Design by Social Entrepreneurs: The Analysis of four Chilean Social Entrepreneurs

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Declaration

This thesis has not been submitted in support of an application for another degree at this or any other university. It is the result of my own work and includes nothing that is the outcome of work done in collaboration except where specifically indicated. Many of the ideas in this thesis were the product of discussion with my supervisors David Hands and Edward McKeever.

Abstract

Social entrepreneurship is the application of the mindset, process, tools and techniques of business entrepreneurship to the pursuit of a social and or environmental mission. However, issues such as lack of resources and knowledge affect the performance of these organisations. On the other hand, design is used by organisations to increase their competitive advantages and in social innovation to develop solutions to pressing social issues using the principles of sustainability. Nevertheless, despite the wide range of studies regarding the benefits of design for organisations and social innovation, there is no evidence of studies regarding the use of design by social entrepreneurs.

This thesis studies how four Chilean social entrepreneurs use design through their social entrepreneurship processes. For this purpose, a Narrative Research was conducted in a business incubator in which these entrepreneurs were participating in a programme called Open Gate. Data collection methods such as semi-structured interviews with members of the staff and social entrepreneurs were used. The data collected were analysed using a model developed for this study called Social Entrepreneurship and Design Framework. This multidimensional framework enabled the analysis of the main issues that social entrepreneurs encounter against the social entrepreneurship process and different levels of design use.

It was concluded that these entrepreneurs encountered six main issues in their processes: research, community engagement, development, co-creation, positioning and strategies. Consequently, six design drivers were described that show how design was used in the issues found. Buchanan's four orders of design model were adopted to classify the design practices used by the entrepreneurs. This analysis shows that design practices such as graphic, product, interaction and experience design as well as illustrations were mostly conducted by designers, both, external or internal to the social enterprise. Facilitation activities, processes of engagement and strategies were conducted by social entrepreneurs (non-designers).

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List of Abbreviations and Acronyms

H: Haedus

HCD: Human-Centred Design

LPE: La Polla Energética

M: Miaum

MV: Municipio Verde

MVP: Minimum Viable Product

SEDF: Social Entrepreneurship and Design Framework

STC: Solar Thermal Collector

UI: User Interface

UX: User Experience

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Chapter 1   Introduction

1.1   Background

I was born and raised in a small city in Chile. My father was a tailor, and my mother a dressmaker and the pillar of my family. They both worked from home, so I grew up between fabrics, chalks, scissors and sewing machines. Life was not easy at home. My parents had to work very hard to compete with big companies and sized clothes. They taught me how to work hard and how to pursue opportunities in life.

When I was a child, I always followed the opportunities. For instance, I helped my old neighbours to take out the trash, collected cardboards and metals and sold home-made icecreams in my neighbourhood. Thus, through these small jobs, I earned my first money. I learned in practice how to start my own business. I promoted myself by talking with my neighbours, I listened to what they needed, and I offered my services. At that age, I did not know what entrepreneurship was, and it did not matter. I had no idea what design was, and it did not matter either. I could say that my parents did not know what entrepreneurship and design were, but they used their guts and learned how to run their businesses and, obviously, they knew about fashion design.

I did my bachelor degree in Product Design Engineering. In this stage of my life, I started learning some principles, practices and theories of design, business and technology. The books, mostly written by European authors, described everything that I knew at the moment and even more. I became fascinated by all this knowledge, and I complained about why people in my country did not apply that knowledge. I remember talking about this with my dad, and no after a long time, I realised that the answer was simple. The context in Chile, and even more, in my hometown is different.

This conversation with my dad made me think about this dichotomy between theory and real life. In my bachelor dissertation, I designed an educational tool for children studying in a rural school in my hometown. The tool aimed to support the development of their creative thinking. This project intended to challenge the paradigm that these children will not develop their creativity because they did not have access to computers. With the experience of a local potter, I designed a system of seedling with different sizes and shapes that encourage children to work differently with what they have at hand: agriculture.

The efforts of my parents, my life as a child looking for opportunities in a small town, my undergraduate dissertation, and the unbalance of opportunities opened my interest in working with social issues. Also, throughout my life, I realised that people do not use concepts such as design and entrepreneurship in their quotidian language. Therefore, this thesis intends to shed light on what design means for entrepreneurs that work on social issues.

1.2   Introduction

This research aim to contribute to the understanding of design from a non-designer centred approach, particularly by analysing the use of design by four Chilean Entrepreneurship.

1.2.1 Chile

Chile is a South American country with more than 18.300.000 inhabitants (INE, 2017). It borders in the continent with Perú, Bolivia and Argentina, but it also has insular territory and Antarctic territory. In total, Chile has an area of 2,006,354 Km2 with high biodiversity that ranges from the driest desert in the world in the north to ice fields in the south. Geographically, Chile is a diverse country with a variety of climates and natural environments.

The Chilean culture is a mix of the influence of Spanish colonialism with a blend of indigenous elements, from more than ten indigenous tribes along with the country. The Spanish colonialism highly influences the Chilean culture in terms of religion (55% Catholic) and the language. The mix with indigenous elements is present, for instance, in the 'Chilean-Spanish' language, which has adopted numerous words from the indigenous language. Also, the numerous combinations of elements from indigenous and Spanish cultures originated a heterogeneous national identity (Donoso, 2004). Culturally, Chile is very diverse due to the multiple cultural syncretisms that originated from the mixtures of Spanish and indigenous cultures.

However, that diversity also reflects the social issues that the country faces. In fact, according to the OECD (2015b), Chile has a high level of inequality, where 10 per cent of the wealthiest sector earn 26 times more than the most impoverished sector. These inequalities generate multiple social problems in the country. To name a few: low-quality education, disparities among the job offers and demands, inequalities between men and women, duality in the labour market that affect women, young people and minorities, for instance (OECD, 2015a).

1.2.2 Innovation Ecosystem

In order to tackle the different challenges that the country faces, the Government is working on different initiatives to promote economic growth and reduce social inequalities. One of the most important of these initiatives is the support and promotion of the innovation ecosystem.

The Chilean innovation ecosystem is composed by five actors: startups, investment funds, Government, universities and the industry. The *startups* are one of the main sources of innovation in the country. They generate new businesses with the capacity to create new businesses and generate value. The *investment funds* offer the financial resources that startups require to grow. The *Government*, through Corfo, generates innovation incentives such as tax reductions for organisations that invest in research and development, support to business incubators and entrepreneurs. *Universities* develop new knowledge through research which can be applied by the *industry*. The link between entrepreneurship and innovation is considered the national innovation ecosystem (Fundación País Digital, 2019).

1.2.3 Entrepreneurship Ecosystem

The entrepreneurship ecosystem in Chile is led by Chilean economic development agency, called Corfo. This agency has been promoting entrepreneurship initiatives and business incubators since the beginnings of 2000s. For instance, in 2001, this agency launched a programme that aimed to support the creation of business incubators. As a result, to the date, the country has eighteen business incubators supported by this agency (Corfo, 2016), some of them are among the best incubators in Latin America (UBI Global, 2016). The entrepreneurship ecosystem is well-positioned in the country and globally, offering resources and support to those who are starting a business.

One of the examples of the initiatives of the Government to promote entrepreneurship is Start-Up Chile. Start-Up Chile is one of the main Accelerator Programme in Latin America and one of the most important in the world. This programme seeks to position Chile as a worldwide hub of innovation. From its creation, in 2010, Start-Up Chile has supported more than 1600 startups from 85 countries. With the rise of these initiatives, there is an increasing interest by citizens to start new businesses

The interest is not only on organisations that seek to maximise profits but also focused on the creation of social impact. In fact, the concept of social entrepreneurship is highly recognised by the general Chilean public, which has also been promoted by social type local incubators.

1.2.4 Social Innovation in Chile

In 2015 the Government set three guidelines to set the Social Innovation agenda (División de Innovación - Minecon, 2018).

- Working table to coordinate the different social innovation initiatives supported by the public sector.

- Establishment of a Public Council for tge Cooperative Development and the Social Economy.

- Adoption of a quintuple helix model that aims to connect the public, private, scientific-academic, civic society and entrepreneurs. The aim of this guideline is to develop a social innovation ecosystem. The objective is to assure an efficient management of social innovation initiatives as well as to establish an evaluation system of social innovation policies.

Consequently, in 2014 the Chilean Government launched the SSAF-Social programme (Flexible Seed Allocation Allowance for Social Innovation Entrepreneurship) (OECD, 2016). This programme aims to support the whole *social innovation cycle*. For this purpose, the programme includes five stages which involve both economic and non-economic support (División de Innovación - Minecon, 2018). The stages are described as follows:

1. Definition of a social problem – priotisation of regional challenges
2. Concept – Open social innovation platform
3. Social Innovation Prototype Contest
4. Validation and package of solutions
5. Scalability of the solutions

Figure 1: Social Innovation Programme Structure (División de Innovación – Minecon, 2018)

The formal establishment of these stages incentivised the raise of business incubators that support social initiatives.

In 2016, a business incubator, called Socialab, launched a call called OpenGate funded by this programme. The focus was on Stage 2 of the program 'Concept – Open Social Innovation Platform'. This call received one hundred and sixty proposals. Twenty-five of them were selected, and six were funded. Four of these six organisations are the cases analysed in this research.

1.2.5 Researcher's opinion on the Chilean Innovation and Entrepreneurship Ecosystem

One of the main issues that I recognise as a Chilean is that this ecosystem is disconnected. These disconnections relate to the small size of the Chilean market and the inequalities mentioned above. In particular, there is a small group of big corporations that share a large section of the market share of the country, which gives them sufficient power to negotiate with the Government. Therefore, small organisations have little or no chances to compete in this scenario. The impulse to generate the appropriate conditions for entrepreneurship given by the Government, the academic and private sectors are usually taken by people with a high level of education who are in need of resources to initiate their businesses. The reason for this is that the ecosystem is targeted to an elite group of people that speaks the 'same business or innovation language'. Thus, funding applications require a certain level of skills and knowledge, from which, most of them, are thoughts in Higher Education Institutions. For instance,

it is required to know about markets to describe the target market of an opportunity, also to define the market share that the business opportunity will cover.

These requirements make it difficult for people without professional degrees to take part in these ecosystems as entrepreneurs. Therefore, it is normal to see professionals working in communities in need rather than communities working by themselves within the entrepreneurship ecosystem. This does not mean that communities are not active in addressing their issues, but they do it in informal ways. Consequently, social entrepreneurs have to gain access to communities by reshaping their practices and approaches to be able to engage and work in collaboration with community members. Thus, in Chile, social entrepreneurs have to be able to interact with different stakeholders within the ecosystem. These stakeholders have different backgrounds, motivations and practices. Social entrepreneurs have to adapt their ways of working to each of them.

Theoretical Rationale of the Project

Social entrepreneurship is the "application of the mindset, process, tools and techniques of business entrepreneurship to the pursuit of a social and or environmental mission" (Kickul & Lyons, 2012, p. 1). Social entrepreneurs address social issues that neither governments nor private organisations are dealing with (Martin & Osberg, 2015; Nicholls, 2006). These organisations face multiple challenges such as access to resources, networks, infrastructure and knowledge.

Social entrepreneurs, like commercial entrepreneurs, require resources to achieve their mission. The challenge is how to define a strategy that allows them to obtain the economic revenues needed to create positive social impact. While commercial entrepreneurs seek to increase their economic revenues maximising profits to shareholders, social entrepreneurs aim to increase the revenues to obtain the necessary resources to increase the social impact of their ventures.

Multiples practices and disciplines have contributed to the improvement of economic revenues of organisations. Design is not an exception. Historically, design has shifted from crafts to industrialised practices that support business processes, manufacturing practices and communicational strategies. At the same time, the scope of design has

become wider. Design is considered as a way of thinking, creative processes, a widespread of disciplines, signs, objects or systems (Cooper & Press, 1995). Papanek (1971) argues that design is the conscious and intuitive effort to impose a meaningful order. According to Buchanan (2001), design can be found in symbols, things, actions or thoughts, which in turn, address graphic, industrial or product, interactions and environment design disciplines. Thus, design is present in different dimensions of our everyday life through goods and services that are widely provided by companies.

Papanek claimed that design had been used to satisfy only evanescent wants and desires rather than genuine needs (V. Papanek, 1984, p. 15). This claim was an invitation for designers to focus on real-world problems rather than ephemeral desires. Since then, design has also been used in social innovation initiatives. Researchers and practitioners have studied the benefits of design for social innovation (Brown & Wyatt, 2010; Cipolla & Moura, 2012; Manzini, 2015; Mulgan, 2014). Design for social innovation is defined as the activities that a designer can do to activate and conduct a process of social change bearing in mind the principles of sustainability (Manzini, 2015, pp. 58–59). Nevertheless, those initiatives are commonly led by designers who, in turn, bring some disadvantages related to the adaptation of designers to social innovation projects.

Design can play an important role in how social entrepreneurs respond to these ambivalences of different stakeholders. Design has the potential to generate value for organisations but also for social good. This thesis will explore how non-designers social entrepreneurs utilise design in incubation processes.

1.2.6 Research Overview

This research aims to explore social entrepreneurs use design in their processes. Most of the research focuses on the role that designers play in different contexts and the impact of the activities that they conduct. However, in the real world, social entrepreneurs lack resources, hence hiring a designer to increase their social impact seems unaffordable.

This research study focuses on how four non-designer Chilean social entrepreneurs use design during an incubation programme in which they participated. The study aims to understand the social entrepreneurship process that they undertook, identify the

circumstances that they faced and reflect on how they utilised design to achieve their objectives. Therefore, the research question of this research is ***How do non-designer social entrepreneurs use design during a business incubation programme?***

In detail, the three research questions of this investigation are

R.Q. 1. What are the main issues that social entrepreneurs encounter in their processes?

R.Q. 2. How is design used by social entrepreneurs during the social entrepreneurship process?

R.Q. 3. What design practices are used by social entrepreneurs to address their issues?

To answer these questions,

Table 1 shows the structure and objectives of the research study.

Table 1: Research study structure and objectives

Stage	Description	Objectives
Theoretical Exploration	The initial stage aimed to review the literature related to the research topic to minimise theoretical assumptions and to gain an in-depth understanding of what was studied in the field	Explore the literature regarding social entrepreneurship and design (see Chapter 2).
Pre-Intervention	During this stage, the researcher travelled to Chile to understand (feel) the context of the study. The researcher conducted three semi-structured interviews with staff members.	Explore the context of the study, the profile of the social entrepreneurs and the social entrepreneurship process offered by the business incubator (see 4.2).
Intervention	The intervention stage aimed to introduce design concepts to the social entrepreneurs participating in an incubation programme and to evaluate the understanding of design by social entrepreneurs. In this stage, the researcher conducted structured interviews and questionnaires.	Describe the understanding of design by social entrepreneurs at the beginning of the incubation programme (see Design Understanding in pages 159, 184, 212 and 238).
Post-Intervention	The post-intervention was a follow-up process conducted by distance. This process involved twelve in-depth interviews with social entrepreneurs and two interviews with the mentor of the programme. In addition, non-obstrusive measures were used to collect data.	Describe the different circumstances that social entrepreneurs encountered in their processes. Describe how social entrepreneurs used design in the circumstances identified. (see 4.3)

A narrative approach was followed to analyse the data. This research methodology aims to analyse the discourses that show temporal sequences of what people detect in their lives (Bryman, 2012, p. 582).

A Social Entrepreneurship and Design Framework (SEDF) was developed to structure the narratives of social entrepreneurs. This framework comprises four dimensions of analysis: (1) the social entrepreneurship process, (2) a temporal dimension related to the duration of the incubation programme; (3) the circumstances that social entrepreneurs face in their processes (moments); and (4) the use of design.

Theoretical foundations of the framework were developed through an interdisciplinary literature review (Chapter 2) and the social entrepreneurship process used by the business incubator studied (p. 152)

This thesis aims to inform entrepreneurship, social entrepreneurship and design scholar as well as business incubators and social entrepreneurs about the use of design by non-designers social entrepreneurs. The following is the structure of this thesis.

1.2.7 Thesis Overview

This thesis is composed of five sections described as follows.

Chapter 2 Literature Review provides a comprehensive analysis of the literature related to this research study. 2.2 explores the social dimension of this research study; 2.3 and 2.4 overview of entrepreneurship and social entrepreneurship, respectively. Lastly, 2.5 offers definitions of design and its use in organisational and social contexts.

Chapter 3 explores the research methodology of this research study. 3.2 describes the stand of the researcher through the research foundations of this study. 3.3 introduces the research design of this study. Finally, 3.4 and 3.5 introduce the methods selected to collect and analyse the data, respectively.

Chapter 4 presents the analysis of the data of this research study. This section includes two chapters. 4.2 describes the context of the field research and 4.3 introduces the cases of the four Chilean social entrepreneurs investigated.

Chapter 5 shows the findings of this study in three chapters. 5.2 offers a cross-case comparison of the four cases describing six themes or issues that affect their social entrepreneurship process (research, engagement, development, co-creation, positioning and strategy) and also describes the social entrepreneurship process from a design perspective. 5.3 offers a detailed analysis of the various uses of design across the cases and 5.4 analyses these drivers following Buchanan's (2001) *four orders of design* model.

Finally, Chapter 6 offers the conclusions of this research study. This section comprises the contributions and limitations of this research study as well as future directions for this research and a final summary.

Chapter 2   Literature Review

2.1   Introduction

The literature review aims to inform the theoretical approach of this research. Therefore, this chapter explores four main topics regarding *the use of design by social entrepreneurs.* First, a brief description of social issues serves as a context of this research which shows a description and examples of social challenges as well as the complexity of defining those challenges. Second, a comprehensive review of the term entrepreneurship explains the *entrepreneurial* side of social entrepreneurship. Third, specific matters regarding social entrepreneurship are introduced, such as the motivations of social entrepreneurs, the differences between social and commercial entrepreneurship, as well as the challenges they encounter. Fourth, a chapter dedicated to design explores a diverse range of discussions regarding the definition of design as well as an overview of design in an organisational and social contexts.
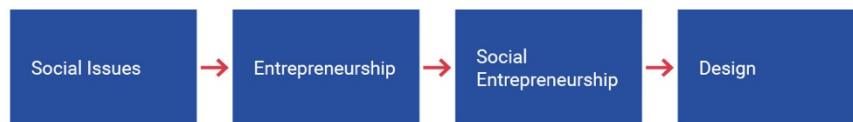
Figure 2: Structure of Chapter 1

2.2 Social Issues

During the last decades, multiple concerns about new measurements of countries' growth have arisen. The main principle of growth is based on the accumulation of capital and the efficient use of it for the production of products and services (Yusuf et al., 2009, p. 7). Nevertheless, the growth measurements also have provoked wealth disparities. Most of the poor, illiterate and sick people live in developing countries in which disparities in income and access to opportunities are recurrent (Zahra et al., 2008, p. 118). Thus, the concept of growth should lie beyond just the economic aspects. For instance, the European Union (2014) have triggered the questioning about how to rethink the course for economic renewal to a way to produce value focusing on the real social demands or needs.

