

Value

Empowering enterprise member

Value dimension

Emotional value

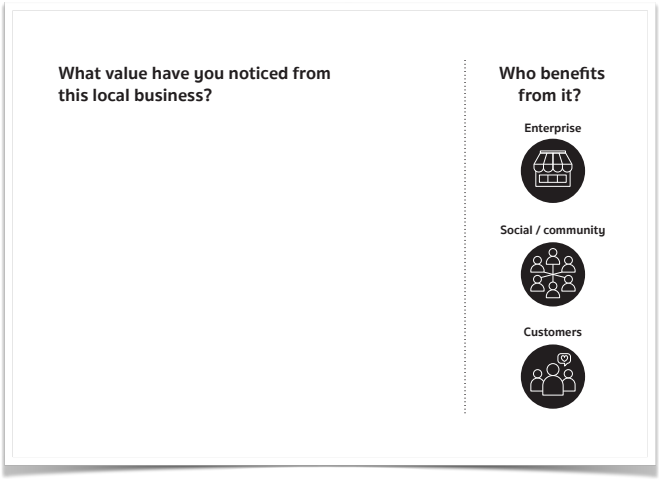
Social value

Beneficiaries

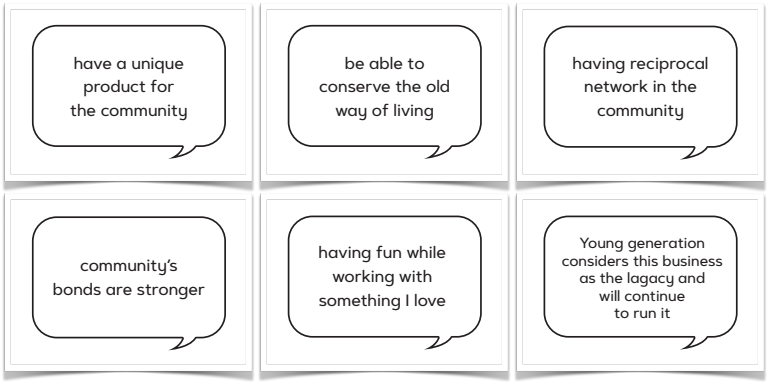
- Member (being proud to play an essential role as part of the enterprise)
- Local community (having quality people to represent the local area)

Examples of tools to use with the activity

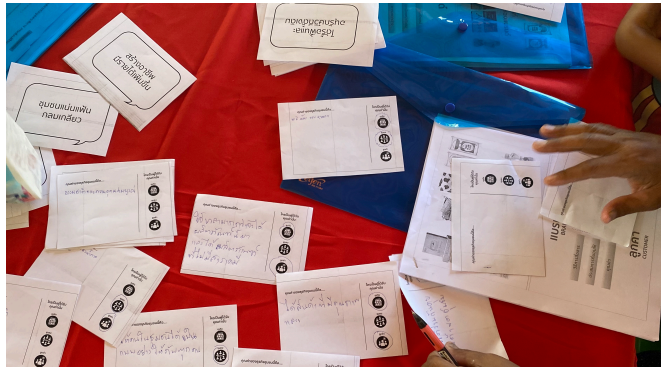
E1: Value and its beneficiary exercise card

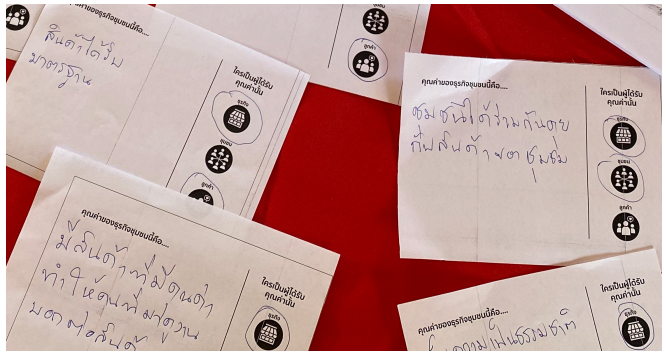


E2: A set of shout-out value cards for pick and choose



Example of tools while implementing together





Facilitators note:

Tools E1 and E2 can be used together, especially with participants who are unable to write. A facilitator can assist participants by helping them write down what they said.

B

DISCOVER
current situation and key area for development

What to do:

- Discover the current issue of the enterprise
- Find the key area for development which can be the value driver

Expexted outcome:

- The key area for development
- Find the value drivers based on overarching goals

Duration:
60-90 mins

Facilitators note:
The value drivers are subdivided into subsidiary topics listed on the right. The facilitator can use this as a guide or checklist for assessing the overall needs of the participants.

Identifying problems is an essential skill for entrepreneurs. Before co-creating value, it is helpful to discover the problems and challenges entrepreneurs face in order to create new values and strategies that can address current issues. This phase of the VCo is to understand what entrepreneurs are facing and to scope the development area. It often starts with their explicit needs and requirements; however, there could be latent or tacit needs that they might not realise or be able to express. The expected outcome of this step is to understand the **value driver** from the **key area of development**.

How to do?:

To start, it is helpful to conduct interviews by asking questions that enable conversation (see the example questions on the next page). The value drivers are key areas for development that can be categorised into (1) product and service, (2) marketing and communication, (3) production and management, and (4) networking and social relationships. However, the conversation might only touch on one development area; therefore, the facilitator can also ask about other areas to uncover latent needs.

In addition, the facilitator can ask questions that promote a positive mindset towards business development. A positive mindset can be seen as the foundation for every development area. For instance, encouraging them to support other local businesses and grow together as part of the community or asking them to think about other ways to foster positive relationships within their networks.

KEY AREAS FOR DEVELOPMENT

VALUE DRIVERS

Product and service	Marketing and communication	Production and management	Networking and social relationship
o Quality o Design o New product line or new collection o Standardisation o Expertise & craftmanship o Research and development (R&D)	o Market channel o Distribution channel o Offline/online marketing o Promotion o Retail/wholesale o Branding o Packaging design o Communication design o Advertising o Finding new potential customer	o Planning o Pricing o Financial management o Logistic o Resource management o Human resource management o Workforce management o Operational management o Law and legitimacy o Trademark registration o Intellectual patent	o Interpersonal network o Interorganisational network o Reciprocal network o Involvement of the young generation o Friendship in community

Mindset:
o Leadership
o Keen on new knowledge
o Enterprise's self-sufficiency
o Grow together as a part of community

Examples of questions to enable the conversation

Product and service

- Who is responsible for designing your product?
- What sets your product apart from others in the market?
- What is your unique selling proposition?
- How frequently do you release new collections?
- Does your product meet national or international standards?

Marketing and communication

- Where can customers access your product?
- Do you believe your brand is effectively reaching its target audience?