Additionally, Vision Europe defined countermeasures needed to deal with the effects of growth. They argue that it is necessary to define policies that reduce income inequality and strengthen social security systems (Bertoncini et al., 2017, p. 30). In that respect, governments have to pay attention not only in economic matters but also in social and cultural arrangements (Urama & Acheampong, 2013, p. 9). In other words, there is a latent demand to refocus the measurement of success of governments from economic growth to one that addresses actual societal challenges.

To describe social challenges is necessary to understand the definition of social. The term social often is used to describe a group of people living in a determined territory, sharing cultural features such as language, rules, behaviours and values (Giddens & Sutton, 2009, p. 7). However, societies (as social) are more complicated than that definition. Societies are combinations of tangible (physical institutions and organisations, buildings, places of work) and less tangible structures (regulations, legal frameworks, habits and routines) over which individuals, as social, have no direct control (Giddens & Sutton, 2009, p. 7; Ransome, 2010, p. 12). Consequently, societies are dynamic configurations in a continuous process of structuration (Bourdieu, 1990, p. 52; Giddens & Sutton, 2009, p. 9) due to the endless combinations of the factors that compose them.

Therefore, social challenges relate to issues that affect these configurations of people and things. As a way of example, some issues are related to from poverty, healthcare, education, employability, social inclusion, community regeneration, inequality and natural environment, for instance (Dacin et al., 2011, p. 1204; Nicholls, 2006, p. 14). Nevertheless, similar to the definition of social, social challenges are also complex. Social challenges are the gaps between socially desirable conditions and the existing reality (Guclu et al., 2002, p. 3). Social challenges are the combinations of conditions that affect a determined group of people, which in turn, describe these conditions as problematic (Lauer, 1976, p. 122) and become part of a general debate (Isaacs, 2015, p. 9). This definition opens a series of questions that make it impossible to generalise determined social challenges. Some of these questions are, *Who defines the problem? What is problematic for those people? When does a social problem become part of a general debate?*. Furthermore, social problems can appear and disappear due to a variety of reasons: as a result of a policy, because of a specific circumstance, or due to a social change (Isaacs, 2015, p. 10), for instance. Hence, there are no explanations about the motivations that make a social problem become a debate in the public sphere, but rather some elements come together to highlight the problem (Isaacs, 2015, p. 10). Social problems are multidimensional constructs consisting of related components (Perrini & Vurro, 2006, p. 77). In sum, there will never be a single event that causes a social problem, preferably a combination of multiple elements that provoke undesirable conditions for a group of people.

These definitions enable the understanding of what a social mission means for social entrepreneurs and the efforts required to achieve their missions. In essence, social entrepreneurship involves entrepreneurial activities aiming to deal with a combination of issues that affect a social group. Moreover, to understand, and potentially solve those issues, social entrepreneurs have to critically understand the different circumstances and conditions that affect a social group and provide a solution in line to the reality and actual needs of the social group concerned.

The next chapter discusses the definition of entrepreneurship, providing different perspectives related to the topic such as the individual characteristics of the entrepreneur, the processes of opportunity identification and exploitation, the areas of management and the role of business incubators as supporters.

2.3 Entrepreneurship

During the last decades, turbulent changes and disruptions have affected all the world. Terror attacks, economic crisis but also the rapid development of technologies and communications have produced unexpected consequences in the markets. Governments and large firms have found it difficult to deal with the complexity of these issues. In this scenario, small firms and entrepreneurship have gained influence. Over the last years, entrepreneurs have been captivating media and governments due to their contribution to the generation of wealth and the creation of job opportunities (Burns, 2014, p. 3).

The word "entrepreneur" originally comes from the French word *entreprendre*, which means 'undertake'. This word relates to economic practices. For instance, in the 19th century, the French economist Jean Baptiste Say declared that: *"The entrepreneur shifts economic resources out of an area of lower and into an area of higher productivity and greater yield"*. This eraly definition of the entrepreneur shows the potential of the individual to transform resources and, consequently, create value. Thus, entrepreneurship pertains to the actions that an individual takes in a context to create a new business or revive an existing one (Hébert & Link, 1989, p. 39). Moreover, entrepreneurship is the discovery, evaluation and exploitation of opportunities for the generation of value for their stakeholders (Eckhardt & Shane, 2003, p. 335; Hindle, 2010, p. 609).

There are different perspectives to approach the definition of entrepreneurship. This chapter analyses the entrepreneur as an individual and entrepreneurship as a process of opportunity discovery, evaluation and exploitation. Additionally, it shows relevant issues considered by entrepreneurs when managing their organisations and concludes with the role that business incubators play in the entrepreneurial ecosystem.

Figure 3: Structure of Chapter 2

2.3.1 The Entrepreneur

The entrepreneurial pathway is a source of admiration for many people. Entrepreneurs are the *heroes of capitalism* because of their capacity to rise from humble origins to positions of power and status (Casson, 2003, p. 200). They are also considered as a synonym of power, success and wealth (Cunningham & Lischeron, 1991, p. 46). Entrepreneurs are considered productive deviants that break the common pathways of producing value for other people (Fortunato & Alter, 2015, p. 445) to become their own bosses. There are multiple reasons for following an entrepreneurial career, dissatisfaction with the job, disagreement with the corporate culture and values, and the need for self-realisation (Kochargaonkar & Boult, 2014). Regardless of the reason, what defines entrepreneurs is their willingness and motivations to act upon their ideas (Burns, 2014, p. 5).

Psychological and non-psychological factors determine the propensity to follow an entrepreneurial pathway. The psychological attributes refer to the specific characteristics of the person to make decisions whereas the non-psychological attributes derive from experiences, conditions or situations that entrepreneurs encountered during their lives (Shane, 2003, pp. 61–117).

i) Psychological Factors

Personal characteristics determine the decisions made by people with the same information and the same skills (Shane, 2003, p. 96). In the case of entrepreneurs, they utilise available information and their skills to start an entrepreneurial activity. Different factors influence the decision of whether to pursue or not an entrepreneurial venture.

Entrepreneurs show distinctive personalities that include proactiveness to identify and act upon opportunities (Crant, 1996, p. 43), self-efficacy, tolerance for ambiguity, desire for independence, need for autonomy and achievement, and capacity to deal with uncertainties and take risks (Begley & Boyd, 1987, pp. 29–54; Johnson et al., 2005; Shane, 2000, p. 449). Moreover, entrepreneurs are resilient and persistent even in adverse conditions, as well as passionate about their business ideas (Renko, 2013, p. 1052). To achieve their objectives, entrepreneurs take risks and lead any uncertainty that appears, transforming them into innovations (Johnson et al., 2005, p. 6; Schumpeter, 1928, pp. 379–380).

Cognitive studies focus on how people think and make decisions. Cognitive studies in entrepreneurship relate to how individuals recognise and exploit opportunities. The cognitive process of entrepreneurs involves aspects such as knowledge, motivation, attention, identity and emotion (Shepherd & Patzelt, 2018). Table 2 shows the different aspects of the cognitive process of entrepreneurs.

Table 2: Cognitive process of entrepreneurs (adapted from Shepherd & Patzel, 2018)

Cognitive Aspect	Description
Knowledge	Knowledge affects the way that entrepreneurs recognise opportunities (Shane, 2000; Venkataraman, 1997). Knowledge about markets, technologies and customers, for instance, play an essential role in the identification of new ways to serve markets (Shane, 2000, p. 452).
Motivations	Motivations refer to goals and goal-oriented behaviours (Dweck & Leggett, 1988, p. 257). Thus, entrepreneurial motivation is what embrace entrepreneurs to set and accomplish goals for themselves and their organisations (Naffziger et al., 1994, p. 38). Moreover, motivation in entrepreneurship describes the reasons why entrepreneurs direct attention to identify and exploit specific opportunities (Shepherd & Patzelt, 2018, pp. 51–103).
Attention	Attention represents the allocation of attention of entrepreneurs in specific issues such as sources of information, opportunities, tasks, strategies and profits, for instance (Gifford, 1992).
Identity	Identity describes the characteristics that differentiate one individual from others (Brewer, 1991). The need to be distinct from others is fundamental to an individual emotional and physical's wellbeing, which for entrepreneurs relates to the career choice that distinguishes them in their communities, industry and society (Shepherd & Haynie, 2009, p. 318). People consider entrepreneurship as a way to have greater control over the development of an organisation as well as their lives (Shepherd & Haynie, 2009, p. 318).

	Emotions relate to how entrepreneurs feel during their entrepreneurial career. The concept of emotion also relates to passion, or in other words, how passionate entrepreneurs are regarding a particular initiative. A positive emotion will determine the likelihood to recognise, evaluate and exploit an opportunity (Shepherd & Patzelt, 2018, pp. 201–258).
Emotions	

ii)   Non-Psychological Factors

Non-psychological factors relate to the decision to exploit an opportunity and the individual factors that influence the valuation of these opportunities. Entrepreneurs decide to exploit opportunities depending on the personal cost that they may incur to pursue that opportunity (Shane, 2003, pp. 61–95). In other words, entrepreneurs are more likely to exploit an opportunity if the return of exploiting it is higher than the return of alternative use of their time and resources. Table 3 shows the non-psychological factors that affect entrepreneurs.

Table 3: Non-psychological factors that affect entrepreneurs (adapted from Shane, 2003)

Non-psychological factors	Description
Income	The return of investment of an opportunity should be higher than the income currently perceived. Thus, people who have higher incomes are less likely to exploit entrepreneurial opportunities.
Unemployment	The cost of exploiting entrepreneurial opportunities are lower for unemployed people according to the length of their unemployment. People who have been unemployed for an extended period are likely to pursue entrepreneurial opportunities.
Working partner	Married people increase the likelihood to become an entrepreneur. A working partner provides psychological and financial stability that support people to undertake entrepreneurial endeavours. On the other hand, individual factors also influence the likelihood to exploit entrepreneurial opportunities. Individual factors are related to the experience of the entrepreneur, which involves the skills necessary to develop and execute a plan for exploiting the opportunity.
Education and prior working experience	These factors provide information and skills to exploit opportunities. Thus, better-educated people and people with career experience are more likely to exploit opportunities.
Technical and industry experience	These factors increase the likelihood to exploit opportunities. Because these experiences equip entrepreneurs with the technical expertise necessary for the operations of the business as well as an understanding of markets to be covered by their businesses.

Prior experience in creating a venture	**People that have experience starting a venture have already the tacit experience that neither formal education nor industry experience can provide.**
Observing other entrepreneurs	**The experiences of other people are sources of inspiration for exploiting entrepreneurial ideas. For example, children whose parents are entrepreneurs are more likely to exploit entrepreneurial opportunities than others.**
Age	**The older that the person is, the more information and skills that this person would have to exploit an opportunity. However, as people become older, the cost of opportunity increases due to the uncertainties of the opportunity.**
The social position of the individual	**There are two aspects related to the social position: social status and social ties. Social status helps entrepreneurs to convince others that their opportunity is valuable and also give them access to private information. On the other hand, social ties support the access to resources and information necessary to exploit the opportunities.**

2.3.2 The Entrepreneurship Process

Entrepreneurship can be unfolded by settling two premises: first, the existence of inefficiencies in the market that turn into opportunities for enterprising, and second, the presence of individuals that seek to create profits from those opportunities (Venkataraman, 1997, p. 121). Opportunities play a fundamental role in entrepreneurship. The existence of opportunities determines the presence of entrepreneurial services (Casson, 2003, p. 203). In other words, without opportunities, entrepreneurship does not happen. At the same time, entrepreneurs perform as a catalyser in turning opportunities into a business endeavour. Entrepreneurs are always "looking for a change, respond to it, and exploit it as an opportunity" (Drucker, 1985, p. 25). Therefore, entrepreneurship relates to the discovery and exploitation of opportunities that generate a return for their effort and a social contribution to one's effort (Venkataraman, 1997, p. 132).

Entrepreneurial opportunities are the potential transformation of information or resources in new goods and services that can be sold at higher than their cost of production (Shane & Venkataraman, 2000, p. 222). These can be grouped in three

categories: (1) the creation of new information as result of the development of new technologies; (2) the exploitation of market inefficiencies as result of the information asymmetry; and (3) the use of resources in a different way as result of the changes in costs or benefits of them (Shane & Venkataraman, 2000, p. 223).

Nevertheless, the process of developing entrepreneurial opportunities is necessary because opportunities rarely appear in *packages* (Venkataraman, 1997, p. 123). For this reason, entrepreneurs require to develop entrepreneurial opportunities throughout a process that includes the discovery, evaluation and the final exploitation of them (Ardichvili et al., 2003, pp. 105–106; Shane & Venkataraman, 2000, p. 218; Venkataraman, 1997, p. 120). Next, it will introduce the process regarding the discovering, development, and exploitation of entrepreneurial opportunities.

i)   Discovering an entrepreneurial opportunity

The process of opportunity recognition or perception (Ardichvili et al., 2003, p. 110) occurs when an individual identifies either a market need or unemployed resources not previously discovered by others. Two main factors influence the recognition of entrepreneurial opportunities: the access to information and the cognitive capacities of the entrepreneurs (Casson, 2003, p. 203; Shane & Venkataraman, 2000, p. 222). To acquire information, entrepreneurs explore information corridors, which represent the different stocks of information distributed between different people (Casson & Casson, 2013, p. 23; Shane & Venkataraman, 2000, p. 222; Venkataraman, 1997, p. 122). On the other hand, entrepreneurs also need to collect information from significant customers and technical experts to reduce the risks of failure (Casson & Casson, 2013, p. 32). Thus, entrepreneurs use their social capital to gain access to information about permits, managerial practices, investors and suppliers (Shane, 2003, p. 92). Once the necessary information is collected, entrepreneurs have to process large amounts of information about markets, competitors and customers to succeed in the market (Zahra, 1996, p. 1721). Accordingly, entrepreneurs' psychological factors and social capital determine their capacity to capture, handle and apply the information in a way that those who do not have access to it cannot replicate it (Shane, 2000, p. 452).

In short, the recognition of an entrepreneurial opportunity includes the reflection on prior knowledge and access to external information to reduce the risks of failure and

increase the chances of success. In this way, entrepreneurs identify information asymmetries of markets, the potentiality for the use of new technologies, for instance. The next stages are the evaluation and exploitation of opportunities.

ii)   Evaluating an entrepreneurial opportunity

The difference between an idea and an opportunity relies on the evaluation process (Keh et al., 2002, pp. 125–126). The evaluation includes the assessment, estimation, and the inference of future events and the effects of the entrepreneurial initiatives (McMullen & Shepherd, 2006). The evaluation is a personal process in which the entrepreneur assesses the competitive advantage of an opportunity and its capacity to generate future entrepreneurial returns for the company (Haynie et al., 2009, p. 338). The importance of the evaluation of an entrepreneurial opportunity relies on the possibility to anticipate future scenarios. The evaluation of an entrepreneurial idea reduces the risks of failure and financial losses (Keh et al., 2002, p. 126).

To evaluate an opportunity, the entrepreneur has to consider three main components: (1) the feasibility of the opportunity, (2) the desirability of the opportunity and (3) the propensity to act upon the opportunity. The analysis of the value that potential combinations of resources could produce determines the **feasibility** of an opportunity (Ardichvili et al., 2003, p. 111). The **desirability** of an opportunity refers to how attractive the opportunity is for the entrepreneur to act upon it (Krueger & Brazeal, 1994, pp. 96–97). Additionally, a **propensity** to act corresponds to the self-capacity and need for autonomy attributes mentioned previously. The propensity to act relates to the entrepreneur's sense that they can influence their environment, also called locus of control (Shane, 2003, p. 108). The evaluation of these three components will determine the attractiveness of the opportunity. Table 4 shows the characteristics of a good business idea.

Table 4: Characteristics of a good business idea (adapted from Burns, 2014)

Characteristics	Description
Identified market need/gap	**The idea meets a well-identified marked need to be commercially viable. If the market is new or growing it is easier to launch a product rather than declined market**
Identified customers and marketing strategy	**Markets and marketing strategies must be well identified and planned.**
No or few existing competitors	**Competitors must be well-identified to plan the pricing strategy. The fewer competitors in the market, the higher the price to charge. The innovative of the product and market will likely increase the margin.**
No easily copied	**The product and service have to be protected via intellectual property and developing a brand reputation quickly.**
Low fixed costs	**To reduce the risk of the organisation, the fixed costs should remain low**
Funding	**It is easier to start up an organisation with low external funding requirements. If external funding is necessary, the business idea needs to be able to show a return of investment to attract finance**
Risks	**Risks have to be identified, monitored and mitigated to reduce the uncertainty of the organisation**
Scalability	**The organisation has to define a strategy to scale the business project.**

By evaluating the opportunities against the different factors mentioned above, entrepreneurs decide whether to turn those opportunities into a viable business or not.

iii)   Exploiting an entrepreneurial opportunity

The opportunity exploitation stage is the proactive effort in which concepts or ideas are transformed into a new business (Ardichvili et al., 2003, p. 109). This stage occurs when the expected demand is great, the profits are high, the technology lifecycle is new, the competition is neither too low nor too high, the cost of capital is low, and the demand is receptive to new entrants (Shane & Venkataraman, 2000, p. 223). Nonetheless, to exploit an opportunity, entrepreneurs must not only to believe that there is an economic return for enterprising effort, but also a social contribution of their effort (Venkataraman, 1997, p. 132).

The exploitation of entrepreneurial ideas requires entrepreneurs to be flexible and creative. Entrepreneurs deal with unexpected circumstances during the exploitation stage. They utilise a process of bricolage (Baker & Nelson, 2005) which is the combination and reuse of resources to deal with the issues that they encounter (Baker & Nelson, 2005, p. 335). Accordingly, the exploitation of an entrepreneurial opportunity is not just the execution of a plan because it also involves the combination

or reuse of resources necessary to fulfil the organisation's goals. This stage requires entrepreneurs capable of using their creativity and imagination to respond to the unexpected conditions of new markets.

The three stages that compose the opportunity identification, evaluation and exploitation of entrepreneurial opportunities allow entrepreneurs to make efficient use of their time and available resources for pursuing entrepreneurial pathways.

2.3.3 Management issues for entrepreneurship

Failure is common in entrepreneurship. One of the common reason for failure is the propensity of entrepreneurs to take risks (Shepherd & Patzelt, 2017, p. 63). There is a direct relationship between the number of start-up match with large numbers of failed efforts (Aldrich & Yang, 2014, p. 60). For instance, the rate of failure of start-up companies in the US reaches 77% (Shane, 2009, p. 143). To reduce the risks of failure, entrepreneurs have to learn how to manage their organisations.

The decision-making process in entrepreneurship is normally considered as a *"Making it happen"* performance (Sarasvathy, 2004) of the entrepreneur. The success or failure of an organisation relies on the capacities of the entrepreneurs to manage three types of knowledge: 'know-what', 'know-how' and 'know-who' (Aldrich & Yang, 2014, p. 60). The know-what refers to the habits and routines associated with building an organisation. The know-how corresponds to the tacit knowledge required to deal with a complex system and design the organisational routines. Finally, know-who relates to the capacity to bring people to the team and to have access to social and business networks (Politis, 2005, p. 404). Therefore, entrepreneurs must invest time in learning and develop "know-how," "know-what," and "know-who" knowledge for their organisations (Aldrich & Yang, 2014, p. 60). In this way, the learning process is fundamental for entrepreneurs because it reduces the risks of failure associated with poor management practices or unawareness of market rules.

There are two types of decision-making processes in which entrepreneurs utilise these three types of knowledge: the decision-making involving causation and effectuation. Decision-making involving causation includes a clear goal to be achieved, a set of causes to achieve the goal, consideration of constraints on possible means and criteria

for selecting between the means. On the other hand, a process involving effectuation consists of the decision-making process on a given set of means, a set of effects or general aspirations to achieve as a result of the decision process, constrains on possible effects, and criteria for selecting on possible effects (Sarasvathy, 2001, pp. 249–250). In essence, in the process of causation, the entrepreneurs aim to achieve a given effect, while in the process of effectuation only some means are given, and the entrepreneurs decide over the possible effects of the decisions made. The type of decision process used will depend on the circumstance that the entrepreneur meet. Therefore, none of these approaches is better or more efficient than the other.

In practice, entrepreneurs use the decision-making process as a process of bricolage (Baker & Nelson, 2005) to determine the best ways to manage their resources, strategy and operations, markets, and stakeholders and networks.

i)   Resources

Entrepreneurs have to leverage and manage necessary financial and human resources to achieve their business objectives.

- ### *Financial Resources*

The lack of financial focus appears as the main threat for organisations (Drucker, 1985, pp. 193–197). In early-stages, entrepreneurs have to find financial capital (Politis, 2005, p. 404) or take on personal debts to fund the business (Cope, 2011). In this way, they make use of their financial capital, composed of their savings, or loans or donations from family members and people associated to them, to bring financial resources to their firms (Welter, 2011, p. 169). Later, the entrepreneur has to focus on how to make the organisation profitable, considering cash flows, capital and control mechanisms.

Therefore, entrepreneurs have to develop a financial focus to leverage resources in the early stages. Moreover, they have to maintain positive cash flows during the establishment of the organisations to guarantee the proper operations of their companies.

- *Human Resources*

To achieve their goals, entrepreneurs have to build teams with the abilities and. Initially, entrepreneurs use their human capital through their experiences and skills acquired in previous roles or through educational programmes to identify opportunities and manage their organisations (Shane, 2000; Venkataraman, 1997). Nevertheless, as companies grow, they also have to attract talents that provide the capacities that they do not have. The latter means that in early stages, they are in permanent processes of restructuration in which current and new team members have to be able to adopt new roles and responsibilities. The adoption of new roles and responsibilities also affect founders. They have to identify and assume the areas that they work the best for the organisation (Drucker, 1985, pp. 201–205). Throughout the team-building process, the organisation has to develop its structures and culture that enable the team to work cohesively and motivate (Burns, 2014, p. 248).

The lack of those resources implies that entrepreneurs have to build own legitimacy to gain access to external resources and to develop a market for their products or services (Politis, 2005, p. 405; Zhang & White, 2016, p. 605).

ii)   Strategies and Processes

Entrepreneurs lack methods and managerial practices that allow them to cope with the challenges of a new venture. Nascent entrepreneurs usually lack routines following no fixed sequences of activities (Aldrich & Reuf, 2006, p. 66) and reacting to the different circumstances they encounter (Thorpe et al., 2006, p. 232). The lack of methodologies makes entrepreneurship risky because entrepreneurs may overlook elementary and well-known rules of markets (Drucker, 1985, p. 29). Thus, entrepreneurs with prior experience have fewer difficulties in coping with this challenge than those who start a new business for the first time. Experienced entrepreneurs use methods and practices learned previously in their new ventures, whereas, those without experience have to appeal independent and objective external advice (Aldrich & Yang, 2014, p. 60; Drucker, 1985, pp. 205–206) from mentors or business incubators.

To articulate the value of an entrepreneurial opportunity, entrepreneurs have to design their business models and operational strategies to manage their ventures effectively.

Business models describe the activities and resources necessary to deliver value to customers, guaranteeing the sustainability of the firm and defining the management of the organisation (Trimi & Berbegal-Mirabent, 2012, p. 450). The operational strategies relate to the definition of activities to make the business model work (Burns, 2014, pp. 198–200). Those activities range from maintaining the institutional website to organising product launching and conducting critical operational activities.

iii)   Knowing and acting in markets

Understanding the industry where entrepreneurs will operate is another issue in entrepreneurship. Being familiar with the markets is crucial to define the channels to reach clients, to identify competitors, and the strategies to build their reputation (Burns, 2014, p. 72). Nevertheless, entrepreneurs tend to focus on the development of products and services not focusing on the structures and rules of the markets (Drucker, 1985, pp. 189–193), taking for granted the ways that the markets operate. Understanding and defining the markets where they operate is a process that requires factual information rather than mere feelings or subjective approaches.This process requires not only market research, instead, the entrepreneur has to go out and look carefully for the opportunities and information.

In early-stages, entrepreneurs have to build trust with potential customers. Trust building reduces the hesitation from potential customers of placing orders on newcomers who have little or none track records of their business performance (Politis, 2005, p. 404).

iv)   Stakeholders and networks

Stakeholders provide valuable information, knowledge and resources to support the process of building a new organisation (Aldrich & Martinez, 2010, p. 392). For this reason, entrepreneurs must manage their relationships with their stakeholders. In this process, entrepreneurs have to deal with the different expectations of their multiple stakeholders (vendors, investors, employees, customers, regulators) (Aldrich & Yang, 2014, p. 73). Hence, entrepreneurs have to creatively convince external stakeholders of the value of their business idea (Nielsen et al., 2018, p. 361). Therefore, understanding

and establishing and managing relationships with them is one of the core activities for entrepreneurs.

Similarly, networks of alliances provide entrepreneurs access to resources and information that facilitates the discovery of new opportunities (Gulati, 1998, p. 294), as well as external knowledge which is a critical component for innovation (Cohen & Levinthal, 1990, p. 128). Initially, they utilise their social capital to access information, advice and support from relatives, friends or colleagues (Hindle, 2010, p. 604; Welter, 2011, p. 169). They also have to explore external networks to acquire information about capabilities and reliability of potential partners and valuable knowledge and resources for the organisation (McEvily & Marcus, 2005, pp. 1033–1034). Thus, entrepreneurs at the early stages have to develop their capacity to build and maintain their relationships with stakeholders. In doing so, they have to recognise, evaluate and assimilate networks, to get access to information, knowledge and resources that help them to overcome their challenges.

Managing entrepreneurial initiatives it requires specific capacities, for instance:

- to identify, acquire and manage resources;

- to define the ways to use those resources adequately;

- to identify and adjust their value propositions to the markets where they operate;

- as well as to establish relationships with stakeholders and networks.

2.3.4 Business Incubators

The Entrepreneruship Process and Management Issues for Entrepreneurship, showed that entrepreneurs are likely to fail due to various circumstances. It seems evident that early-stages entrepreneurs require support to overcome their obstacles (Bøllingtoft & Ulhøi, 2005, p. 267). Business incubators arise as one of the most popular models that aim to support and stimulate entrepreneurship by assisting to early stage-entrepreneurs (Bøllingtoft & Ulhøi, 2005, p. 270; Grimaldi & Grandi, 2005, p. 111). Business incubators are classified in different ways: by the type of business (for-profits, non-profit, academic, hybrid); by the type of service (university, regional business,

company-internal, independent commercial and virtual incubators), by the industry (manufacturing, technology or mixed); by the type of organisation (university, independent, private); or by the type of network they provide (inter-networking, extra-networking (Rubin et al., 2015, p. 12).

Incubators offer flexible spaces in which entrepreneurs can interact and share their experiences with other entrepreneurs and receive advice from mentors. Entrepreneurs also gain access to shared equipment and administrative services. Incubators also offer access to internal and external networks (Bøllingtoft & Ulhøi, 2005, p. 274), which can be composed of industry experts, public and private funding bodies, experienced entrepreneurs, universities, for instance. Moreover, incubators offer training programmes which aim to accelerate the development of organisations facilitating the access to technology, capital and know-how (Grimaldi & Grandi, 2005, p. 111). Thorugh business incubators, entrepreneurs get access to information, knowledge and resources that help them to overcome the challenges of the entrepreneurial process.

In practice, the business incubators framework has three general areas: selection, business support and mediation (Bergek & Norrman, 2008, pp. 23–26). The process of selection consists of choosing companies that lack resources but have promising business cases (Hackett & Dilts, 2004, p. 61). The business support includes entrepreneurial training as well as supportive services concerning accounting, legal matters, advertising and financial assistance (Bøllingtoft & Ulhøi, 2005, p. 270; Mian, 1996, p. 194). Lastly, mediation support relates to the process of connecting the *incubatees* to the entrepreneurial environment with the purpose of leverage talent or resources (Grimaldi & Grandi, 2005, p. 114).

Private or public organisations support business incubators (Allen & Rahman, 1986, p. 13). These organisations demand specific outcomes regarding their interests (Mian, 1996, p. 194) that in turn, define the goals and outcomes of business incubators. In general terms, those outcomes relate to:

a. enhancing economic development and reduce unemployment by supporting early stages of new companies, and training entrepreneurs to increase their success rate and growth and,

b. stimulating firms involved in the development of new technologies or the commercialisation (or transfer) of research generated in universities and organisations (Bergek & Norrman, 2008, p. 22).

In essence, business incubators aim to stimulate entrepreneurship reducing the costs of initiation and providing guidance to the entrepreneurs. The type of incubator, and therefore their processes, will depend on the sector that the incubator operates. This definition of the sector will be crucial for entrepreneurs to choose the business incubator to be part of, as well as to the sponsors to decide which incubator to support. In this way, business incubators operate as intermediaries of both incubatees and sponsors. The objectives and goals of the business incubators should be able to articulate and match the interests that both actors have. In other words, the business incubator has to provide the support expected by the entrepreneurs and achieve the performance indicators defined by their sponsors.

2.3.5 Summary

This sub-chapter analysed three main areas regarding entrepreneurship. First, it analyses the entrepreneur as an individual with particular psychological and non-psychological characteristics. Those unique characteristics allow the understanding of the drivers and attitudes towards the pursuit of entrepreneurial initiatives. For instance, entrepreneurs are risk-takers and capable of coping with uncertainties. Second, it analysed the phenomenon of entrepreneurship as a process of discovery, evaluation and exploitation of entrepreneurial opportunities. These opportunities arise as a consequence of market inefficiency or information asymmetries, that the entrepreneur identifies, evaluates and exploits. Third, some critical issues regarding the management of a new venture were introduced, such as resources, strategies and prices, markets, stakeholders, and networks. Those elements are essential to consider by entrepreneurs to reduce the risks of failure associated with initiating a new organisation. In addition to these three areas, the concept of business incubators were explored as one of the main supporters for entrepreneurs. These organisations act as intermediates between funders and entrepreneurs. They support entrepreneurs providing infrastructure, mentorship, administrative service and networks.

This sub-chapter aimed to provide a comprehensive overview of entrepreneurship to lay the foundations of the definition of social entrepreneurship. The next section will explore social entrepreneurship in-depth. 2.4 will show the differences between social entrepreneurship, social innovation and traditional entrepreneurship. It will introduce the ecosystems were social entrepreneurship occurs and the drivers that motivate social entrepreneurs to pursue a social mission. Later, it will describe the different stages of the social entrepreneurship process and the common challenges that social entrepreneurs encounter in this process.

2.4 Social entrepreneurship

Social entrepreneurship is the "application of the mindset, process, tools and techniques of business entrepreneurship to the pursuit of a social and or environmental mission" (Kickul & Lyons, 2012, p. 1). Social entrepreneurs address problems that are too narrow for the public sector or too small to attract private interest (Martin & Osberg, 2015; Nicholls, 2006). Unfortunately, due to the unique nature of social problems (see 2.2), traditional market solutions are impractical, expensive, complicated and unprofitable (Zahra et al., 2008, p. 118).

Social entrepreneurship is multidimensional, moving across various intersection points between the public, private, and social sectors (Nicholls, 2006, p. 12). Social entrepreneurship takes place in both for-profit or non-for-profits basis (Mair & Martí, 2006, p. 39). Thus, social entrepreneurs can appear as a for-profit, non-profit or hybrid organisations, in the form of charities, foundations, co-operatives, community businesses, or conventional private companies, for instance.

This sub-chapter begins with a comparative analysis between social entrepreneurship and social innovation and traditional entrepreneurship. Furthermore, this chapter focuses on the social entrepreneur and the drivers that motivate them to initiate social enterprises. Subsequently, it analyses different social entrepreneurship models and summarises them into a process of three stages. Furthermore, it explores the social entrepreneurship ecosystem to illustrate the context where social entrepreneurs operate. Lastly, it lists a series of challenges that social entrepreneurs encounter and provides a summary of the main concepts reviewed in this discussion.

Figure 4: Structure of Chapter 3

2.4.1 "Social relatives": Social Innovation and Social Entrepreneurship

In the same way that social entrepreneurship focuses on solving social issues, social innovation comprises new ideas that meet social needs (Mulgan et al., 2007) and social problems (Phills et al., 2008, p. 36). Phills et al. (2008, p. 36) point out that social innovation refers to more effective, efficient and sustainable solutions to social problems in which the value created benefits primarily to society rather than individuals. In addition, social innovations are instances of collaboration in which social good is created by the enhancement of society to act upon their issues. Therefore, social innovations create novel solutions that meet social needs while creating new relationships and collaborations (Manzini, 2015, p. 11). The process of social innovation (Figure 5) has six stages that cover the conceptualisation of ideas to impact (Murray et al., 2010, pp. 11–13).
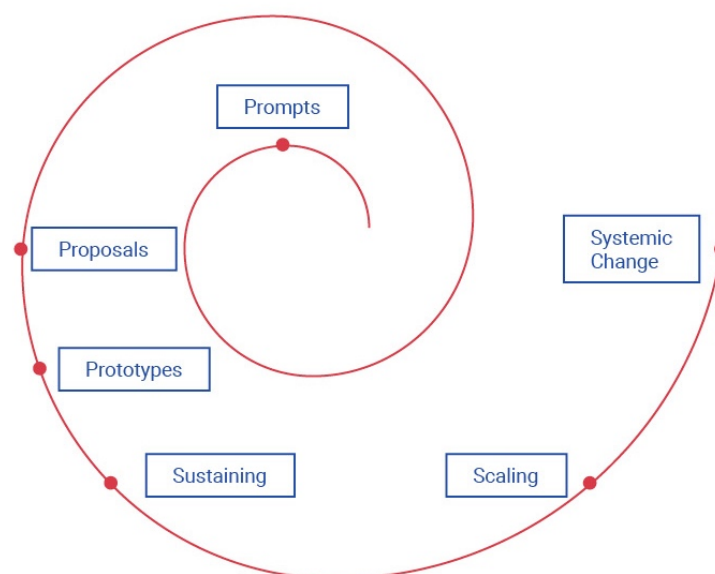
Figure 5: The six stages of social innovation (adapted from Murray et al., 2010)

On the other hand, social entrepreneurship is the application of the mindset, process, tools and techniques of business entrepreneurship to the pursuit of a social and or environmental mission" (Kickul & Lyons, 2012, p. 1). The juxtapose of the word social in both approaches relate to their social mission which aims to solve social problems or

create solutions that meet social needs. This juxtaposition seems to unveil a clear similarity between the two practices. Even researchers argue that using the term social innovation is more useful than using separated the terms social entrepreneurship and social enterprise (Phills et al., 2008). **However, given the purpose of this research, social innovation will be used as an overarching term that involves any social initiative, whereas social entrepreneurship involves the creation of an organisation in order to achieve a social mission.**

By differentiating these terms, the focus of this chapter will examine not only issues regarding the achievement of a social mission but also issues concerned with the creation, management and sustainability of a social organisation.

2.4.2 Differences between social and traditional entrepreneurship

After analysing the differences between social innovation and entrepreneurship, this chapter now explores the differences between social and traditional entrepreneurship. As discussed earlier (see the introduction of 2.4), social entrepreneurship is the "application of the mindset, process, tools and techniques of business entrepreneurship to the pursuit of a social and or environmental mission" (Kickul & Lyons, 2012, p. 1). This definition indicates that there are multiple similarities between social and business entrepreneurs (i.e. mindset, process, tools and techniques). However, there is one and crucial difference, the pursuit of a social and or environmental mission, rather than profits.

Social entrepreneurs are interested in benefiting society rather than maximising their individual or shareholders profits (Austin et al., 2006, p. 39). The lack of focus on the profit maximisation makes social entrepreneurship less attractive for shareholders or financial supporters. Therefore, to leverage resources and generate positive social impact, social entrepreneurs have to operate differently than their commercial peers. Table 5 analyses the differences between commercial and social entrepreneurship (Austin et al., 2006, pp. 2–3).