Production and management

- How do you typically manage the workforce within your group?
- Do you outsource any materials to produce your product?
- How do you handle large orders?
- Do you have plans to expand production capabilities? If so, why?
- In your opinion, how significant are leadership skills?
- What steps do you take to sustain local resources?

Networking and social relationship

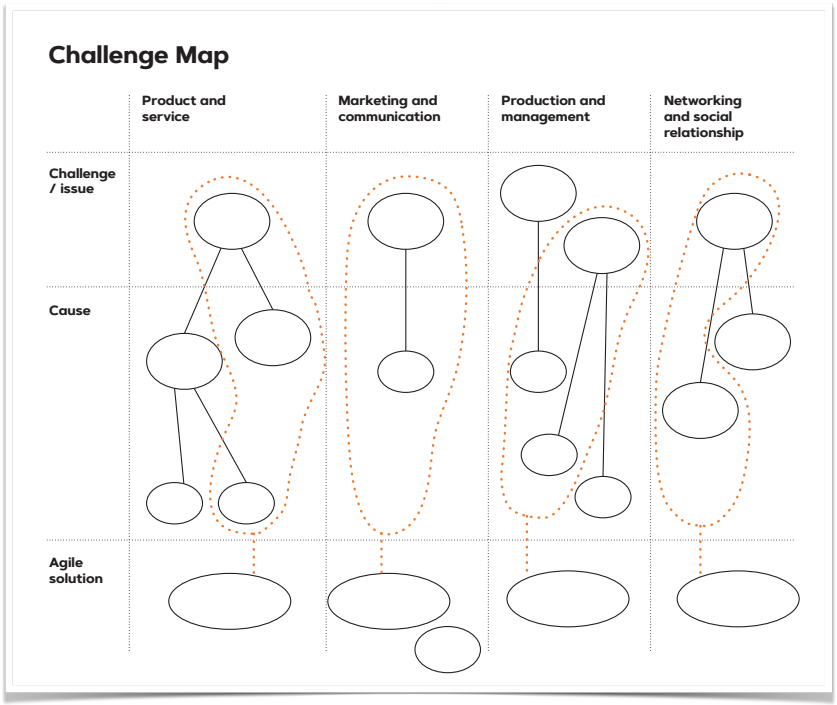
- Do you maintain reciprocal relationships with other local businesses? How does this support your enterprise?
- What kind of information is shared within your network?
- How can your business support other businesses in the community?

Facilitators note:

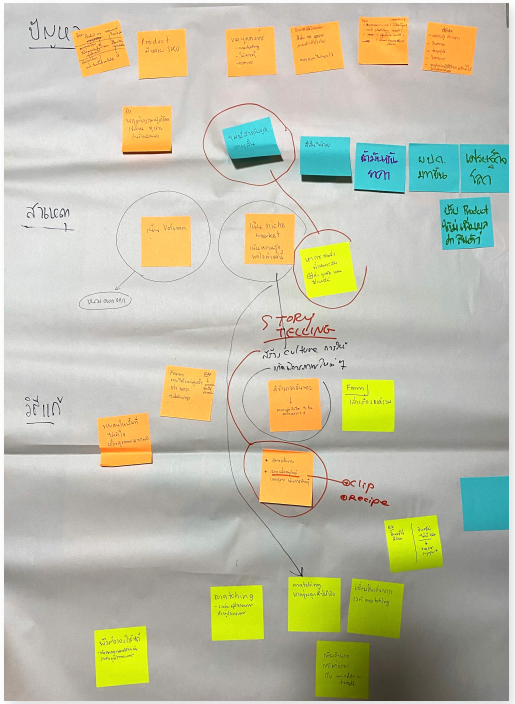
The facilitator should ask the question to enable the conversation, which should cover all key areas. Then, try to narrow it down to identify the dominant value driver.

To facilitate the conversation, mapping on canvas enables all participants to have a holistic view and engage more effectively in the discussion. Participants can write on Post-it notes and arrange them on the canvas. The canvas structure includes the current issues and their causes. Once the mapping is complete, the key areas for development can be identified, and they can serve as the value driver for the next phase of the VCo.

Example of collaborative canvas



Example of challenge map while in use



Facilitators note:

Participants have the option to hand-draw the canvas and express their opinions by jotting them down on post-it notes and placing them on the canvas. It is recommended that the canvas is large enough for all participants to view. If the VCo is conducted with a small group of individuals (3-10) within the same enterprise, the facilitator can utilise a single canvas to encourage the group to brainstorm business ideas. However, if the participants come from various enterprises, it may be beneficial to use multiple canvases and divide the group by industry, such as food and beverages, home decor and souvenirs, fabric and fashion accessories, and non-food herbal products. Presentations between the groups can also foster idea sharing.

Challenges identified by local entrepreneurs from previous study categorised by groups of products

The table below presents common issues discussed with different groups of entrepreneurs categorised by their product types, which include: (1) food and beverage, (2) fabric and fashion accessories, (3) home decoration and souvenirs, and (4) non-food herbal products. While some issues are shared across groups, the facilitator can use this list as a guideline to anticipate possible issues. It is important to note that the list below provides only examples generated from brainstorming and may not apply to every enterprise.

Food and beverages

- Agricultural production is limited due to seasoning changes.
- Agriculturists' knowledge does not meet the expectations of the enterprise. Outsourcing an extra workforce usually involves apprentices.
- The food and beverage enterprise has two main operational directions: large batch production (emphasis on volume) and small batch production (quality/consuming culture). These two groups use different marketing communications, which require different support. The standard/ trademark/certificate for guaranteeing is different between the two groups.
- Creating a cluster among producers (to increase negotiating power with buyers/modern trade) is not easy.
- Innovation about prolonging shelf-life/packaging
- It is difficult to create an outstanding brand when everyone is doing the same thing in the market.

Home decorations and souvenirs

- Unable to manage the cost and selling price to cover all expenses and get enough profit Appropriate pricing is the issue.
- Deficient batch production due to the number of makers
- Logistics problems due to fragile products
- The customer does not understand the value of the product.
- The entrepreneur does not know how to add value to the product.
- The entrepreneur does not know how to communicate artistic value.
- Lack of craftsmanship skill in the young generation
- Lack of knowledge of applying chemicals for product finishing
- Lack of negotiation skills when dealing with the customer about the waiting time

Fabric and fashion accessories

- Unable to manage the cost and selling price to cover all expenses and to get enough profit Appropriate pricing is the issue.
- Deficient batch production due to the number of makers
- Lack of machines/tools to shorten the production time
- It is difficult to find new and right market/buyers.
- Cannot reach the right customer/buyers
- Trends and fashion change over time, and it is difficult to keep up.

Non-food herbal products

- Repetition of the herbs/key ingredients with other local areas that provide the same benefit
- Lack of innovation for new product formulas
- The image of Thai herbal products is outdated and unreliable.
- Confusion about communication of the product's effectiveness and how to avoid overclaimed advertising
- The target market is too small, and the entrepreneur does not know how to expand it.