Table 5: Variables that differentiate Commercial and Social Entrepreneurs (adapted from Austin et al.,2006)

Variables	Commercial Entrepreneurship	Social Entrepreneurship
Market failure	**Commercial opportunity**	**Social-market failure**
Mission	**Maximisation of profits**	**Social value creation**
Resource mobilisation	**Commercial entrepreneurs generate higher return of investment, in turn, a higher mobilisation of resources.**	**Low mobilisation of resources from investors because their return of investment is lower**
Performance measurement	**The indicator of success for the commercial entrepreneur is measured by the return of investment (ROI) of the solution implemented. This quantitative method of evaluation compares the financial resource invested with the income perceived after the operation**	**The indicator of success for the social entrepreneur is measured by the social return of investment (SROI) of the solution implemented. This method of evaluation is difficult to implement due to non-quantifiability, multi-causality, temporal dimensions, and perceptive differences of the social impact created**

Therefore, social entrepreneurship differs from traditional entrepreneurship regarding the type of market where they operate, the mission of their organisations, the access and mobilisation of resources and the ways to measure their performance. To leverage resources, thereby, social entrepreneurs have to compete between each other for philanthropic and public funding, volunteers, community recognition, political attention and talent within the industry (Austin et al., 2006, p. 9). For this reason, they are required to understand their ecosystem and develop networks to acquire resources, information and support that makes them perform better (Hindle, 2010, p. 604). The following is an analysis of the social entrepreneurship ecosystem.

2.4.3 Social Entrepreneurship drivers

There are different drivers that make individuals to start a social entrepreneurship. Page 35 shows how non-psychological factors affect entrepreneurs to start a business. The literature shows that the evaluation of a business opportunity will depend on a series of factors related to the opportunity cost of the initiative. The entrepreneur, then, will opt to exploit an opportunity if the return is higher than the return of alternative use of their time and resources. Social entrepreneurs also decide to exploit opportunities based on their evaluations. Nevertheless, for social entrepreneurs return of investment expected is called Social Return of Investment (SROI), which means that the entrepreneur will exploit an opportunity if the time and resources used will generate positive social impact.

The motivation to create positive social impact is called pro-social motivation. The pro-social motivation makes entrepreneurs work on filling a gap between socially desirable conditions and the existing reality (Guclu et al., 2002, p. 3). Social entrepreneurs demonstrate their willingness to generate new approaches to social problems existing in their communities, jobs or families. Based on their own experiences, social entrepreneurs might pursue social initiatives to generate positive changes in their contexts.

Additionally, social entrepreneurs seek to generate new ideas for pressing social changes (Guclu et al., 2002, p. 5). For instance, the increasing migration in some countries has inspired entrepreneurs to develop solutions that deal with the different needs arisen from this situation. In short, social entrepreneurs generate solutions that serve communities affected by social problems as well as to anticipate social issues caused by current social changes.

Social entrepreneurs seek to improve social conditions rather than to maximise profits. However, the generation of economic value does not mean something negative either; it means that social entrepreneurs must be a non-profit organisation. The economic and social value can coexist in a social venture. Economic value is essential for the sustainability of social organisations, and consequently, for the creation of social value (Dacin et al., 2011, p. 1205). The difference is that creation of economic value is considered as the means to generate social impact rather than the end of the organisational efforts. To create social impact, social entrepreneurs undertake a process described as follows.

2.4.4 Social Entrepreneurship Ecosystem

To create social impact, social entrepreneurs have to understand and often alter the social systems where the social problem happens (Bloom & Dees, 2008, p. 47). The social system includes all of the actors related to a social group, as well as the broader environment (the laws, policies, social norms, demographic trends, and cultural institutions) within which the social entrepreneurs perform (Bloom & Dees, 2008, p. 47). Figure 6 introduces an ecosystem map that shows the players and the environmental conditions that influence the social organisations to create and sustain their impacts.
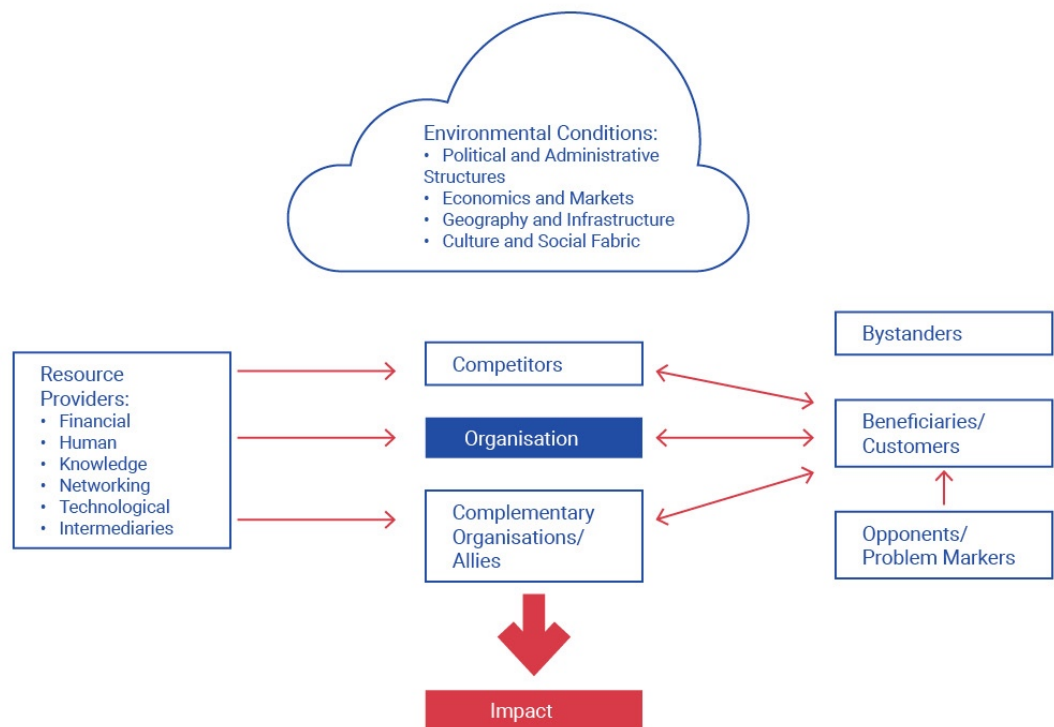
Figure 6: Social Entrepreneurship Ecosystem Map (adapted from Bloom & Dees, 2008)

Figure 6 suggests that social entrepreneurs interact with other individuals and organisations, providing and receiving support, defend from threats, and compete with other players (Bloom & Dees, 2008, p. 49).

Table 6 describes the players of the social entrepreneurship ecosystem.

Table 6: Players of the Social Entrepreneurship Ecosystem

Players	Description
Resource providers	These players offer financial, human, knowledge, networking, and technological resources. Commonly, resource providers include organisations such as government, philanthropists, volunteers, and banks, as well as the commercial market (Nicholls, 2006, pp. 10–11).
Competitors	These players are those who operate in the same market and compete for the same for "philanthropic dollars, government grants and contracts, volunteers, community mindshare political attention and clients of customers, and talent within their industry context" (Austin et al., 2006)
Complementary organisations	These players are organisations or individuals that facilitate the operations of social organisations to create social impact (i.e. business incubators).
Beneficiaries and customers	These players include those who benefit from social entrepreneurs' activities such as clients, customers, or patients. This group is not merely for those who pay for the solutions offered by social entrepreneurs because, on some occasions, governments or sponsors are the financial providers. Beneficiaries also provide valuable insights regarding the social issues that they are facing as well as the internal capacities and resources that communities have available. Thus, beneficiaries are not only who receive the benefits of the solutions providers by social entrepreneurs but also an essential source of information and resources.
Opponents and problem makers	These individuals make the social entrepreneurs' activities ambiguous addressing, undermine the ability of the organisations to achieve and sustain their impact or oppose their efforts politically.
Bystanders	This category contains all those players that do not have a direct impact but are affected by the entrepreneurs' efforts or who could influence their success.

Consequently, one of the most critical activities for early-stage social entrepreneurs is to build relationships with their stakeholders. Undoubtedly, building relationships relates to a specific aspect of people's personalities.

2.4.5 Social Entrepreneurship processes

The social entrepreneurship literature describes multiples models of social entrepreneurship processes. Mair & Martí (2006, p. 37) describe social entrepreneurship as a process that:

- It creates value by the combination of resources in new ways,

- it explores and exploits opportunities to stimulate social change or meet social needs,

- and, it involves the creation of new organisations to offer product and services that meet those social needs.

Guclu, Dees & Anderson (2002) developed a process model that shows the development of social impact opportunities (Figure 7). The process has two steps that lead to the generation of social impact. The first step is the generation of promising ideas. In this stage, social entrepreneurs start by identifying social needs and assets and matching them with the entrepreneurs' pro-social motivations. This step enables them to generate promising ideas. Subsequently, it shows the evaluation and refinement of those ideas into opportunities, considering various aspects, such as the business model and the social impact theory. The model suggests that at the end of this refinement, the entrepreneur should be able to develop to turn these ideas into opportunities that generate social impact.
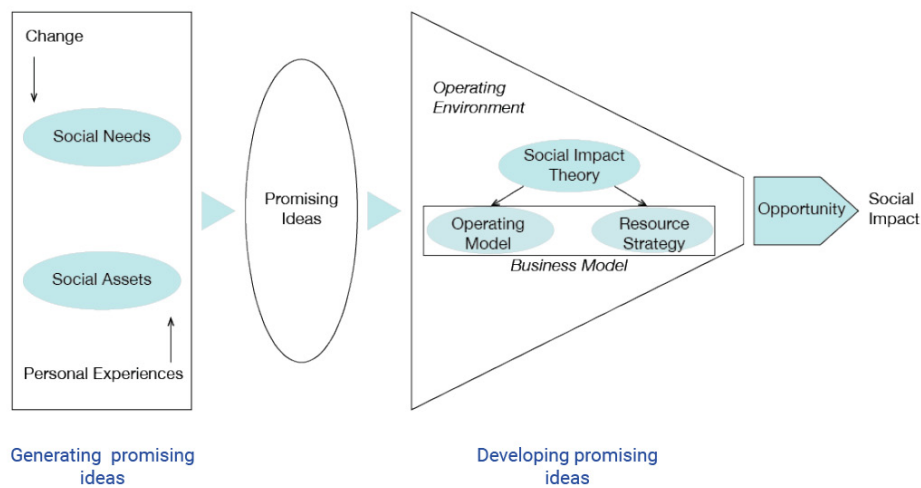
Figure 7: The Opportunity Creation Process (Guclu, Dees & Anderson, 2002)

Austin et al. (2006) offer a different approach that includes the key variables that affect social entrepreneurs. Figure 8 illustrates a framework, developed by Austin et al. (2006), in which the social entrepreneurship process appears as a non-linear combination of four variables that affect social entrepreneurs: people, context, deals and opportunity. In this model, the social value proposition (SVP) appears as the intersection of opportunities, capital and people surrounded by the context in which the organisation operates. This approach proposes that social entrepreneurs require to balance those elements to generate social impact through their organisations. In this way, the attention is not centred only on the final goal of social entrepreneurs but also

in the establishment of relationships, the awareness of opportunities, the sources of capital available and the implication that contextual forces exert on the organisation.
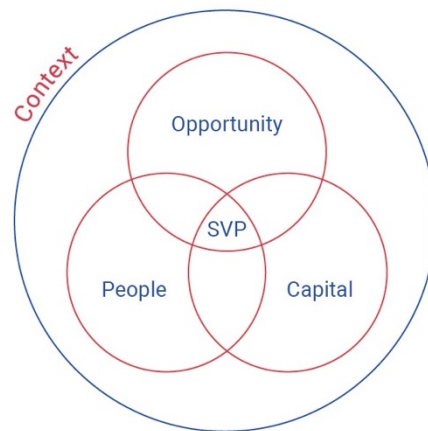
Figure 8: Social Entrepreneurship Framework (adapted from Austin et al., 2006)

Kickul and Lyons (2012, pp. 34–35) created a model that captured the Opportunity Creation Model and the Social Entrepreneurship Framework in two main stages. Stage 1 is the Idea Creation, where an idea is created by the combination of the individual social motivation (see Social Entrepreneurship divers, page 52), the social need (see Social Issues, page 30) and the capacities of the communities or society to fulfil that need. The combination of these factors led the entrepreneurs to generate and evaluate a business idea (see the Entrepreneurship Process, page 36) that aims to change a social condition positively. Stage 2 is the Mission Achievement phase, in which the entrepreneur combined the evaluated opportunity with the human and capital resources (see Resources, page 42) to achieve the social mission of the organisation. These stages are influenced and affected by external factors such as the geography, history, politics, culture, economics, social mores, and legal and monetary systems of the context.
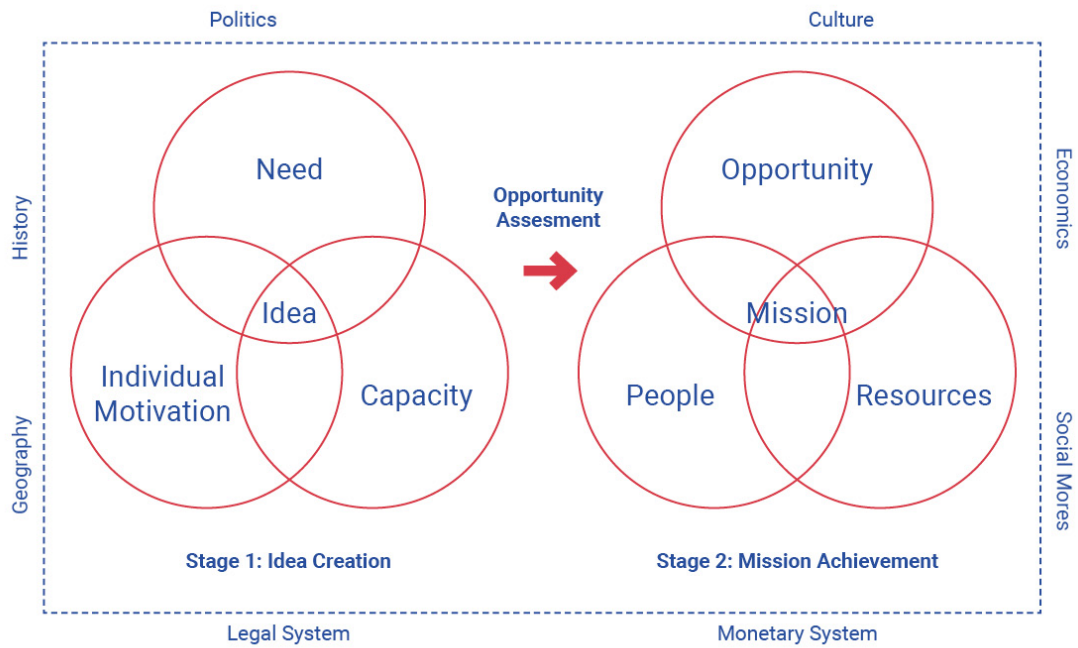
Figure 9: Social Entrepreneurship Process Model (adapted from Kickul & Lyons, 2012)

Lumpkin et al. (2013) provide a framework based on three main stages: antecedents, entrepreneurial orientation and outcomes. The first stage of collecting antecedents suggest that the entrepreneur starts defining their motivations and opportunities. Also, they stay abreast of the stakeholders concerned about the social issue and the financial and sources available to develop their ideas. In this framework, they also describe five dimensions related to the entrepreneurial orientation. These dimensions relate to the entrepreneurs' personal qualities described in Part 2.3.1 (page 33). Finally, it illustrates the outcomes that a social venture should achieve. The outcomes do include not only the social value creation but also the sustainability of the solutions and the way to satisfy the organisations' stakeholders. This last stage is critical because it also considers the ways to maintain the social impact and the support of stakeholders in the long term. The framework is constructed on the foundations of traditional entrepreneurship considering the direction of social ventures in the creation of social value (Figure 10)

Figure 10: Social Entrepreneurship Framework (Lumpkin et al., 2013)

Bresciani & Eppler (2013) utilise a seven-phases model that shows the social entrepreneurship process and the different knowledge visualisation methods that social entrepreneurs can use in each phase. This model includes (1) idea generation, (2) idea refinement, (3) idea promotion and fundraising, (4) planning, (5) sales and instructions, (6) scaling and (7) monitoring. The model is used as a structure to map different knowledge visualisation methods recommended in each stage of the social entrepreneurship process (Figure 11).

PHASE	Idea Generation	Idea Refinement	Idea Promotion and Fundraising	Planning	Sales and Instructions	Scaling	Monitoring
Visual method	Hand drawings	Templates, i.e. the Business Model Canvas	Visual metaphors	Timelines	Interactive and tangible visualizations	Videos, visual storytelling	Interactive information visualization
Content	Key innovative idea	Key idea in a business context	Benefits of the offering	Rollout steps for the development of the idea	Benefits of the product and instructions	Events and developments	Numbers related to the venture's performance
Target audience	Entrepreneurs	Entrepreneurs and consultants or partners	Investors	Entrepreneurs co-workers and partners	(Potential) customers.	Public and the media, second-tier investors	Managers, investors and the entrepreneurs

Figure 11: A framework for the use of knowledge visualisation in social entrepreneurship (Bresciani & Eppler, 2013, p.2)

The revision of the literature conducted by Perrini and Vurro (2006, pp. 65–68) to describe social entrepreneurship summarised three non-temporal phases, including opportunity definition; organisational launch and functioning; financial resource collection and leveraging. The first step comprises the opportunity definition, which is the cognitive process in which entrepreneurs intentionally identify a solution to a problem or needs due to specific motivations, including financial rewards. This

definition, unlike many others, considers the financial reward as a motivation for social entrepreneurs. Secondly, the organisational launch and functioning step are when the entrepreneurs transform a viable idea into a functioning organisation. Thirdly, the step of financial resource and leveraging comprises the innovative ways that social entrepreneurs utilise to obtain financial capital and resources to sustain their organisations.

In essence, the process of social entrepreneurship has three main stages: opportunity creation (personal motivation and ideation), prototyping (business modelling and implementation), and social impact generation (business stability, growth and replication). Firstly, social entrepreneurial initiatives start with personal motivations that become initial ideas that pursue social impact. Simultaneously, it starts the exploration of the context; defining the problem, stakeholders and resources. At this stage, the entrepreneur focus on understanding the context, identifying the social issue or challenge to be solved and generating business ideas to undertake through its enterprise. The outcome of this stage is the *creation of an opportunity* to meet the social problem defined.

During the second stage of *proyotyping*, entrepreneurs test their ideas with beneficiaries. Also, they legally establish the enterprise and develop the products and services that will solve the problem defined. In this stage, entrepreneurs undertake actions such as: set up and start-up, piloting, securing the operational stability and social impact and leveraging funds.

The thid stage of *generation of social impact* involves the generation of an economically stable organisation and the scalability of their solutions. This stage is also known as organisational growth. Growth is what social entrepreneurs' supporters expect of them. Supporters expect that social entrepreneurs use the resources given appropriately to generate as much social impact as possible (Kickul & Lyons, 2012, p. 202). Social entrepreneurship growth is achieved by scaling up the organisation directly, in partnership with other organisation or a combination of both.

Throughout the process, social entrepreneurs require a vast range of skills, both technical and interpersonal. These skills include innovativeness, proactivity, risk-

taking, competitive aggressiveness, and autonomy. Moreover, they have to deal regularly with several variables such as capital, people and the definition (and redefinition) of the opportunity to achieve their social impact.

2.4.6 Common challenges for social entrepreneurs

The focus on social introduces a series of external and internal barriers that make social entrepreneurs' journeys more complicated. External barriers appear in multiple forms such as economic, social, institutional and cultural (Robinson, 2006, pp. 101–104). Economically, social entrepreneurs need to leverage investment to build their technologies, resources and competitive advantages. However, social entrepreneurs are less attractive for traditional investors that are seeking the return of investment. Social entrepreneurs have to look for different sources of funding to support their operational needs. In this way, public and private funding and philanthropic donations are the primary sources of funding for social initiatives (Austin et al., 2006). In turn (and in contrast to traditional investors), these supporters require the return of social investment instead of profits (Kickul & Lyons, 2012, p. 202). Social entrepreneurs have to differentiate themselves to build their business legitimacy to attract investors that provide funding and resources needed to sustain their ventures (Zahra et al., 2008, p. 124).

Social entrepreneurs also encounter social barriers that limit the exploitation of opportunities. There are at least five categories of social barriers: business owners, business organisations, civic organisations, political infrastructure and labour markets (Robinson, 2006, pp. 101–102). These barriers impede social entrepreneurs to use their networks to gain access to resources and information which is fundamental for starting and sustaining an organisation (see page 53). In practice, social barriers appear as:

- Lack of access to community-based networks which restrict access to informal trust networks, local information and resources.

- The lack of access to political infrastructure impedes the accessibility to public funds and information about social policies related to the social mission of the organisation.

- The lack of access to business organisation and resources networks difficult the access to sources of knowledge, methods, and external resources.

Social entrepreneurs also encounter barriers related to the institutional structure of the markets. These barriers prevent them from having access to knowledge about the market culture, practices and rules (Robinson, 2006, pp. 102–103). Similarly, social entrepreneurs face the bureaucracy and inefficiency of public organisations and other related organisations (Renko, 2013, p. 1048).

Cultural barriers also affect social entrepreneurs. The interaction between social entrepreneurship and communities are full of unspoken norms and rules that range from language, dressing etiquette, attitudes and beliefs (Robinson, 2006, pp. 103–104). These cultural barriers make difficult the access of social entrepreneurs to the communities they try to serve. These four external barriers affect the evaluation of opportunities. When the barriers are high, social entrepreneurs may consider not to exploit the opportunity. Besides, internal challenges also affect social entrepreneurship.

Internal challenges are also critical for social entrepreneurs. These challenges relate to the capacities embedded to discover, evaluate and exploit social entrepreneurial opportunities. As mentioned on page 52, pro-social motivations drive social entrepreneurs to establish social organisations. However, in many cases, this type of motivation is not sufficient to build a new organisation. Building a new organisation requires the entrepreneur to socially engage with stakeholders to provide the resources and information necessary to transform opportunities into a working organisation (Renko, 2013, p. 1047). This engagement is particularly challenging because they have to convince stakeholders to show interest in a venture with a primarily social mission, which in turn, because its social component, is challenging to define. Therefore, social entrepreneurs have to demonstrate their motivation and capacity to generate social impact.

Capacity is another internal challenge for social entrepreneurs. Like commercial entrepreneurs, social entrepreneurs have to build internal capacities to start their organisations. Those capacities include methods and routines (Aldrich & Reuf, 2006,

p. 66) as well as the ability to react to the different circumstances they encounter (Thorpe et al., 2006, p. 232).

In short, social entrepreneurs encounter external and internal challenges that hinder their ability to provide solutions that generate social impact. External factors relate to the lack of resources, social barriers, institutional structure, as well as cultural differences. In turn, internal factors relate to the entrepreneurs' capacities to exploit their opportunities, such as excess of motivation and lack of methods, routines and practice to start a business.

2.4.7 Summary

This sub-chapter provided a comprehensive overview of social entrepreneurship. It started comparing social entrepreneurship with its *relatives*: social innovation and traditional entrepreneurship. Social entrepreneurships shares the social focus with social innovation. Nevertheless, the creation of an organisation to pursue a social mission distinctive of social entrepreneurship. On the other hand, both social and traditional entrepreneurship involve the creation of a new organisation. Nevertheless, the mission of social entrepreneurs is to create social return of investment, whereas the mission of commercial entrepreneurs is the economic return of investment. The social focus is the main driver of social entrepreneurs.

The social entrepreneurship ecosystem is composed by different players that affect positively or negatively social entrepreneurs to acomplish their social mission. The social entrepreneurship ecosystem includes: resource providers, competitors, complementary organisations, beneficiaries and costumers, opponets and problem makers, and bystanders.

This sub-chapter also explored different models that aim to describe the social entrepreneurship process. Three main stages were described as a summary of these models: opportunity creation (personal motivation and ideation), prototyping (business modelling and implementation), and social impact generation (business stability, growth and replication).

Lastly, the main challenges that social entrepreneurs encounter were introduced. These challenges involve, for instace, cultural and social barriers, institutional structures, as well as internal issues related to their capacities to exploit opportunities.

Sub-chapters 2.3 and 2.4 aimed to provide an in depth definition of what social entrepreneurship is and the main charactheristics of social entreprenuers. The next sub-chapter will explore different definitions of design and how design is used in organisational and social context.

2.5 Design

The last sub-chapter of the literature review aims to explore the definition of design and the value of design in organisational and social contexts. From a theoretical perspective, design has been studied for decades, and its definition is still an object of debate. Nevertheless, from practice, design has shown its value in multiple contexts. This chapter explores design from three different perspectives. First, it explores the definition of design following a historic structure. It starts with early definitions such as designing the artificial of Herbert Simon, the wicked problems (Webber and Rittel) and designerly ways of knowing (Nigel Cross). Later it explores more contemporary definitions such as the four orders of design by Buchanan and different models that aim to describe the process of design. Subsequently, this part focuses on human or user-centric approaches such as human-centred design and design thinking, and finished exploring collaboratory approaches such as co-creation, co-design and participatory design.

To understand design by social entrepreneurship, this sub-chapter analyses the use of design in organisational and social innovation contexts. Design in organisational contexts includes the analysis of the value of design in organisations, design management, the concept of silent design, design maturity, and when design is considered as a managerial practice to design organisations. On the other hand, this chapter explores design in social innovation contexts, practices, advantages and challenges of design for social innovation.

Figure 12: Structure of Chapter 4

2.5.1 Defining Design

Design is a broad field which definition varies according to the perspective taken. Design can be considered as a discipline, as a way of thinking, as a way of management,

as a cultural phenomenon, as an industry on its own, as art, as a process, or as a problem-solving activity (Cooper & Press, 1995, pp. 7–50). Design is in continuous evolution and maturing as a profession; therefore, its definition is continuously changing and expanding (Muratovski, 2016, p. 13). No single definition of design neither a design-specific profession can cover all the extent of ideas and methods related to design (Buchanan, 1992, p. 5). While for some people, design is related to an outcome (things, symbols) for others design corresponds to a practice (designing) (Redström, 2017). Far from a problem, the ill-definition of design allows the constant revitalisation of design by allowing the incorporation of new terms and discarding previous ones (Buchanan, 2001, p. 8). The variety of definitions of design raises a discussion to this project. This project aims to analyse how social entrepreneurs use design. Therefore, it is crucial to explore the meaning of design in a broad sense. In this way, this chapter describes different definitions given to design to reveal the various functions of design for social entrepreneurs.

i) Designing the Artificial

During the 1960s, Herbert Simon, in his seminal book *The Sciences of the Artificial* (Simon, 1996) points out the differences between the natural and the artificial world. He defines the artificial world as the man-made world in which we currently live. He used the word artificial as "produced by art, rather than nature; not genuine or natural; affected; not of the essence of the matter" (Simon, 1996, p. 4). In other words, the artificial world is produced by human intentions, while the natural world relates to everything that has not been influenced or modified by humans.

He deepens in the analysis of the artificial world, arguing that the creation of the artificial relates to the intention of an engineer or a designer of how things ought to be to reach goals and to function. The artificial world is what designers and engineers create to achieve particular objectives. With this viewpoint, Simon introduced the notion of the Science of Design as a science that enables the creation of the artificial world by focusing on problem-solving. He considered design as a central part of disciplines such as engineering, architecture, business, education, law, and medicine because the objects of these disciplines are not out there to be discovered (as in natural sciences) but out there to be designed (Yoo, 2013).

Nevertheless, he goes beyond of a mere disciplinary condition for the creation of the artificial by saying that "everyone designs who devises courses of action aimed at changing existing situations into preferred ones" (Simon, 1996, p. 111). From this point of view, Simon attributes design as a human capacity to conduct actions to transform determined situations into something desirable.

The main contributions of Simon rely on the definition of an artificial science which is the study of the human-made world. He described the human-made world as an artificial world which is the result of the actions taken by people to create preferred situations. In this way, Simon pioneered the analysis of design as a process or way of thinking. Throughout this contribution, he does not limit design to the activities or processes that designers do, but as the courses of actions that people, in general, undertake to achieve their goals. This last point is relevant for this thesis because it establishes a precedent to analyse how design is utilised by non-designers, in this case, by social entrepreneurs.

ii)   Wicked Problems in Design

Wicked problems are problems that cannot be defined in one particular way. This is because a precise definition of a problem requires the formulation of potential and conceivable solutions towards the problem itself, which in turn, is a wicked problem itself (Rittel & Webber, 1973, p. 161). To understand a problem is necessary to have an orientation to a solution which would emerge gradually among the participants as a result of incessant judgement and critical argument (Rittel & Webber, 1973, p. 162). In this context, design emerges as a collaborative process of problem understanding and definition towards a conceivable solution. Table 7 lists the ten properties of wicked problems.

Table 7: The ten properties of Wicked Problems (adapted from Rittel & Webber, 1973)

Dimension	Description
Non-defined	**There is not a definite formulation of a wicked problem, but every formulation of a wicked problem is a wicked problem itself.**
Non-stopping rule	**The definition of wicked problems depends on external considerations, such as investment, time or resources.**
Ambiguity	**Solutions to wicked problems cannot be accurate or false, only good or bad.**
No definite solution	**There is no immediate and definite solution to a wicked problem. The solution of a wicked problem will generate a series of consequences that are difficult to measure; therefore complicated to outweigh the intended advantages accomplished.**
Consequences	**There is no opportunity to learn by trial-and-error from a solution to a wicked problem as every attempt counts significantly. Every solution proposed and tested carried consequences which traces cannot be undone.**
Wicked solutions	**Wicked problems do not have a particular set of potential solutions. A solution to a wicked problem is a wicked solution itself. A solution to a wicked problem is determined considering the feasibility and the capacities available.**
Uniqueness	**Every wicked problem is unique. Despite the similarities between problems, there are always distinguishing properties that differentiate them.**
Symptoms	**Wicked problems are symptoms of other problems. Every wicked problem belongs to a higher-level problem. Hence, every idea to solve a wicked problem is an attempt to solve just a part of a significant problem.**
Explanation	**Explaining a wicked problem determines the nature of the problem's resolution. Who defines a wicked problem includes their perspective onto the definition.**
Wicked problem solver	**Who determines a wicked problem has no right to be wrong? People who work with these types of problems deal with wicked and incorrigible problems, which by nature have undetermined boundaries and causes.**

Throughout the article, the authors complemented these observations pointing that wicked problems that designers encounter are unique, complex, messy and ambiguous.

iii)   Designerly ways of knowing

Nigel Cross attributes design to a human condition, arguing that design is something that people do and neither animals nor, so far, machines do (Cross, 2006, p. 29). He discusses the cognitive aspect of design by the study of how designers work and what experts say about design. In his investigation, Cross points out that designers' creativity comes from the construction of "creative bridges" that connect ideas to solutions rather than mere creative leaps (Cross, 1997, p. 311). By analysing the way that designers approach a creative strategy, he identified three stages in their way of thinking (Cross, 2011, pp. 67–90). First, designers analyse systematically the problem given, going

beyond the first description and criteria. Secondly, they explore and frame the problem. Thirdly, they use the problem frame to structure the initial design principles that trigger the formulation and development of new concepts. This analysis shows that the creative way of thinking of designers goes from a constant interrogation and exploration of a given problem to the structuration, formulation and development of new concepts.

iv)   Buchanan's perspective on design: The four orders of design

To define design thinking, Richard Buchanan explores the definition of liberal art as a discipline of thinking that is shared by all men and women which mastery in specific practices can produce advances into new areas of innovative applications (Buchanan, 1992, p. 8). Furthermore, he claims that Simon's distinction of the artificial as a humanmade science does not capture the essence of the artificial, which may be part of human experience (Buchanan, 1992, p. 18).

He argues that design works as a new liberal art discipline that explores the combination of knowledge with the practice for new productive purposes and enriching human life (Buchanan, 1992, p. 6). From this perspective, design shapes human experience by planning, projecting, or working on a hypothesis that captures the intentionality of specific operations (Buchanan, 1992, p. 8). This characteristic of design has drawn together people from diverse disciplines that are interested in the conception and planning of the artificial (Buchanan, 1992, p. 14). Nevertheless, he argues that there is a need of understanding the way that design thinking operates, to increase the cooperation and mutual benefits between those who apply design thinking to different problems and in different contexts (Buchanan, 1992, p. 8).

In order to understand the areas in which designers operate, Buchanan introduces four levels or orders in which design affect contemporary life (Buchanan, 1992, 2001). He considers that designers, but also many others that do not consider themselves as designers, work in four interconnected areas which also interpenetrate and merge in design thinking practices enhancing innovation (Buchanan, 1992, p. 10).

The first-order is the design of symbolic and visual communications. This order relates to the traditional practice of graphic design (typography, advertisement, editorial design, book and magazine production, illustration, for instance) but also including new

means of communication such as photographic, film, television, and digital displays. This order represents the transformation of words and images into symbols and visual communications.

The second-order is the design of material objects or things. This area relates to the creation of physical or material things such as products, tools, clothing, instruments, machines and vehicles, but also involves the interpretation of the interactions between those objects and human beings.

The third-order is the design of activities and organised services as well as the relations between human beings through the influence of products. This order involves managerial practices that combine physical and human beings to reach specified goals. This area is also about decision-making processes and strategic planning to create better human experiences.

The fourth-order is the design of complex systems or environment for living, working, and learning. This area is concerned with the scale of systems that range from engineering, architecture to urban planning. This also involves the exploration of the role of design in the integration of humans into broader ecological and cultural environments.
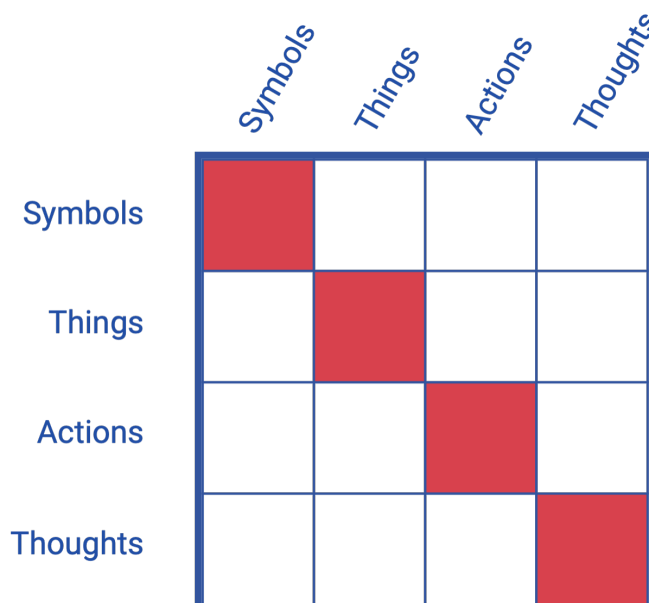
Figure 13: Four Orders of Design (adapted from Buchanan, 1992)

Nonetheless, Buchanan (Buchanan, 1992, p. 13) points out these areas do not have rigid boundaries, but rather unfixed and flexible boundaries, or as he called 'placements'. In practice, this means that someone who designs in these orders may choose to move intuitively among them according to new ideas and possibilities when applied in specific circumstances. Therefore, Buchanan claims that by using placements, design acts identifying and formulating, through a principle of relevance, the type of knowledge necessary for design thinking to be used in a particular circumstance. In this way, design functions as an integrative discipline able to understand, communicate and act to serve the purpose of enriching human life.