Facilitators note:

The challenge map can be kept for reference in future phases. Once the challenge mapping is complete, the key areas of development can be identified, and then value drivers can emerge.

C

EXPLORE
the new value from value driver, connect and capture potential value

What to do:

- Explore and co-create potential value through value driver and value source
- Connect occurred value by matching with key area for development
- Capture the potential values

Expexted outcome:

- New value from value drivers and their sources
- Sets of connected potential values

Duration:
90-120 mins

After participants and facilitators learn about the key development area, they can determine the value driver. The facilitator can then introduce the 'value source' as a starting point for discussing new value exploration.

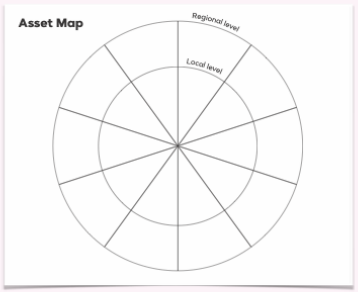
Key area for development → **Value driver** → **Value source**

(from challenge mapping) (obtained through a deeper discussion on the key areas for development) (which will be the subject for discussion)

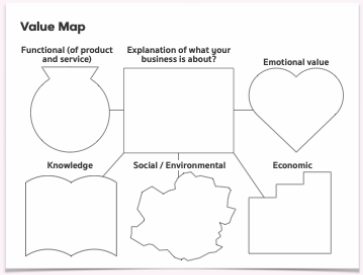
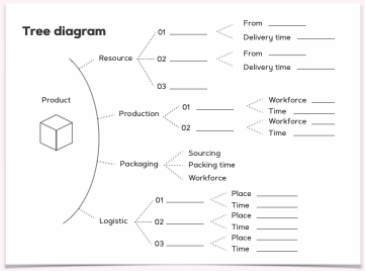
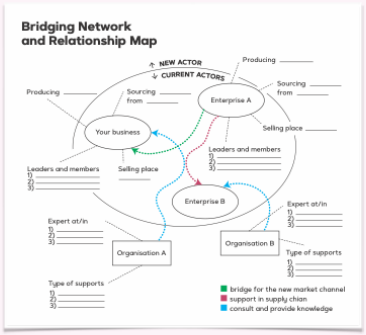
How to do?:

Exploring new values can be achieved through thinking, discussion, writing down ideas, and mapping them to construct a comprehensive picture for all participants to see. The discussion can focus on local tangible resources or delve deeper into intangible topics that bring out tacit thoughts. The following are examples of value drivers, sources, and mapping canvases categorised into four main development areas.

Value driver, value source and examples of canvas

Value driver (from the key area for development)	**Value source** (subject for discussion) + **Exploring and co-creating technique**	**Examples of mapping canvas**
Product and service For example: To seek a new product collection / new design	**Value source:** Community's asset for new inspiration + **Exploring and co-creating technique:** Asset mapping (e.g., cultural resources, natural resources, places, food)	

Facilitators note: Starting the community development process with asset mapping is a common practice, as it allows for the exploration and utilisation of local resources. The mapping context can be adapted to fit the specific needs of the community or enterprise. Additionally, asset mapping has the potential to connect both tangible and intangible resources. Locals can easily engage with this process since it is centred around their community.

Value driver (from the key area for development)	**Value source** (subject for discussion) + **Exploring and co-creating technique**	**Examples of mapping canvas**
Marketing and communication For example: To rebrand and communicate the new brand image, emphasise the local value	**Value source:** affirmative questions • What are you proud of doing this business? • What are you proud of being a member of this community? • How does your business offer value to your community and members? + **Exploring and co-creating technique:** discussion on the topics, grouping by themes using mind mapping (e.g., social value, emotional value, the value of achieving new knowledge)	
Production and management For example: To source and manage resources more effectively	**Value source:** unfolding the current resource and discussing how to manage them better + **Exploring and co-creating technique:** assembling product parts/resources that have been used and doing a supply chain mapping using a tree diagram	
Networking and social relationship For example: To expanding, bridging and connect a new reciprocal network	**Value source:** finding the support system from the current relationship with other enterprises or organisations (local/regional/national/ international) + **Exploring and co-creating technique:** exploring the current and potential new relationships such as B2C (business-to-customer), B2B (business-to-business), B2G (business-to-government), C2C (customer-to-customer)	

Facilitators note:

The table on the left provides examples of value drivers, value sources, and canvases. The facilitator can adapt the discussion subject and canvas based on the value driver.

Value can be captured during the mapping process or discussion. Referring to a challenge map can be helpful in connecting new values.

The following page provides an example of exploring and co-creating new value with a local enterprise using asset mapping.

(See the larger version of the canvases in the appendix)

Example Case 1, the exploring and co-creating of new value with a hand-woven community-based enterprise using asset mapping

Value driver: to seek a new product collection / new design
Value source: Community's asset for new inspiration, which can be categorised as

People
- Famous people
- Talent people
- Leaders
- Friends
- Family

Place
- Gathering place
- A place for getting together
- Cultural place
- Religion place
- Online space

Organisation
- Organisation
- Educational institute
- Learning centre
- Cooperative

Natural resource
- Geography
- Mountain
- Forest
- Sea/beach
- Materials
- Ingredients

Cultural resource
- Languages
- Legacy
- Story
- Belief
- Arts & design
- Folk wisdom

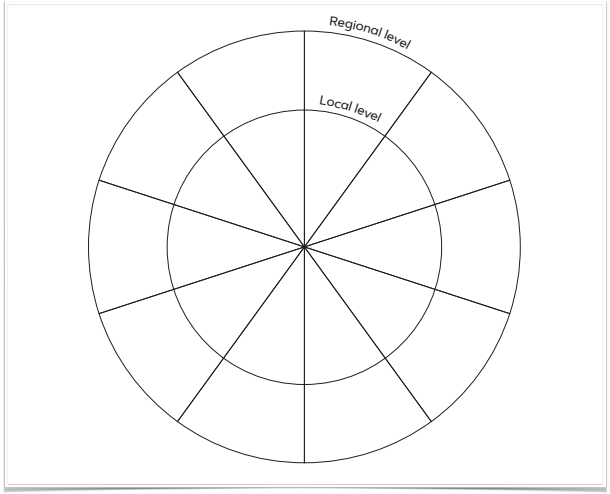
Activity
- Tradition
- Common practice
- Sports
- Hobbies
- Occasional/seasonal activity

Food
- Local food
- Famous restaurant/ retail
- Unique dish

Award & recognition
- Awards
- Recognition
- Well-known things

The topic can be cut and pasted on the map. Then, the facilitator can open a discussion one topic at a time and make connections between them.