The four orders offer a general perspective of how social entrepreneurs use design in their ventures. For instance, the first-order regarding the communicational efforts to divulge the social mission to the different stakeholders; the second-order appears through the creation of products and services that meet a social need; the third-order is used in the interactions with people to understand requirements and validate their ideas; the last order occurs in the articulation of systems that allow them to deliver a social value proposition.

v) Contemporary approaches to design. Defining the Design Process

Drawing on the cognitive aspects of how designers work, the design process has been reduced to its essence as a process that involves divergent and convergent thinking. Convergent thinking is the process of deciding among different alternatives; meanwhile, divergent thinking is to multiply the options to create choices (Brown & Katz, 2011). Figure 14 illustrates the divergent and convergent thinking, which is usually described as a 'diamond'.
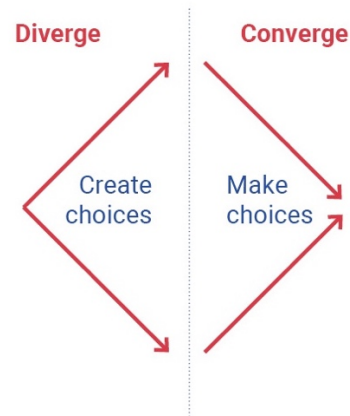
Figure 14: Divergent and Convergent thinking (adapted from Brown & Katz, 2011)

In 2007, the British Design Council conducted an in-depth study of the design process used in eleven leading global brands (Design Council, 2007). The organisations studied include Alessi, BSkyB, BT, LEGO, Microsoft, Sony, Starbucks, Virgin Atlantic Airways, Whirlpool, Xerox and Yahoo!. The study analysed the ways that these organisations used design, their relationships with other disciplines and the ways that design is managed to achieve successful results. In this study, they introduced a design process model divided into four stages: discover, define, develop and deliver. Figure 15 illustrates the Double Diamond model, which maps the divergent and convergent stages of the design process.
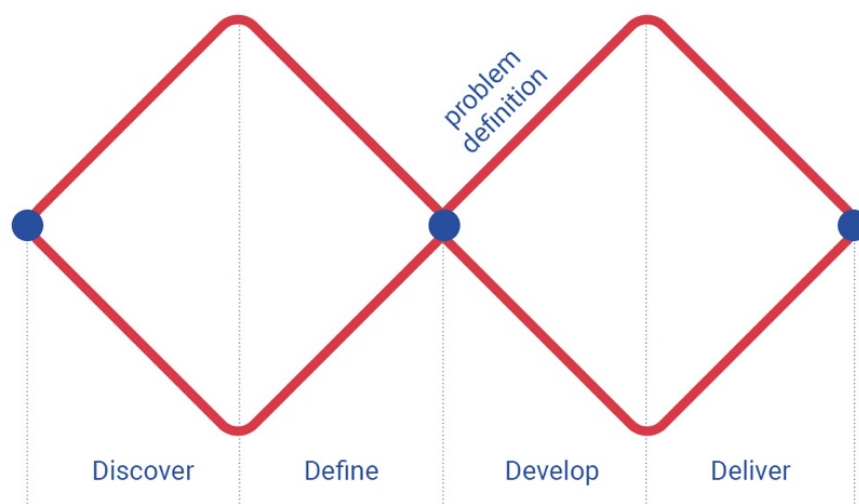
Figure 15: Double Diamond (adapted from Design Council, 2007)

The stage of *discovering* occurs at the beginning of the project and involves the exploration of initial ideas and sources of inspiration. In this stage, the organisations conduct investigations, pose hypotheses or identify markets by analysing data, information and trends. Common activities conducted in this stage include market research, user research and design research groups.

The stage of *defining* is considered as a filter to review, select and discard the ideas generated in the previous stage of discovery. In this stage, the findings are analysed and defined as problems. In addition, initial ideas are transformed into prototypes. At the end of this stage, actionable tasks for the development of new products or services are defined in design project briefs. Therefore, key activities of the define stage include the generation of ideas, project development and management and the project sign-off.

The stage of *development* involves the prototyping and iteration of the ideas to be tested and fed back by the project team and stakeholders. Therefore, this stage involves the participation of experts from different departments, users and external suppliers and manufacturers. The main part of this stage is the testing of concepts and prototypes.

The last stage of *delivering* occurs when the final concept is tested and validated to be sent to production and subsequently, launched. In this stage, the organisations focus on identifying any constraints before manufacture. In addition, the final ideas are also tested by targets groups for their evaluation and feedback.

vi)   Human-Centred Design

Simon analyses design as a way to create "the artificial". This means design applied to solve ill-defined problems, also as cognitive behaviours or processes. Nevertheless, the human-centred perspective is one of the main characteristics of design. Human-Centred Design (HCD) focuses on the "human needs, capabilities, and behaviour first, then designs to accommodate those needs, capabilities, and ways of behaving" (Norman, 2013, p. 8). Thus, this approach is considered as a process that ensures that design matches the needs and capabilities of people for whom they are intended (Norman, 2013, p. 9). This approach has been widely used by other disciplines, especially by computer scientists, for the development of usable interactive systems or products (Maguire, 2001, p. 587).

The HCD process aims to identify the right problem and fulfil human needs. Norman (2013) introduces the HCD process as iterative cycles of four activities that are embedded in the divergent-convergent process of the double diamond introduced previously.
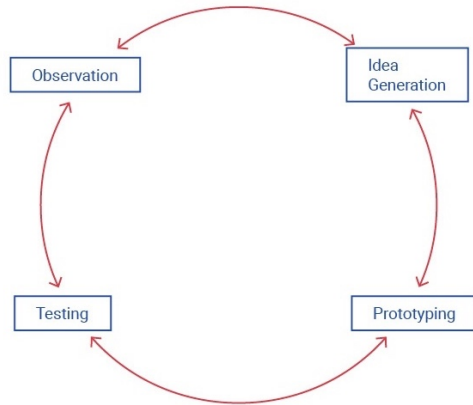
Figure 16: Human-Centred Design (adapted from Norman, 2013)

Table 8 describes the stages of the HCD process defined by Norman.

Table 8: Human-Centred Design (adapted from Norman, 2013)

Stages	Description
Observation	**The initial activities are to understand the interests, motives, and needs of the people who will use the products under consideration. The observations should be conducted in the customers "natural environments", or in other words, where they eat, commute, live, study, work, for instance. These activities will support the definition of the design problem as well as find the right solution for the people targeted.**
Idea Generation (Ideation)	**After defining the design problem, the next step is generating the right solution. The idea generation is a creative process in which methods such as brainstorming are applied. This process aims to generate as many ideas as possible, not being constrained by criticism, and critical, questioning everything.**
Prototyping	**This stage is to test the ideas generated previously. By building quick-prototypes or mock-ups is possible to understand the problem better.**
Testing	**This stage is to gather feedback from the target people by allowing them to try the prototypes or mock-ups in a similar context of use. These activities allow to evaluate whether the problem has been well defined and to ensure that the solution meets the needs and abilities of those who will use it**
Iteration	**The role of iteration is present in each of the four activities. Iteration is to enable continual refinement and enhancement of the ideas developed. In each iteration cycle, the tests and observation can be more targeted to gather the insights necessary for the overall process, or for a specific requirement. For instance, by iterating is possible to redefine the problem, the requirements, the solution, or even specific details of the solution proposed**

The iterative nature of the HCD process differs from the traditional linear design process. The iterative approach is represented in the circular shape of the model. This circular model aims to encourage the continual refinement, continual change and reflection throughout the development of the solution (Norman, 2013, p. 234).

The human centred design process has been used by practitioners and researchers as a methodology to introduce design as a way of thinking to non-designer audiences. Next, the design thinking approach from IDEO and Stanford University are introduced.

vii)   Design Thinking

'Design Thinking' has been studied by researcher since Rowe used this term as the title of his book (Rowe, 1987) in which he aimed to define design thinking by analysing the ways that designer works. Rowe argues that design thinking has been adopted by different disciplines as a way to create a rich and varied understanding of human reality (Dorst, 2011). The adoption of design thinking by other disciplines has created a demand for clear and oversimplified knowledge about this term. For instance, at the beginning of the 2000s, IDEO and Stanford's d. school popularised the concept of design thinking. This *new approach* intended to bring design thinking to the business

environment. In 2008, Tim Brown declared that "thinking as a designer can transform the way to develop products, services, processes and even strategies" (Brown, 2008, p. 84). According to Brown, there are not design thinkers that have been trained in design schools, but rather professionals with natural aptitudes for design thinking (Brown, 2008, p. 87).

Table 9 shows the five qualities that Brown identified in design thinkers

Table 9: Qualities of design thinkers (adapted from Brown, 2008)

Quality	Description
Empathy.	**Design thinkers always put people first (to what is called Human-centred approach), which enables them to design desirable solutions that meet people needs.**
Integrative thinking.	**Design thinkers possess the ability to integrate different perspectives toward a problem and create novel solutions that improve or go beyond the existing ones.**
Optimism.	**Design thinkers are optimistic, no matter how challenging a problem is.**
Experimentalism.	**Design thinkers challenge the status quo, exploring and proposing creative ways to proceed in new directions.**
Collaborations.	**Design thinkers do not work alone, they work in collaboration with people from different professions and backgrounds.**

He added that design thinking as a process follows the HCD approach as an iterative process consisting of three main stages: inspiration, ideation and implementation (Figure 17).
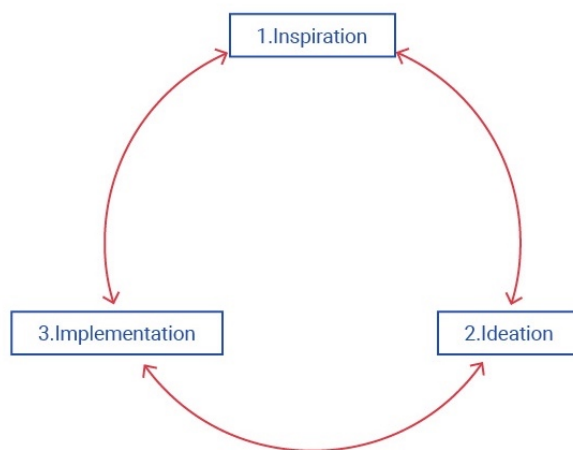
Figure 17: Human-Centred Design

The d.school (2018) from Stanford University, published a Bootcamp bootleg that describes the process of design thinking in five modes of an HCD process. The document includes suggested methods to be used in each of these modes (Figure 18). Similarly, Ambrose and Harris (2010)describe the design process as a linear process that comprises seven steps: define, research, ideate, prototype, select, implement and learn. In each of these steps, the authors provide a definition of the step, the methods

used by designers and a checklist with the issues that need to be solved before to move to the next step.
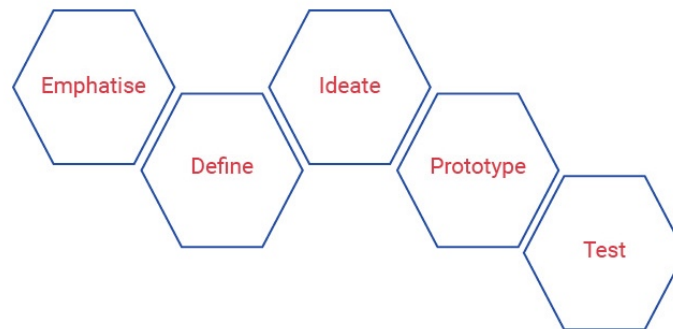
Figure 18: Design Thinking (adapted from d.school, 2018)

In these models, design thinkers are associated with having a human-centred approach to problem-solving rather than being organisational- or technology-centred. In these processes, design thinkers show the capacity to questioning, to work in collaboration, to iterate, to generate prototypes and artefacts, and to be involved in anything (Kimbell, 2011, p. 287). These approaches have helped to expand the boundaries of design to other disciplines. Nevertheless, these models or these definitions of design put design as an application of processes, modes, and methods rather than a reflective and intentional creative process.

viii) Designing with others. Perspectives on Co-Creation, Co-Design and Participatory Design.

Social, political and civil rights movements of the 1960s and 1970s opened a space in which people demanded more participation in the decision-making processes about the different matters that concerned them. Designers and design researchers have investigated the ways that design could contribute to this call for participation. For instance, in 1972, the Design Research Society held in Manchester a conference called Design Participation. In the 1970s, Scandinavians led a design approach that considers users of a project as partners (E. B.-N. Sanders & Stappers, 2008, p. 5).

The traditional user-centred or human-centred design approaches shifted to a design process based on collective activities (E. B.-N. Sanders & Stappers, 2012, p. 23). This approach differs from human or user-centred design in the way the people are involved

in the project. HCD (page 73) considers the involvement of people in its different stages of the process; nevertheless, the participation is always as a way of consultation for the evaluation and validation of the concepts proposed.

Three similar terms involve the participation or collaboration of people in design or creation processes. Co-creation is a broad term that refers to any act of applied collective creativity (E. B.-N. Sanders & Stappers, 2008, p. 6). Co-design emerged as a process in which designers and non-designers work together in the design development process (E. B.-N. Sanders & Stappers, 2012, p. 25). Participatory design claims genuine participation in which people's role is to being part of the design process rather than merely informants (Robertson & Simonsen, 2013, p. 5). The latter term emerged when researchers, for the first time, considered the importance of the voices of workers in the design of technologies. Therefore, participatory design is also considered as a political action that claims for the right of people to make decisions about the way they work and use technologies (Robertson & Wagner, 2013, p. 65). A seminal project in this context was the Utopia project. This project used a co-operative design methodology involving users in early-stages of developments of computer applications (Bødker et al., 2000).

Research in these areas focuses on how to improve methods for participation. Methods are *recipes* that enable the active participation of users throughout the development process (Bratteteig, et al., 2013, p. 118). On the other hand, these projects examine the use of *tools* and *techniques* as a constituent of the activities that people participate in. Techniques refer to the directions for performing an activity which may include project management, data gathering and data processing. Correspondingly, *tools* are the graphic representations that support the processing and presentation of the knowledge contributed by a technique (Brandt et al., 2013, p. 146). Methods, techniques and tools are articulated (Schmidt & Bannon, 1992) by a researcher or a designer who plays the role of a facilitator in interactive sessions commonly workshops. This role involves, for instance, acting as a designer, developer, technician, trouble-shooter and handy person to support design-in-use effectively (Hartswood et al., 2008, p. 14). The facilitator interoperates between these roles according to the emerging and constantly changing and evolving solutions (Voss, 2006, p. 84) that arise in the development process.

This approach is relevant for this research because social entrepreneurs have to engage with their ecosystem (see page 53), particularly with beneficiaries or customers. In fact, beneficiaries participate in different instances of social etrepreneurship process (see page 55), for instance, defining the social problem that affects them (see page 30), and providing information about the communities (see pages 44-45;

Table 6, page 55).

ix)   Service Design

In 1982 Lynn Shostack coinded the term service design to develop an understanding of how organisational processes interact 'behind-the-scene' (Lynn Shostack, 1982). Shostack proposed this approach to understand organisations as a whole and to create services that respond to matkets needs and opportunities. More than three dedades later, the term has been evolving and moving from operation and management to other disciplines. Nowadays, service design aims to contribute to the growing economic role of the service sector (Meroni & Sangiorgi, 2011).

The growth of the service sector does not only affects design but also several disiplines such as marketing, management, engineering, computing and behavioral sciences (Meroni & Sangiorgi, 2011). Thus, service design as an evolving interdisciplinary approach that combines tools and methods from diverse disciplines (Stickdom & Schneider, 2012). In recent literature, service design is described as a design practice and theory for designing desirable, usable and useful service interactions   (Junginger & Sangiorgi, 2009).

In this interdisciplinary approach, the role of designers is to create sutainable solutions and optimal experiences for customers and service providers (The interaction Design Foundation, n.d.). The key role of designers on service design is based on their human-centred approach (see page 73) to design interactions. Based on that, Sangiorgi and Meroni (2011) categorise four main areas in which service design works: service experiences, service systems, service models and future scenarios.

- Designing experiences - derigners aim to improve services by designing more empathic and effective interactions.

- Shaping service systems – designers aim to improve services by suggesting new ways of user-staff interactions, staff service interactions and service systems intractions.

- Exploring collaborative service models – designers develop new service ideas and models by working with people within interdisciplinary teams. In this way, they

contribute to the creation of new service ideas and to the exploration of their economic, social and technological feasibility.

- Imagining future directions for service systems – designers generate visualisations of future scenarios to engage people in strategic conversations to participate in longer transformation processes.

In a similar vein, Stickdorn and Schneider (2012) identify five key principles for service design:

- User-centred – serivice design should focus on customers.

- Co-creative – the design process should include the participation of all stakeholders.

- Sequencing – services are sequences of interrelated actions.

- Evidencing – service experiences should be visualised in terms of tangible artefacts for users, for them to understand and trust brands.

- Holistic – service design should consider the entire environment where the service is provided.

The four main areas described by Sangiorgi and Meroni and the four key principles introduced by Stickdorn and Schneider emphasise that service design is human-centred (it focuses in created value for costumers and the service provider's staff), collaborative (its process involves the participation and collaboration of different stakeholders), complex (either through systemic or holistic approaches, service design should consider the entire environment in which the service is provided) and imaginative (service design should projects future interactions between orcganisations and custormers).

The collaborative aspect of service design is critical for social innovation initiatives. Manzini (2015) argues that social innovations are new meanings and unprecedented opportunities as a result of the combination of people, expertise and material assets. Therefore, social innovation happens when people collaborate and create value. He adds that service design contributes to social innovation by developing solutions consider the quality of the interactions involved (Manzini, 2015, p.59). In this respect, service design

allow social enterprises to create solutions that create social value by involving beneficiaries into the development of service interactions.

There is a increasing number of services based on collaboration. These initiatives can be commercial or non-for-profit. Service design scholars have investigated collaborative services as social innovation since they promote sustainable social relationships almutu. In 2008, Jégou and Manzini described collaborative services as solutions that through collaboration, mutual assistance and shared use could enhance transitioning towards a sustainable society (Jégou & Manzini, 2008).

Nevertheless, *collaborative services* are not only present in social innovation initiatives but also in commercial activities. For instance, Seravalli and Eriksen _. analyse *Makerspaces* as sharing-based collaborative services. Makerspaces are collaborative work spaces for making, learning, exploring and sharing ('What Is a Makerspace?', 2015). Usually, these spaces offer a variety, but not exclusively, of maker equipment such as 3D printers, laser cutters, cnc machines, soldering irons and sewing machines. Seravalli and Eriksen analyse the case of a makerspace called Fabriken as a pool of resources or facilities that offer joint ownership or access. This approach is similar to the service offered by business incubators (see page 45) in which entrepreneurs have access to shared facilities, equipment, mentorship and administrative services.

Service design is relevant for this research because it offers a human-centred, collaborative and holistic approach to create service interactions of social innovation initiatives. Furthermore, by considering makerspaces and business incubators as collaborative services where social entrepreneurs interact with each other, receive support from experts and access to facilities and resoruces.

2.5.2 Design in Organisations

Design in organisations generates different type of values such as generating competitive advantages of product and services, developing markets, dealing with social changes, diversifying product portfolios, for instance. In order to maximise the benefits of design within organisations, researchers and practitioners have studied the ways that design can be managed. Thus, design management comprises the organisation of design-related areas such as budgets, infrastructure, people, timetables and work.

Design appears in organisations in multiple organisational levels and places: from operational to strategic, as well as an outsourced activity to an in-house and core of organisational activity. Design, as a human activity, is also present in organisational design activities. By considering an organisation as a human-made socio-technical system, one can argue that organisational design practices also involve the utilisation of design, for instance, through the design of the layout of furniture, to the interactions between department or with external stakeholders. Nevertheless, the use of design not always is acknowledged as such. The unacknowledged use of design by organisations is called silent design. The use of design silently is common in organisations; however, the lack of design awareness hinders the utilisation of design at maximum efficiency.

i)   The value of design in organisations

In the 1960s, Michael Farr argued that design was needed in organisations because the modern organisation's requirements were becoming more complex as well as the design specialisations (Farr, 1966). Design provides different types of values to organisations. It has the potential to add value to the triple bottom line leading change and innovation and improving customer experiences (Lockwood, 2011, p. 279). Rae (2013), commissioned by the Design Management Institute, investigated the various ways that design adds value to small and large organisation. Her study comprised the analysis of fourteen design-led organisations which shows eight ways in which design add value to these companies.

Table 10: Eight ways in which design adds value (adapted from Rae, 2013)

	Description
The Wow Factor.	**Design helps to produce products and services aesthetically appealing**
Brand Expression.	**Design is used to interpret companies brand identities and how stakeholders interact with them.**
Solving unmet user needs.	**Design, through the use of empathy in research stages, allows the understanding of actual user needs. Moreover, the discovery of latent needs enables organisations to comprehend what people do, think and feel which, in turn, provides the opportunity to commercialise and scale the insight uncovered.**
Developing better customer experiences.	**Designers use their techniques to develop interactions, products, services and graphics that create functional but also emotional experiences.**
Rethinking Strategy.	**Design supports organisations to reframe problems and create new innovative solutions.**
Hardware/ Software/ Service Integration.	**Good design is reflected in simpler and good experiences between digital products (for instance, digital camera, ATM, websites, mobile apps) and users. The result of a good interaction design allows people to reduce time, be more productive and even provide emotional support.**
Market expansion through persona development and user understanding.	**By the understanding and the interpretation of people and cultures, designers support organisations to assimilate what is required to attract customers to the organisation.**
Cost Reduction.	**Operationally, Design can help reduce production costs of manufactured goods through rethinking the processes and materials used in their fabrication.**

In addition to Rae's contribution, Table 11 shows a summary of the contributions of design found in the literature.

Table 11: Literature analysis of the value of design

Topic	Description	Authors
Brand Value	**Design contributes to companies to increase the brand value perceived by customers**	**(Cooper et al., 2016; Rae, 2013; Turner, 2013; Ward & Dekker, 2009)**
Development process	**Design helps organisations to optimise the development process of products and services, both news and current ones. Proper use of design allows the production costs reductions as well as the time to market.**	**(Borja de Mozota, 2002; Brazier, 2004; Rae, 2013; Turner, 2013; Ward & Dekker, 2009)**
Differentiation/ Competitive Advantages	**Design plays an important role in optimising companies' activities and generating value differentiation. Some of the variables identified are** • **Impact in the market. Design increase the market share, higher price, better product margin, and technology transfer.** • **Design supports the value chain of the organisation. Design accelerates innovation, improves cooperation between agents and information circulation.** • **Change the company's vision. Design is a strong competency to create new markets, to change the company's future and to develop customer care.**	**(Borja de Mozota, 2002; Rae, 2013)**
Innovation and Strategy	**Design supports innovation and, in turn, assists the company's strategy. Thus, Design reduces the risks of innovation through activities such as prototyping and testing. On the other hand, design creates value at the value chain supporting and business growth as well**	**(Acklin, 2010; Best et al., 2010; Brown & Katz, 2011; Cooper et al., 2016; Farr, 1966; Rae, 2013; Verganti, 2008)**
Social Change	**Design can help to solve problems even those problems that could be intractable for the people. Furthermore, Design also creates new meanings of artefacts, interfaces, conceptual models, and stakeholders. In that sense design reshapes relationships and interactions provoking social changes and making new meanings.**	**(Farr, 1966; Krippendorff, 2006; Manzini, 2015; Mulgan, 2014; V. J. Papanek, 1971)**
Human-Centred Approach	**Design is user-centred through all its process. Firstly, it promotes the active involvement of the users to understand their problems and needs. Subsequently, it takes these insights to develop solutions that satisfy user requirements, creating experiences that increase the product or service value perceived by the clients.**	**(Borja de Mozota, 2002; Brown & Katz, 2011; Farr, 1966; Krippendorff, 2006; Norman, 2013)**

Borja de Mozota (2010, p. 46) describes the role of design within organisations as adding two competitive advantages: as a differentiator in the value perceived externally based on the products, brand values and corporate image of the company; or as

coordinator or integrator in the value created within the organisation to generate difficult-to-imitate combinations of processes and resources. Thus, design generates internal and external value to the organisations. Internally, optimising the operations and the use of resources, and externally, maximising the value perceived by stakeholders from the products to the company's reputation.

ii)   Design Management

As Simon (1996, p. 4) described that design is related to human creation; therefore, everything made human requires design. However, in business design requires management (Lockwood, 2011, p. 281). Michael Farr introduced one of the first definitions of design management. His definition focused on the *role* of the design manager. He pointed out that design management relates to the process that a designer undertakes which involves the definition of a problem, the selection of a suitable designer and the facilitation of resources to making possible for the designer to solve a problem (Farr, 1966).

More recently, researchers analyse design management as a program of activities within organisations. Borja de Mozota (2003) argues that design management is the implementation of design as a formal program or activity within the corporation. She adds that it is relevant to foster the understanding of design to fulfilling the company's long terms goals for which it is required the communication of its relevance at all organisational levels (Borja de Mozota, 2003, p. 51). Kathryn Best (2010) defines design management as "the management of people, projects, processes and procedures regarding the design activities within the company".

Turner and Topalian (2002, p. 1) argue that design management is reactive and responds to given situations, whereas design leadership describes what the future needs to be. Thus, Turner (2013, pp. 72–81) provides an outline of the different roles and responsibilities of design managers.

Table 12 describes the design management responsibilities identified by Turner.

Table 12: Design Management responsibilities (adapted from Turner, 2013)

Responsibility	Description
Design people.	This responsibility is concerned with managing people related to the design activity, whether they are designer or not. The people involved include: • **End-users and customers** • **Stakeholders** • **Clients** • **Consultants** • **Staff designers** • **Technical specialists** • **Opinion formers** • **Suppliers** • **Specialist outsiders**
Design budgets.	This responsibility is to secure the necessary budgets for design work and ensuring the maximum value from the utilisation of these resources.
Design timetables	This responsibility is one of the most challenging because it is often difficult to manage the creative timings regarding product or service development or launching. Therefore, design managers then have to be able to define what they expect from designers and turn those expectations into realistic and achievable deadlines.
Design work.	This responsibility aims to guarantee that the design activities address identified business issues. The way to manage design work is through a design brief which covers three main issues: • **Strategic context.** • **Stakeholders** • **Success criteria**
Design infrastructure.	Design managers have to ensure the conditions necessary for designers for the execution of design projects. Thus, design managers also have to create a system that accommodates: • **The necessary resources and budgets for design activities.** • **The formal conduct to approve the design briefs.** • **A monitoring process that reviews and approve the design outcomes.** • **A feedback system that nurtures their internal processes from previous experiences.**

Design management operates at the strategic, process and operational levels of the organisations involving planning, organisation, implementation, monitoring and evaluation of design within companies (Cooper & Press, 1995, pp. 222–227). The relevance of this definition is that it touches almost all the points expressed by the other authors since it considers design management's operation at all the organisational levels, but also the managerial activities from the planning to the monitoring of the design activities. These definitions relate design management as a role undertaken by a design manager, as an implementation of design at all corporate levels, as a strategic activity, but also as the management of different aspects of the design activities within

the company. Nevertheless, design is not always recognised as such, operating almost invisibly in organisations.

iii)   Silent Design

Page 83 describes the benefits of design. However, design is not always acknowledged as an organisational activity. Gorb and Dumas (1987, p. 157) coined the term *silent design* to refer to the design activities are often not classified as such within organisations. Organisations may conduct design activities by non-designers at operational levels. Similarly, when the organisation lack of awareness, the benefits of design they might conduct design activities but not calling them as design.

Therefore, by recognising that design is an omnipresent activity within organisations (Junginger & Bailey, 2017, p. 33), the challenge is to identify the narratives in and for design within organisations. The explicit identification of the uses of design will enable organisations to generate a proactive collaboration between departments, to improve their design management practices, to differentiate their offer from competitors, as well as to benefit from using design at the strategic level of the organisation (Shams & Lam, 2016). The challenge of implementing design management regards the level of design maturity of the organisation. Different models to monitor the use of design in organisations are described as following. This is an important concept for this thesis since the objective is to understand how non-designers social entrepreneurs utilise design either explicitly or siliently.

iv)   Design Maturity

The challenge of managing design within firms regards the level of integration of design in business' processes. The integration of design within organisations is also called as maturity (Best et al., 2010, p. 28). Furthermore, Borja de Mozota (2003) argues design must be integrated into an organisation following three conditions. Firstly, design should be introduced gradually through a series of successive projects. Secondly, it should be introduced responsibly considering the support of senior managers. Finally, design should be introduced deliberately, which means that it should be managed on all the levels. For this reason, academics have offered different models to assess the design management value in the business sector (Borja de Mozota, 2003, pp. 47–48).

The impact of design goes beyond organisational levels. The Danish National Agency for Enterprise and Housing (2003) conducted a research about the economic effects of design. They argued that good design offers a combination of functionality, user-friendliness and material choice, which improves products and services. Nevertheless, many organisations and decision-makers lack knowledge of the economic impact of design. In this study, the Agency commissioned the Danish Design Centre to examine:

- The total investment in design

- Gross revenue performance, employment development and exports

- The difference in gross revenue performance, employment development and export between design-led and non-design-led organisations.

To conduct this research, the Danish Design Centre surveyed 1,000 organisation and developed The Design Ladder (Danish Design Centre, 2015). Table 13 describes the four steps of the Danish Design Ladder, and Figure 19 illustrates this model.

Table 13: The Danish Design Ladder (adapted from the National Agency of Enterprise and Housing, 2003)

Stage	Description
No-Design	**Design is an invisible part of the organisation. Design activities are conducted by non-designers and do not contemplate the involvement of users' perspectives in the development process. The solutions focus mostly on aesthetics aspects**
Design as form-giving	**Design is considered at the final stages of products or graphics, as a form given element. This process is commonly known as styling. The tasks are conducted by either designers or non-designers.**
Design as a process	**Design is integrated into the early stages of product development. Thus, design is not a result but an integral part of the development process. By using design throughout the entire process, the solutions include the involvement of users in the early stages of research. Users insights are taken into account in further stages of development in which the whole team contributes to their variety of skills and capacities.**
Design as an innovation strategy for organisations	**Designers work at the board level supporting the strategic development of the company. At the level, the main focus is on the design process about the future visions of the company as well as the role that design would play in the value chain.**
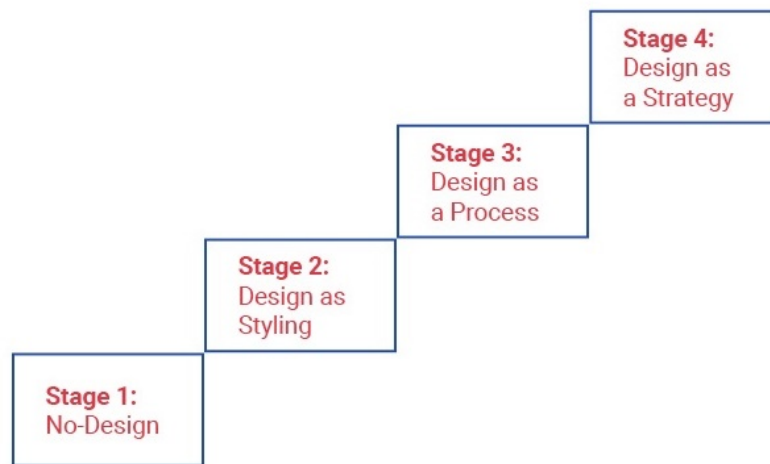
Figure 19: Danish Design Ladder

The result of the investigation conducted by the Danish Design centre revealed the following findings.

- Organisations that invest in design increase their financial revenue by 22% in five years.

- Organisations work with design professionals either internally or externally export 34% more than those that do not invest in designers.

- There is a positive correlation between design and employment because job creation is higher in design-led organisations.

- Gross revenue performance and exports are better in organisations that utilise design at the strategic level.
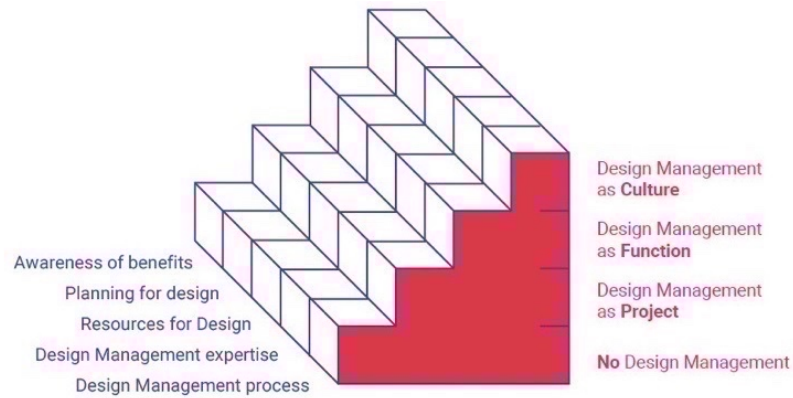
Figure 20: Design Management Staircase (adapted from Best, Kootstra & Murphy, 2010)

Best, Kootstra & Murphy (2010) developed a model to assess the companies' design management capabilities. In the same fashion that the Design Ladder, this model analyses four levels of design management maturity within organisations.

Table 14: Levels of Design Management Maturity (adapted from Best, Kootstra & Murphy, 2010)

Levels	Description
No Design Management	**At this level, companies do not have a design policy. Organisations at this level do not have enough knowledge of how to handle design activities, which, in turn, play a little or non-existent role on companies decisions. The results of design activities are unpredictable and inconsistent due to the lack of standards.**
Design Management as a Project	**At this level, companies utilise design to achieve specific business needs. Design is utilised at the end of the development process as a finishing touch to products or graphics. Design is used mainly as a marketing tool that adds aesthetic value to products, packaging, or visual identity. The responsible for design activities remains at operational levels.**
Design Management as a Function	**An employee or department manages design. The person or department is responsible for the interaction with other departments and company management. Design is used actively and plays an important role in product development processes.**
Design Management as Culture	**Design plays a fundamental role in the aspirations of the company to position themselves as innovative organisations. Design leads to innovation in the company creating new products, new ways of communication and market positioning. These organisations use a design-driven approach as a way to differentiate from their competitors. Organisations that use this approach are often start-up companies that are founded on innovation or design disciplines. Due to the size of the start-ups, senior management and the whole organisation are engaged with design, using it as a central part of their business processes.**

Furthermore, based on an extensive review of the literature, the authors added to the staircase five factors that influence the success or failure of the implementation of design.

Table 15: Factors that affect the success and failure of design (adapted from Best, Kootstra & Murphy, 2010)

Factors	Description
Awareness of benefits.	**Awareness of the benefits of design allows organisation use design effectively. Managers whose education and background relate to design and branding are likely to value design as a competitive asset.**
Planning for design.	**Organisations that are aware of the benefits of design develop strategies for design. They communicate the design's strategy to the rest of the company to maximise the impact of design management in the organisation. When design is part of the planning processes of the company, it is possible to align the design activities to business and market targets.**
Resources for design.	**This factor relates to the resources that the organisation invests in design, such as staff and creative working environment. Investment also includes budgets assigned to training and production. In other words, all the resources necessaries for a designer to accomplish their activities.**
Design Management expertise.	**This factor is about the quality of the design-related staff and the maturity of the design activities, practices and methods within the organisation.**
Design management process.	**Design is embedded from the start of product development and innovation processes. Design activities are connected to other business areas and wider policy-making processes.**

Junginger (2009) argues that both models, the Design Ladder and the Design Management Staircase, regard design as an activity separate from organising and managing. She proposes a graphic model that represents the use of design thinking according to the 'location' or 'place' in the organisation: design as an external resource, design as part of the organisation, design as a core of the organisation and design integral to all aspects of the organisation. The richness of this approach is that design appears as a strategic resource which can be acquired externally or adopted as an internal resource.

| Design on the organisational periphery | Design as part of an organisational function | Design at the core of the organisation | Design integral to all the areas of the organisation |
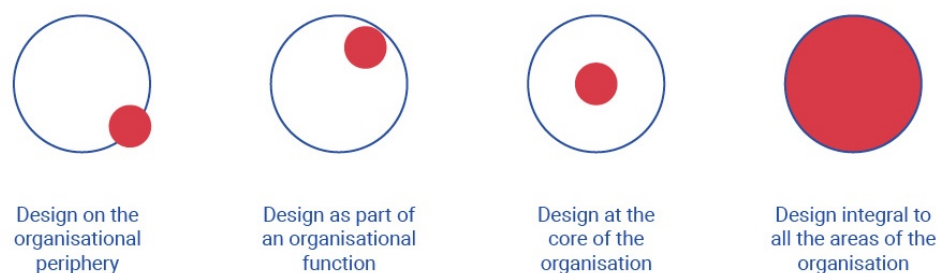
Figure 21: Junginger's model (adapted from Junginger, 2009)

Table 16: Description of Junginger's model (adapted from Junginger, 2009)

Design location	Description
Design on the organisational Periphery.	The organisation does not have a design department or professional within their staff. Therefore, design operates as an operational silo outside of the organisation. The organisation utilises design as an external resource that it is called or dismissed when required. The impact of the design activities is punctual, affecting only the matters related to the scope of a project. Amending errors after sending the brief of the project to the external agency is limited.
Design as part of an organisational function	Design operates within the organisation but as a resource for other departments of the organisation such as engineering or marketing. Thus, design plays multiple operational roles supporting other organisational areas. The impact of design activities is limited to traditional products and services. Nevertheless, the design impact is focused on specific departmental requirements or organisational strategies. Design as a part of the organisation generates spaces for the use of design thinking within the organisation. Thus, design increases the awareness of the possible benefits for design to influence and shape the organisation
Design at the core of the organisation.	Design in the core of the organisation has access to the board level influencing the organisation strategy. The role of design at this level is to unify the products and services to create a greater impact within the organisation. The impact of design ranges from customer services to corporate design. In this position, design is related to a system of products or issues regarding interactions. At this level, design begins to shape or influences certain aspects of the organisation.
Design integral to all the areas of the organisation	At this level, the role of design is to explore, discover and exploit solutions for all type of organisational issues by uncovering and changing fundamental assumptions, beliefs, norms and organisational values. When design as an integral part of the overall organisation, design thinking is applied to generate useful, usable and desirable products and services to the people the organisation intends to serve.