Canvas: Asset mapping



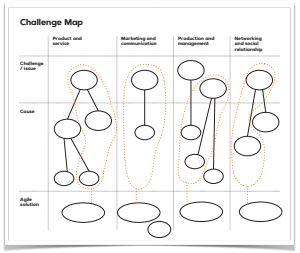
Facilitators note: As mentioned earlier, the exploring and co-creation process can go beyond the physical aspect. The affirmative questions listed below could help reveal hidden value, both tangible and intangible. Try asking participants and seeing what they value, and then the facilitator can ask them to elaborate on that.

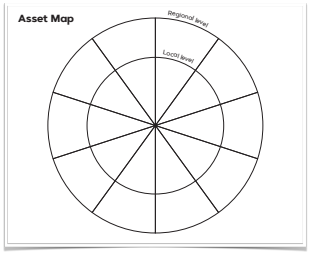
Examples of affirmative question

- What is your community's dream that you would like to see become a reality?
- In this community, what do you feel most proud of?
- What is the most meaningful thing you have done for this community that you feel proud of?
- What do you want to pass on to the young generation?
- What would it be if you could promote something positive about your community?
- What three words best describe your community?
- Do you have any unique characteristics that set your community apart from others?
- What is a must-see or must-try in your community?
- If you could describe your community's uniqueness in a slogan, what would it be?
- What are you proud of being a member of this community?
- What legacy have your ancestors left behind?
- Compared to living in the city, what are the advantages of living in the country?
- What does sustainability mean to you?
- What can you do all day without boredom?
- What is the unique asset or resource of your area?
- Think about what you/your community owns that you would regret losing.
- What is your special talent?
- In this community, what makes you feel happy?

Facilitators note:

The facilitator can connect the outcomes from the challenge map and asset map, among others, as the conclusion of this phase. Both maps can be displayed on the wall for everyone to see.





From Example Case A (the hand-woven fabric enterprise), new value can emerge from matching the results of asset mapping and challenge mapping. The following conclusions can be drawn:

- Discussion about the local language, local foods, and the village's name that represents their natural resource revealed the potential for new fabric patterns.
- Participants drew some design elements during the asset mapping exercise. They applied their knowledge and limitations of weft and warp to the designs.
- When mentioning the skills they were interested in, participants expressed a desire to learn how to use tie-and-dye yarns to create patterns.
- They want to involve adolescents in the business.
- They see an opportunity to develop products for the gift-giving season.

D

CONSTRUCT
mutual value and develop new business strategy

What to do:

- Construct mutual value, build a collective statement
- Develop the new potential strategy

Expexted outcome:

- A collective statement which has mutual value as a core for developing new business strategies

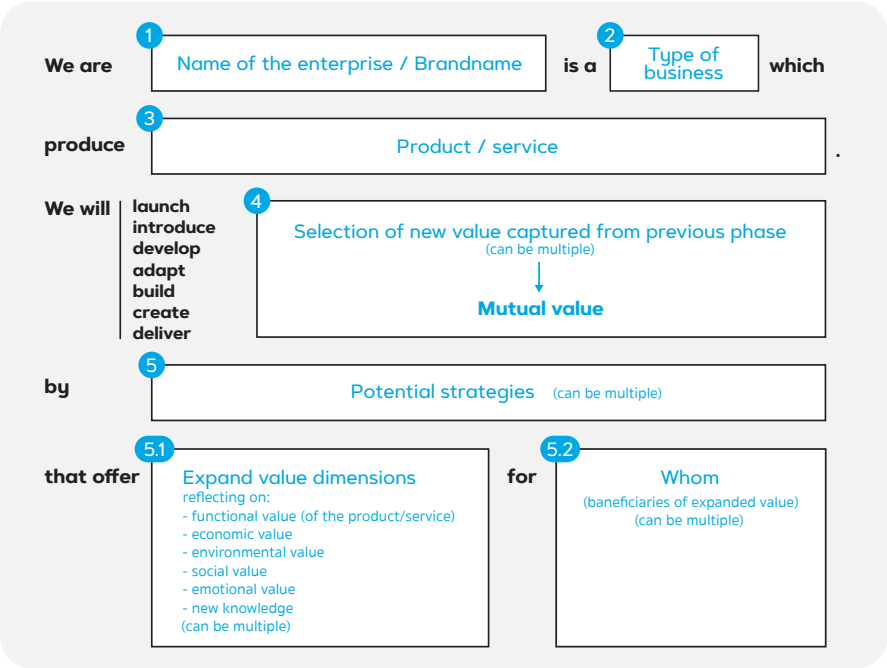
Duration:
90-120 mins

Facilitators note:
The facilitator should bring all the maps and canvases from previous phases to reference. Then, they can pull Post-its from the previous canvases and arrange them on the mutual value building structure canvas.

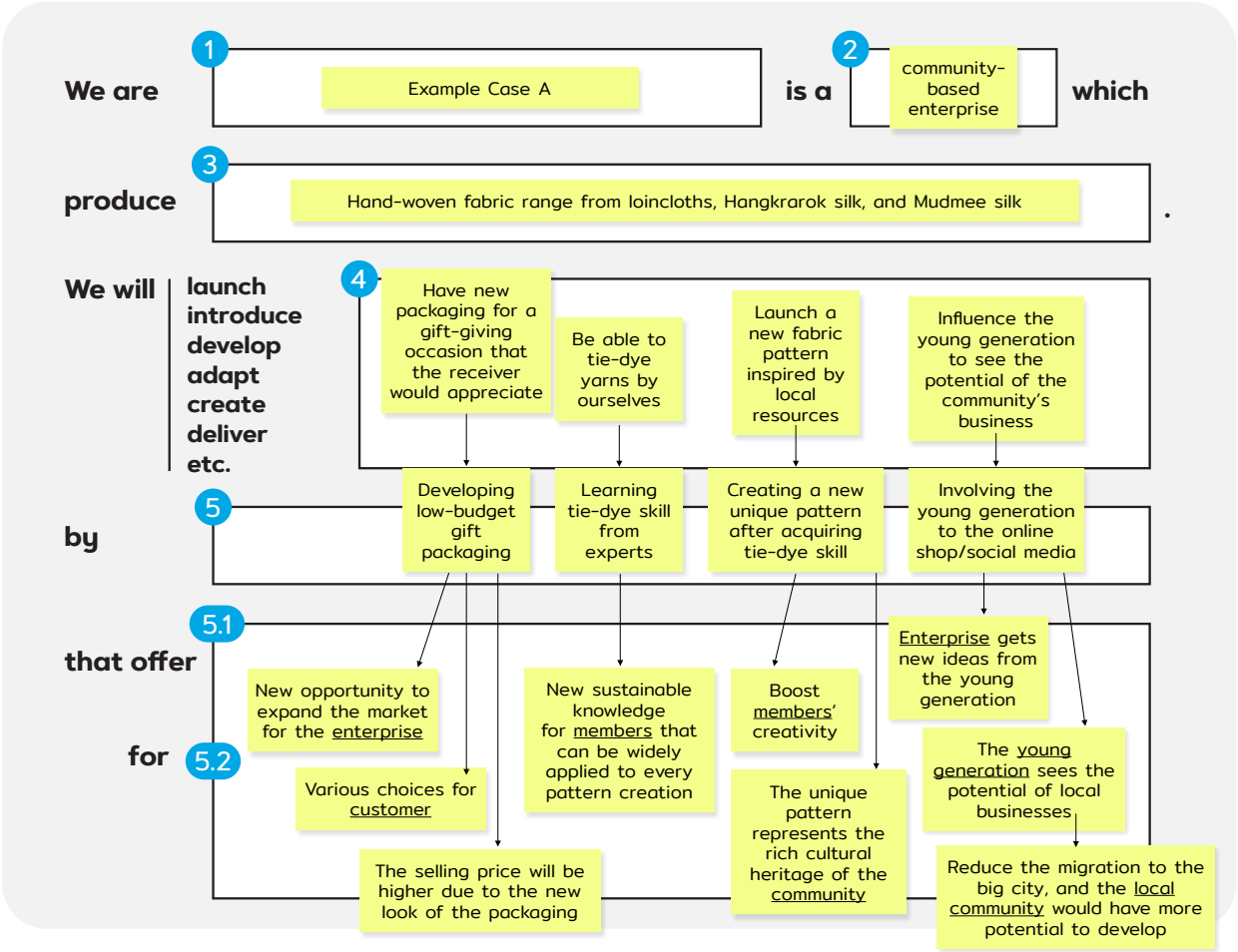
In the previous phase, new values were captured from the discussion and mapping process. In this phase, the goal is to arrange them into a collective structural statement. This statement serves as a summary of the co-creation of value and can be used as a starting point for building an agreement and determining further actions.

How to do?:

According to a **'mutual value building structure'** below, it starts with stating the name of the enterprise 1, the type of business 2 and what product they produce 3, in order to build a sense of commitment. Followed by the selection of value captured from the previous phase 4, the agreement of mutual value can be identified here. It can lead to a discussion on potential strategies 5. However, it is worth looking back and expanding the value by reflecting on other dimensions 5.1 and determining the beneficiaries of that value 5.2. The value here is the value created from the ripple effect of the mutual value. The more expanded values occur, the selective mutual value becomes more meaningful.



Example of the mutual value building structure while in use

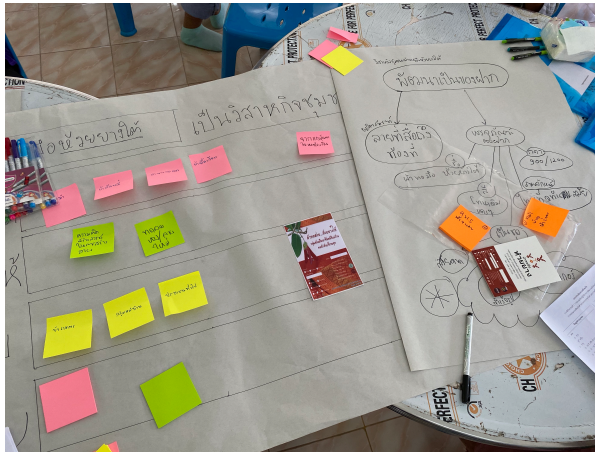


Facilitators note:

The structure of a collective statement is a guideline to help participants agree and be on the same page as others. It can be created using a large piece of paper and Post-it notes. The structure does not need to be exactly the same, but the outcome from 4 and 5 should be determined for the next phase.

The left figure shows an example of elaboration with Example Case A, a hand-woven fabric community-based enterprise. The captured values from the previous phase are constructed towards having potential strategies and expanded value dimensions as a ripple effect of selective strategies.

Example of the mutual value building structure while in use



Facilitators note:

- The top left presents a mutual value building structure canvas and challenge map to reference the business's needs.
- Participants can hand-draw the structure, as shown in the bottom left picture.
- The Post-it from previous phases and the value exercise card can be used on the mutual value building canvas.

E

PLAN
through collective agreement and build commitment with stakeholders

What to do:

- Select the feasible strategies
- Determine action plans
- Discuss requirements for the governmental support

Expexted outcome:

- Agreement for the new development
- Action plans and limitation
- Determination of key players and their roles
- Requirement for governmental support
- Follow-up engagement

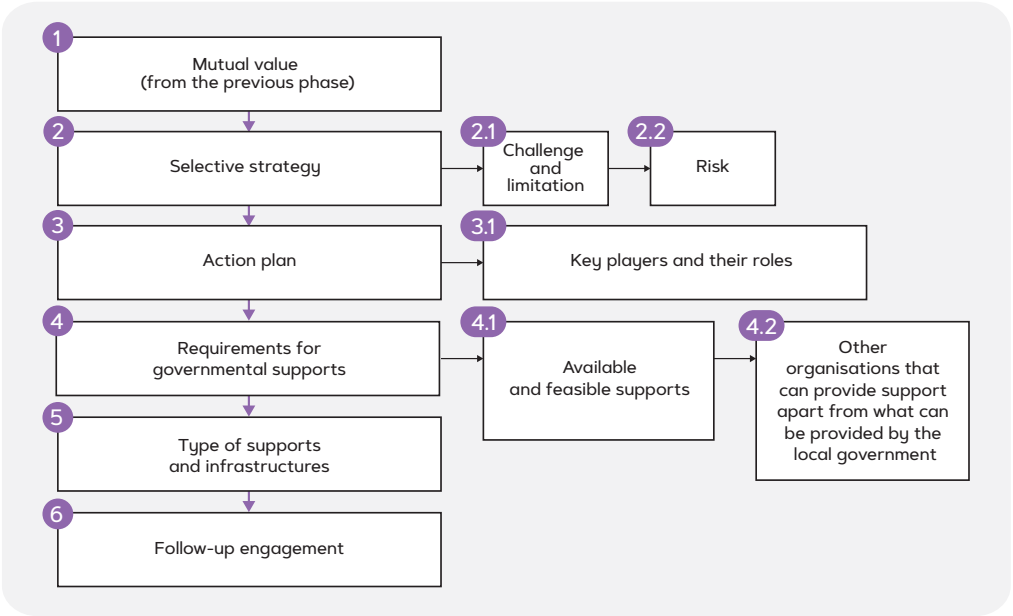
Duration:

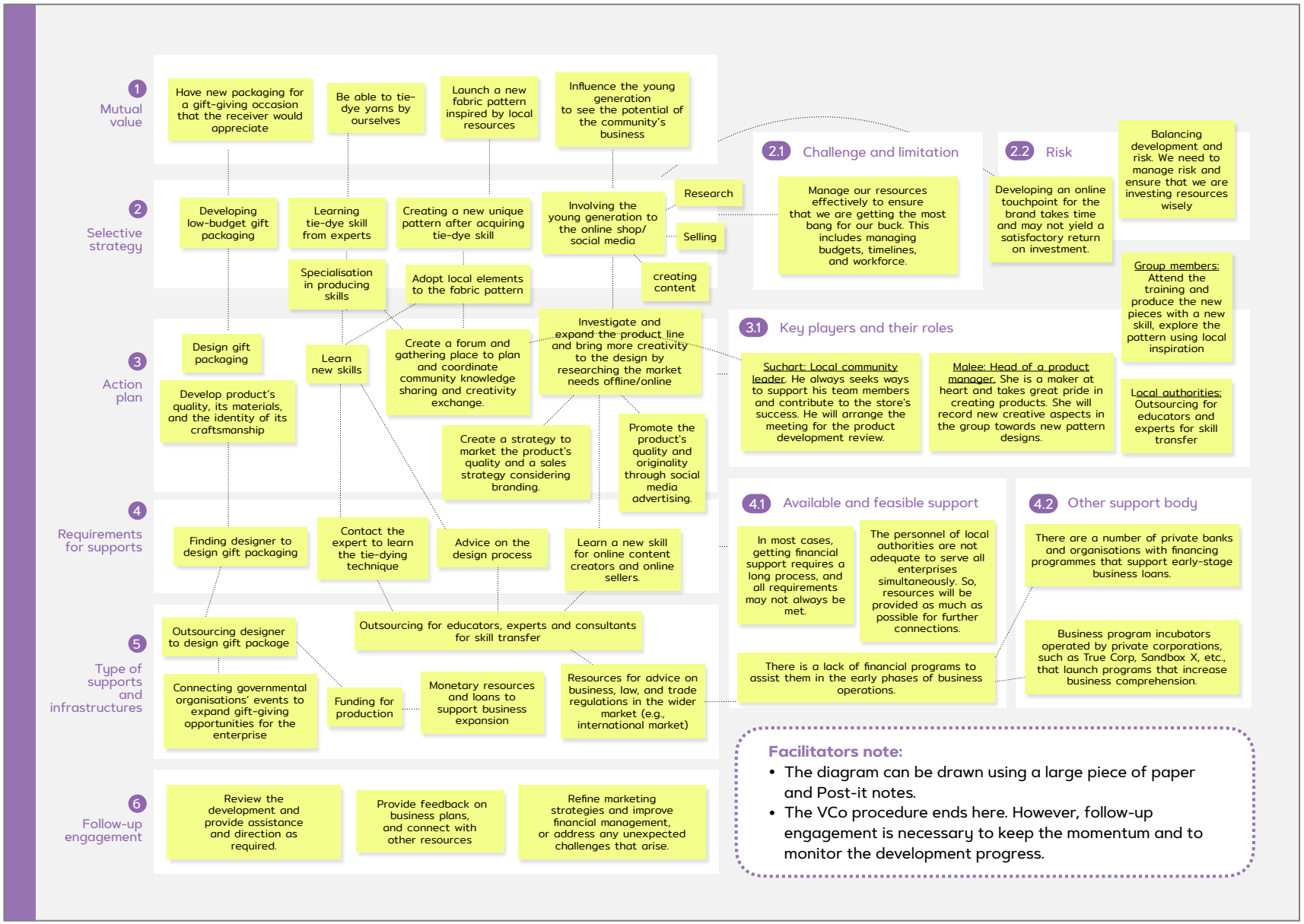
120-150 mins

This phase aims to select potential strategies that can create impact according to mutual value. Once the strategies are determined, the action plan and requirements for governmental support can be discussed. Involving the local authorities as key stakeholders is essential in this phase so that they can discuss feasible support.

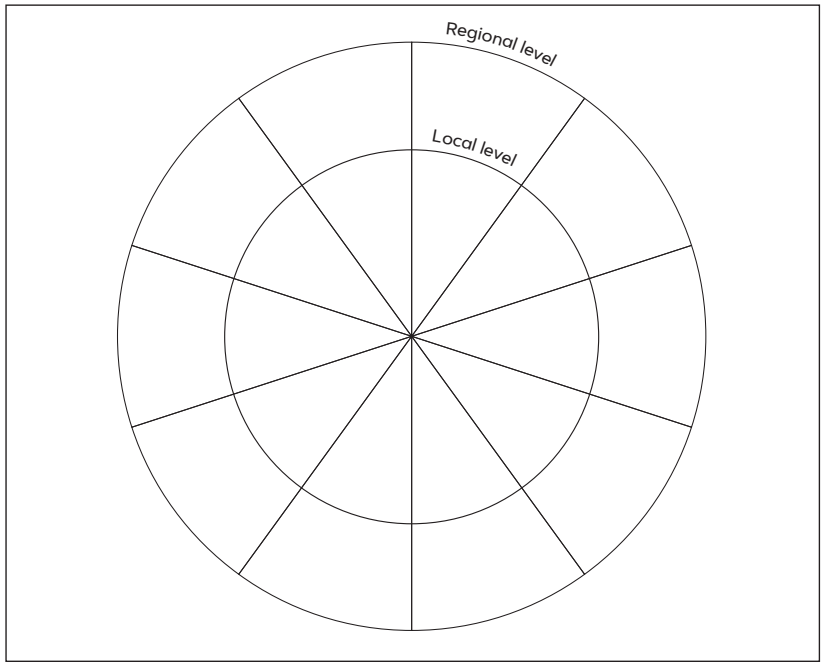
How to do?:

The following diagram can be used as a guideline to facilitate the commitment towards action plans and requirements needed from the government. Start with 1, the mutual value from the previous phase is the heart of development. Followed by 2 the selection of strategies that could create an impact according to mutual value. To do an agile evaluation of the selected strategy, 2.1 and 2.2 need to be considered to explore limitations and mitigate risk. Once the strategy is concrete, the determination of action plans 3 could be indicated with key players and their roles 3.1. Next, the discussion should be about the requirements of governmental support 4 ,what is available and feasible 4.1 and what is beyond capability 4.2 that might need to suggest for other support bodies. Finally, the type of support and infrastructure could be determined 5 . Lastly, creating a follow-up engagement 6 with all stakeholders is important to keep track of the development and provide further support if needed.

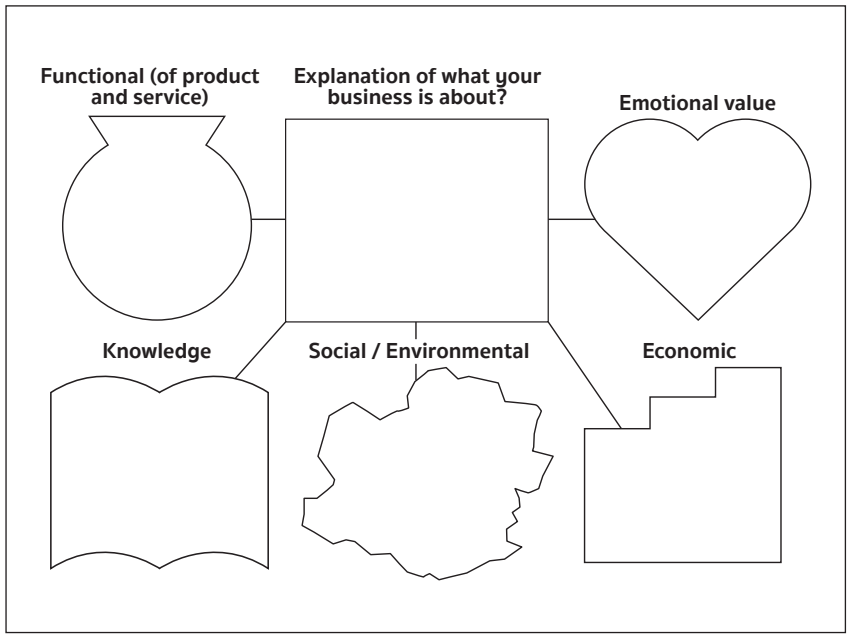



1 Mutual value
Have new packaging for a gift-giving occasion that the receiver would appreciate
Be able to tie-dye yarns by ourselves
Launch a new fabric pattern inspired by local resources
Influence the young generation to see the potential of the community's business
2 Selective strategy
Developing low-budget gift packaging
Learning tie-dye skill from experts
Creating a new unique pattern after acquiring tie-dye skill
Involving the young generation to the online shop/ social media
Research
Selling
creating content
Specialisation in producing skills
Adopt local elements to the fabric pattern
3 Action plan
Design gift packaging
Develop product's quality, its materials, and the identity of its craftsmanship
Learn new skills
Create a forum and gathering place to plan and coordinate community knowledge sharing and creativity exchange.
Investigate and expand the product line and bring more creativity to the design by researching the market needs offline/online
Create a strategy to market the product's quality and a sales strategy considering branding.
Promote the product's quality and originality through social media advertising.
4 Requirements for supports
Finding designer to design gift packaging
Contact the expert to learn the tie-dying technique
Advice on the design process
Learn a new skill for online content creators and online sellers.
5 Type of supports and infrastructures
Outsourcing designer to design gift package
Outsourcing for educators, experts and consultants for skill transfer
Connecting governmental organisations' events to expand gift-giving opportunities for the enterprise
Funding for production
Monetary resources and loans to support business expansion
Resources for advice on business, law, and trade regulations in the wider market (e.g., international market)
6 Follow-up engagement
Review the development and provide assistance and direction as required.
Provide feedback on business plans, and connect with other resources
Refine marketing strategies and improve financial management, or address any unexpected challenges that arise.
2.1 Challenge and limitation
Manage our resources effectively to ensure that we are getting the most bang for our buck. This includes managing budgets, timelines, and workforce.
2.2 Risk
Developing an online touchpoint for the brand takes time and may not yield a satisfactory return on investment.
Balancing development and risk. We need to manage risk and ensure that we are investing resources wisely
3.1 Key players and their roles
Suchart: Local community leader. He always seeks ways to support his team members and contribute to the store's success. He will arrange the meeting for the product development review.
Malee: Head of a product manager. She is a maker at heart and takes great pride in creating products. She will record new creative aspects in the group towards new pattern designs.
Group members: Attend the training and produce the new pieces with a new skill, explore the pattern using local inspiration
Local authorities: Outsourcing for educators and experts for skill transfer
4.1 Available and feasible support
In most cases, getting financial support requires a long process, and all requirements may not always be met.
The personnel of local authorities are not adequate to serve all enterprises simultaneously. So, resources will be provided as much as possible for further connections.
There is a lack of financial programs to assist them in the early phases of business operations.
4.2 Other support body
There are a number of private banks and organisations with financing programmes that support early-stage business loans.
Business program incubators operated by private corporations, such as True Corp, Sandbox X, etc., that launch programs that increase business comprehension.
Facilitators note:
• The diagram can be drawn using a large piece of paper and Post-it notes.
• The VCo procedure ends here. However, follow-up engagement is necessary to keep the momentum and to monitor the development progress.

Appendix

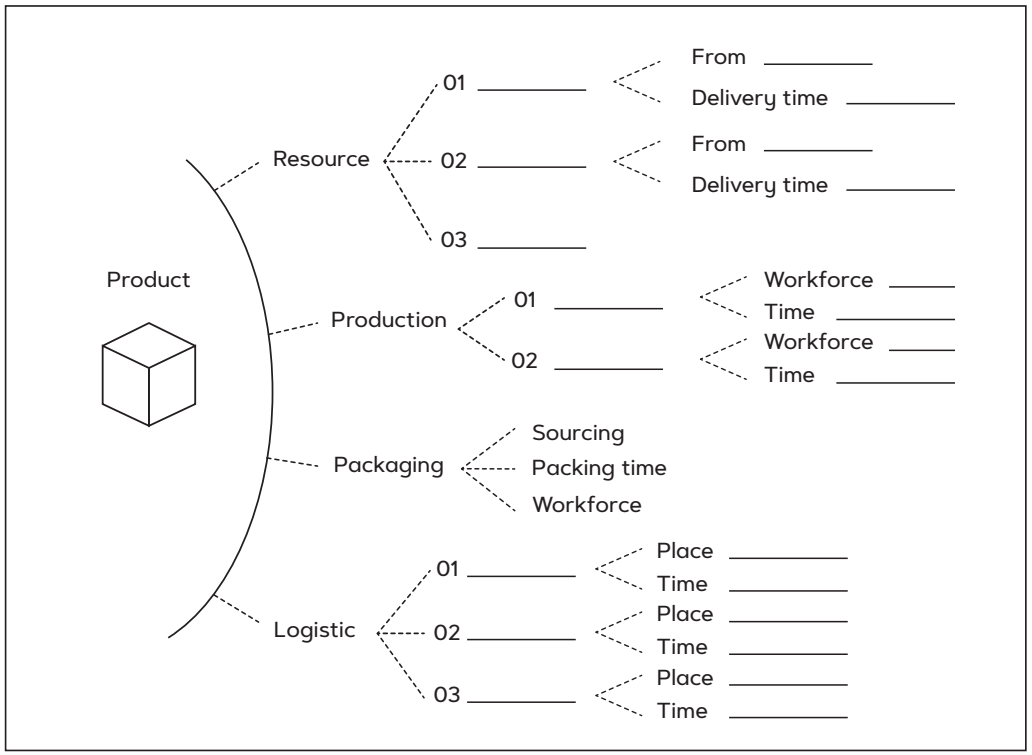


Asset map


Functional (of product and service)
Explanation of what your business is about?
Emotional value
Knowledge
Social / Environmental
Economic

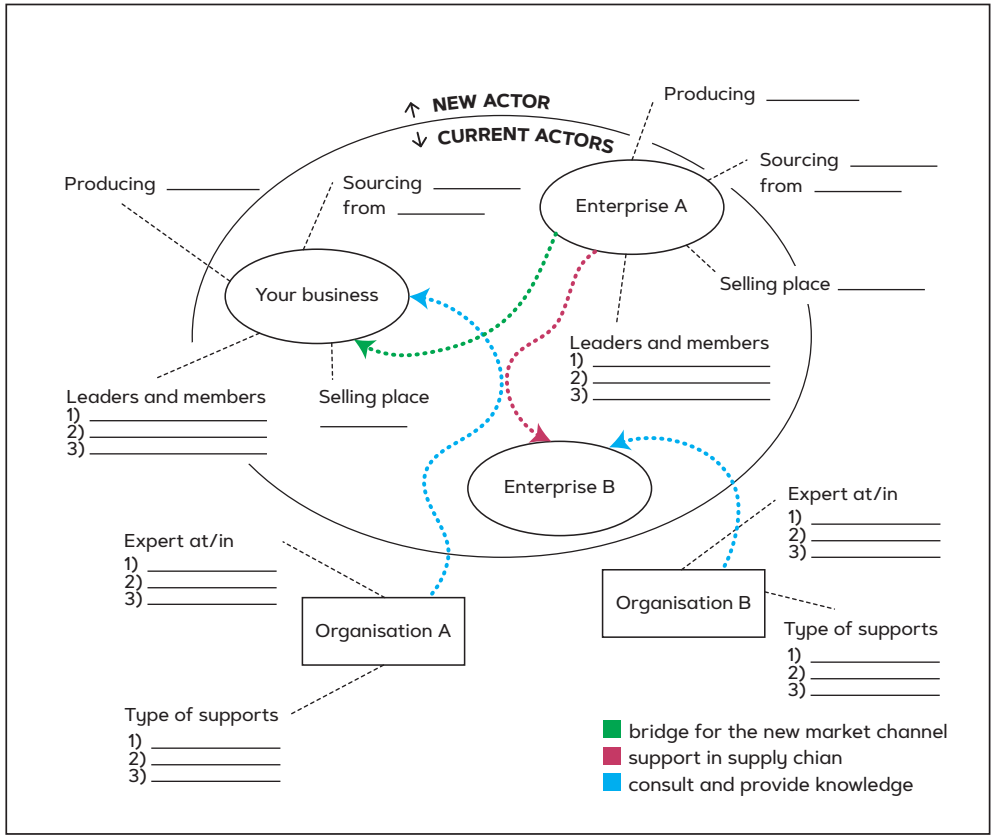
Value map

Appendix



Tree diagram

Appendix



Bridging Network and Relationship map

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Appendix H: Research ethics approval letters

College of Engineering, Design and Physical Sciences Research Ethics Committee
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21 May 2020

LETTER OF CONDITIONAL APPROVAL

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 16/06/2020 AND 31/05/2022

Applicant (s): Miss Mathurada Bejrananda

Project Title: Design-led social participation in value co-creation: the use of participatory design principle with value co-creation process for Thai OTOP (One Tumbon One Product) policy

Reference: 23252-LR-May/2020- 25593-2

Dear Miss Mathurada Bejrananda

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- **Please ensure that you monitor and adhere to all up-to-date Government health advice for the duration of your project.**
- The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment
- Permission has not been given for you to send out a block email to any one company to recruit participants..
- Online research is only approved no face to face interviews have been approved other than online interviews.
- In the Participant Information Sheet please check the data retention periods for your research with your supervisor. Please could you also check the telephone number as this does not seem complete before issuing to your participants.

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

Professor Hua Zhao

Chair of the College of Engineering, Design and Physical Sciences Research Ethics Committee

Brunel University London

College of Engineering, Design and Physical Sciences Research Ethics Committee
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23 February 2021

LETTER OF APPROVAL

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 16/06/2020 AN 31/05/2022

Applicant (s): Miss Mathurada Bejrananda

Project Title: Design-led social participation in value co-creation: the use of participatory design principle with value co-creation process for Thai OTOP (One Tumbon One Product) policy

Reference: 23252-A-Feb/2021- 31360-2

Dear Miss Mathurada Bejrananda

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- **Approval is given for remote (online/telephone) research activity only. Face-to-face activity and/or travel will require approval by way of an amendment.**
- **The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.**
- In addition to the above, please ensure that you monitor and adhere to all up-to-date local and national Government health advice for the duration of your project.

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
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17 February 2022

LETTER OF APPROVAL

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 17/02/2022 AND 31/05/2023

Applicant (s): Miss Mathurada Bejrananda

Project Title: Value co-creation for co-designing public service: a framework with an implementation guideline for grassroots entrepreneurship development programme in Thailand (the OTOP programme)

Reference: 23252-A-Feb/2022- 38124-1

Dear Miss Mathurada Bejrananda

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- **Approval is given for remote (online/telephone) research activity only. Face-to-face activity and/or travel will require approval by way of an amendment.**
- **The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.**
- **Please ensure that you monitor and adhere to all up-to-date local and national Government health advice for the duration of your project.**

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- If your project has been approved to run for a duration longer than 12 months, you will be required to submit an annual progress report to the Research Ethics Committee. You will be contacted about submission of this report before it becomes due.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

Professor Simon Taylor

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1 September 2022

LETTER OF APPROVAL

APPROVAL HAS BEEN GRANTED FOR THIS STUDY TO BE CARRIED OUT BETWEEN 05/09/2022 AND 31/05/2023

Applicant (s): Ms Mathurada Bejrananda

Project Title: Value co-creation for co-designing public service: a framework with an implementation guideline for grassroots entrepreneurship development programme in Thailand (the OTOP programme)

Reference: 37051-LR-Aug/2022- 41352-2

Dear Ms Mathurada Bejrananda

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- **The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.**
- **Please ensure that you monitor and adhere to all up-to-date local and national Government health advice for the duration of your project.**
- **Please amend your study start date in the Consent Form as it cannot be in the past** (This point can be addressed outside of the BREO system)

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study.
- If your project has been approved to run for a duration longer than 12 months, you will be required to submit an annual progress report to the Research Ethics Committee. You will be contacted about submission of this report before it becomes due.
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

Professor Simon Taylor

Chair of the College of Engineering, Design and Physical Sciences Research Ethics Committee

Brunel University London