Junginger's model (2009) represents design as an integral part of the organisation which goes beyond traditional design activities and applications to the actual management of the company. This approach offers a novel perspective since design is not related just to a disciplinary application but to a way of organising or managing a business. Therefore, it is important to notice that these benefits described are conducted either by designers or by non-designers. In fact, every organisation develops and offers products and services to someone else (Junginger, 2009, p. 4).

These models offer a framework to foresee the adoption of design practices within companies starting from the awareness of the value of until it becomes part of the organisational culture (Best et al., 2010; Brazier, 2004). Nevertheless, at higher organisational levels often design decisions are taken by non-designers (see Silent Design, page 88). Therefore, it is important to analyse the role that design plays in

organisations from a non-design centred perspective. Next, it will be introduced a different approach in which design is seen to manage organisations. This approach departs from the logic that organisations are designed artefacts that are created by people.

v)   Designing Organisations

Contemporary researchers (Boland & Collopy, 2004; Jelinek et al., 2008; Orlikowski, 2007) analyse the impact of design in organisations from an interdisciplinary managerial perspective. This approach position design as an attitude that managers to be adopted by managers to energise the development of products, services and processes in a profitable but also human-centred fashion (Boland & Collopy, 2004, p. 3). This perspective, centred on the manager, differs from the literature reviewed until this point because it positions design as an activity conducted not necessarily by designers but also by other members of the organisation, primarily managers.

To understand this approach is important to analyse the meaning of an organisation. Different points of view arise when trying to describing what kind of things organisations are (Jelinek et al., 2008). Organisations are considered as socio-technical systems, which means that organisation are constituted by social and material (not just technical) areas which also interact with one another (Carlile et al., 2013, p. 1). In other words, organisations are constituted by an entanglement of material forms and spaces in which humans act and inter-act among them but also with technology (Orlikowski, 2007).

From a design perspective, Simon (1996) established that whereas sciences focus on existing systems, design is used to envision systems that do not yet exist. Additionally, Gorb and Dumas (Gorb & Dumas, 1987) argued that design relates to 'a course of action for the development of an artefact or a system of artefacts; including the series of organisational activities required to achieve that development'. This perspective situates design not just as an organisational outcome (product, service, branding) but also as the organisational activities necessary to reach the company's goals.

Therefore, this definition encourages attention to questions such as: Who designs the organisations? Why and for which purposes? What are design approaches more effective? (Jelinek et al., 2008, p. 318).

The four orders of design (see page 69) shows traces of the role that design plays within organisations. In fact, from an organisational perspective (not based on design practices), the four orders of design seem to apply to the socio-technical definition described above. For instance, design relates to symbols, in forms such as documents, reports, signs, corporate identity; things, in forms that range from office furnishing to the facilities where the organisation is allocated, but also including the products developed by the organisation itself; actions, as the interactions between team members, across departments, with clients and suppliers, with facilities, etc.; and systems, for instance, the relationship with the wider community (Corporate Social Responsibility), or the environmental impact of their operations. Thus, across the four orders, there are signs of design used to lead and manage the organisations to accomplish their objectives.

2.5.3 Design for Social Innovation

The various design approaches introduced show the human and also the social nature of design. Design also contributes to social innovation in multiple ways. The following shows the context and how design supports social innovation. Additionally, it provides the challenges of design for social innovation.

i)   Design for social innovation context

Design has also contributed to developing solutions to pressing social issues. Almost five decades ago, Papanek claimed that design has been satisfying only evanescent wants and desires rather than genuine needs (V. Papanek, 1984, p. 15). This was a call for designers to centre in social issues rather than focusing solely on economic purposes. Designers have been exploring innovative ways to solve social problems. Thus, design for social innovation is described as the activities that a designer can do to activate and conduct a process of social change bearing in mind the principles of sustainability (Manzini, 2015, pp. 58–59).

Organisations and researchers have been using and investigating the impact of design in social innovation. For instance, in the UK, organisations such as NESTA and The Young Foundation have adopted a design-oriented approach in social innovation. In the US, IDEO promotes HCD approach for social innovation declaring, for instance, that design can improve the lives of people in poor and vulnerable communities. Service design consultancies, such as Engine, Live|Work and Snook, have developed services for city councils and governments to increase their engagement with local communities.

From an academic perspective, design for social innovation has drawn the attention of researchers. The interest in design for social innovation relies on multiple design conditions to support initiatives to move towards more sustainable solutions (Cipolla & Moura, 2012, p. 41). In 2009, Ezio Manzini created the Design for Social Innovation towards Sustainability (DESIS) network. This worldwide network aims to investigate the notions of creative communities and social innovation in several design schools around the world. DESIS network worked local, regional and global partners on the creation of socially relevant solutions to pressing problems.

ii)   Design for Social Innovation in practice

Design for social innovation works in the same space than social entrepreneurship and social innovation because the three of them have a social purpose as the core of their missions. The human-centred approach enables the development of solutions that considers human behaviours, needs and capabilities for whom they are intended (Norman, 2013, pp. 8–9). For instance, IDEO's approach is based on the HCD process, which involves the inspiration, ideation and implementation stages. This approach also considers the divergent and convergent thinking introduced in the double diamond (Figure 15, p. 72). IDEO, one of the most important design consultancies around the world, is also one of the main advocates in promoting design thinking for social innovation. In their website, they accompany the HCD process with a set of tools for design including learning platform, guides (field guide and facilitator's guide), a travel pack and two courses (prototyping and the course for HCD). This comprehensive set of materials are available for free download on their website.

Inspiration   Ideation   Implementation
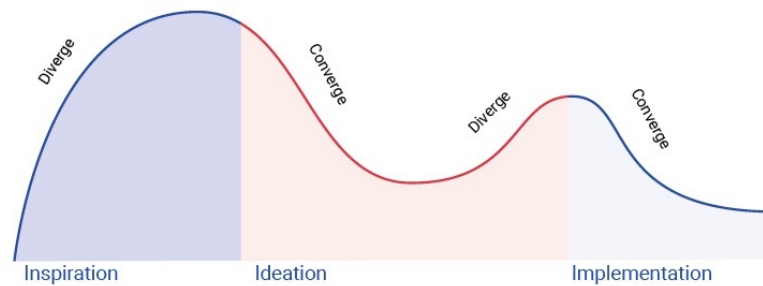
Figure 22: Human-Centred Design (IDEO)

The impact of the application of HCD to social innovation initiatives, or involving designers in social innovation projects, have shown to be beneficial in many aspects. For instance: supporting and empowering the generation of new ideas; multiplying the society's ability to innovate; envisioning and creating future scenarios following the principles of sustainability, and support and promote partnerships among the different stakeholders (Cipolla & Moura, 2012, pp. 43–44).

Table 17: The benefits of design for social innovation (from Cipolla & Moura, 2012)

Design as empowerer	Design as multiplier	Design as envisioner	Design as connector
- Identify social innovation cases - Map actors, contexts, activities, and relationships - Gain insights regarding behaviours, motivations, problems, and opportunities - Generate empowering ideas - Prototype and develop tools for supporting and scaling cases	**- Identify social innovation extreme behaviours** **- Gain insights regarding motivations, problems, and opportunities** **- Translate behaviours into solution ideas** **- Prototype and develop solutions** **- Replicate solutions in other contexts to solve social challenges**	**- Identify contexts in need of social innovation** **- Gain insights regarding behaviours, motivations, problems, and opportunities** **- Envision more sustainable scenarios** **- Prototype and develop envisioned solutions** **- Continuously monitor and iterate solutions in context to favour a sustainable future**	**- Map physical, human, and strategic resources that are necessary for social innovation** **- Understand and gain insights regarding interactions, problems, and opportunities** **- Envision more sustainable relationships** **- Prototype and develop envisioned relationships as part of an integrated system**

From a disciplinary perspective, Manzini (2015, p. 62) recognised two design disciplines that are relevant to social innovation: service design (to create solutions that

consider the interactions involved) and strategic design (to stimulate the partnerships among different stakeholders). Additionally, Mulgan (2014, pp. 2–4) has listed several strengths of design in social innovation projects, such as understanding user experiences, rapid prototyping, visualisation and systematic approach.

iii)   When design for social innovation does not work

However, the use of designers in social innovation projects has shown some disadvantages (Mulgan, 2014, pp. 4–5)

The first disadvantage is about the cost of expert designers who also tend to use expensive methods and tools within their projects, most of the time, unaffordable for social organisations. There are many cases in which well-paid designers have been parachuted into poor areas to support social innovation projects with unsuitable methods that do not match the reality of the beneficiaries.

The second issue is about the compromise of consultant designers with the organisations at the end of the project. Similarly, to social entrepreneurship, social innovation initiatives encounter many difficulties to attract and retain talent in their organisations. Thus, designers tend to leave the projects after the funding ends.

The third concern is about the lack of awareness of the real terms or limitations of the project when designing solutions, in other words, designers tend to design according to the conditions and resources of the industry rather than the local ones. In fact, designers that have worked previously in the industry usually suggest solutions that consider the utilisation of materials or manufacture processes that are not available for social organisations.

Last but not least, designers are hesitant to learn from other practices. Designers show a tendency to demand others to adopt designerly approaches, but they do not recognise that they also might need to learn from others. This issue is critical when designers do not consider the learnings from previous failure and present ideas that have been already tested and not worked. Hence, despite all the advantages that design for social innovation provides, in practice it is not always possible to utilise design in social initiatives.

2.5.4 Design in the Global South – Decolonial Design

There is an increasing debate about the adoption of design principles and practices in the Global South. In fact, current design practices in the South are based on perspectives developed in the North (Fry, 2017), considering the *North* as the regions of globalised and developed countries. The understanding of design is grounded in market-based perspectives which processes are linked to profit-making, human-centred and technocratic objectives (Taboada et al., 2020). In this sense, design in the Global South tends to replicate the conditions of coloniality denying and oppressing the cultural values of non-Western design, craft and arts (Escobar, 2017a, 2017b; Fry, 2017; Taboada et al., 2020). Decolonial authors argue that it is necessary to rethink the understanding and education of design in the Global South. They argue that the replication of these models do not sustain the values and overlook the situated context of the South.

In practice, it is possible to see this replication in the adoption of models such as the double diamond (see page 71), design thinking (see page 75) , HCD (see page 73) or four orders of design (see page 69). In essence, these models suggest that design is 'universal' in which values knowledge, process and methods can be abstracted, reproduced and generalised (Akama et al., 2019). However, in *the real world,* design is named and used differently according to the cultural and social context of its localities (Akama & Yee, 2016). The applications of design models and frameworks created in developed countries do not consider the conditions of the Global South. Therefore, it is important to acknowledge that the use of these models to understand the use of design in the the South might not reflect the peculiarities of the context.

The term *decolonial design* aims to de-link design approaches from Western perspectives. The objective is to understand and practice design from a new perspective that seeks to imagine other possible non-Western ways of being and living in the world (Taboada et al., 2020). This approach is relevant for this research as most of the models and frameworks analysed to understand entrepreneurship and design theories come from a Western perspective. Nevertheless, the case studies of this investigation are located in Chile, which implies that their adoption and use will be questioned.

2.6 Summary of Chapter 2

This chapter provided a review of the literature regarding social issues, entrepreneurship, social entrepreneurship and design.

First, it provided an overview of the social dimension as a context of this investigation. All over the world, governments are tackling social issues focusing the real social demands or needs. Nevertheless, defining social issues is difficult due to the complexity of varables that compose them. Societies are complex to define; therefore it is also difficult to determine how social issues arise. Social challenges are the combinations of conditions that affect a determined group of people, which in turn, describe these conditions as problematic (Lauer, 1976, p. 122) and become part of a general debate (Isaacs, 2015, p. 9). Thus, there will never be a single event that causes a social problem, preferably a combination of multiple elements that provoke undesirable conditions for a group of people.

Second, it explored the concept of social entrepreneurship from the premise that social entrepreneurship is the application of methods, process and techniques of business entrepreneurship to achieve social or environmental mission (Kickul & Lyons, 2012, p. 1). For this purpose, Part 2.4.1 explored the social entrepreneurship drivers to understand the personal motivations that underpin the pursuit of social impact. Thus, social entrepreneurs aim to fill a gap between socially desirable conditions and the existing reality (Guclu et al., 2002, p. 3) by changing the current social condition or working in anticipation to pressing social challenges.

The difference in the type of mission (social impact instead of profitability) makes the traditional or commercial and social entrepreneurship different, which also draw particular challenges for social entrepreneurs. Those challenges relate to internal and external factors that hinder the capacities to exploit the opportunities. Some of these challenges are convincing people to invest in an organisation which purpose is social, leveraging resources, operating into the bureaucracy of institutional and market structures as well as facing cultural differences between the organisations and communities.

On the other hand, this chapter explored different models that attempt to describe the social entreeurship process. In short, the process involves three main stages: context understanding and opportunity definition, opportunity exploitation and organisational growth.

Third, it explored different definitions of design as well as the use of design in organisational and social contexts. To define design is important to consider the different approaches that researchers have taken during the last decades. Design can be considered as a discipline, as cognition, as a process, or as an outcome. Designers commonly conduct design, but it has been discussed that *everyone designs who devises courses of action aimed at changing existing situations into preferred ones* (Simon, 1996, p. 111). Design is also recognised as a capacity to deal with wicked problems and to offer solutions to them (Rittel & Webber, 1973, p. 161).

Nevertheless, to understand how design operates, researchers have centred their attention on the cognitive process of working of designers. Thus, design implies a constant interrogation and exploration of a given problem to the structuration, formulation and development of new concepts (Cross, 1997, 2006, 2011). This way of thinking, commonly called design thinking, has been adopted by organisations as a way to foster innovation. Contemporary approaches also highlight the human-centred approach of design. Human-Centred Design is an iterative process that seeks to identify the right problem and fulfil human needs (Norman, 2013), this approach has been used in organisations to innovate as well as in social organisation to generate social innovations. Buchanan argues that design has been expanding the areas in which it operates. Therefore, he introduces four levels or orders in which design affect contemporary life (Buchanan, 1992, 2001): Symbols, Things, Actions and Thoughts. The four orders provide a wider scope of the different uses of design from the creation of symbols or graphics to thoughts or systems.

Design is not just the application of aesthetics parameters to products and services. Design also operates in a variety of contexts, contributing to organisations and social initiatives. Design creates value for organisation generating competitive advantages of product and services, developing markets, dealing with social changes, diversifying product portfolios, for instance. On the other hand, its human-centred approach allows

social innovation initiatives to solve pressing social needs with the main focus on the people who are profoundly affected by them.

Analysing design in organisational and social context aims to show the potential contributions of design for social entrepreneurship. Social entrepreneurship is the application of mindsets, processes, tool and techniques of business entrepreneurship to the pursuit of a social and/or environmental mission (Kickul & Lyons, 2012). Therefore, design for social entrepreneurship should include the way that design contributes to businesses as well as social initiatives. Design supports organisations creating value in multiple ways, such as generating competitive advantages of product and services, developing markets, dealing with social changes, diversifying product portfolios. Therefore, to maximise its contribution, researchers and practitioners have studied the ways that design is managed in organisations. Thus, design management comprises "the management of people, projects, processes and procedures regarding the design activities within the company" (Best, 2010). However, design and design management are not always adopted by organisations. Different models aim to illustrate the ways that design is used in organisations. Those models, analyse the level of maturity or adoption of design (Danish Design Ladder, page 90; Design Management Staircase, page 91) as well as the location that design occupies in organisations (Junginger's model, page 92).

On the other hand, interdisciplinary researchers have also described how design operates in organisations from a socio-technical perspective. This perspective situates design not just as an organisational outcome (product, service, branding) but also as the organisational activities necessary to reach the company's objectives. However, design is not always recognised as such despite the benefits and the multiple ways that it is used in organisations. This way of use design is called silent design.

Design also contributes to social innovation initiatives. Design for social innovation involves those design initiatives that aim to solve social issues. The human-centred approach enables the development of solutions that considers human behaviours, needs and capabilities for whom they are intended (Norman, 2013, pp. 8–9). Thus, in the case of social innovation initiatives, this approach allows organisations to solve pressing social problems. Nevertheless, those initiatives are commonly led by designers who, in

turn, bring some disadvantages related to the adaptation of designers to social innovation projects.

The next chapter explores the research methodology of this research study. 3.2 describes the stand of the researcher through the research foundations of this study. 3.3 and introduces the research design of this study. Finally, 3.4 and 3.5 introduced the methods selected to collect and analyse the data, respectively.

Chapter 3   Research Methodology

3.1 Introduction

Research is a 'systematic and organised effort to investigate a specific problem that needs a solution' (Uma Sekaran., 2003, p. 4). Two elements are important in this definition: 'systematic' and 'investigate'. 'Systematic' suggests that research is a process that follows logical relationships, whereas 'to investigate' means that there are different purposes for conducting research. In essence, research is a creative and strategic process that involves the identification of an area for research, data collection, analysis, and presenting findings (Gray, 2014, p. 4). There are different purposes for conducting research. For instance, academics conduct social research due to the existence of gaps in the literature to understand what is going on in social life (Bryman, 2012, p. 5). Throughout the research process, different types of reasoning are used. A deductive approach moves towards to the hypothesis testing from the existing knowledge. An inductive approach seeks to discover binding principles from theories that prompted through the exercise (Bryman, 2012, p. 26; Gray, 2014, pp. 16–18). Nevertheless, these approaches are not mutually exclusive (Gray, 2014, p. 18) but can be used in combination with one another.

When starting a research project, there are fundamental questions that have to be answered. First, what methodologies and methods will be used in the research? Second, how to justify the methodologies and methods chosen? (Crotty, 1998, p. 2). To answer these questions is necessary to consider and identify four elements that will be part of the investigation: methods, methodology, theoretical perspective and theory of knowledge.

Methods in research refer to the techniques that researchers utilise to capture the collect the data, whereas *methodology* is the combination of methods selected for conducting a study. In short, methods can be considered as *tools* and methodology as a *toolkit* (Muratovski, 2016, p. 35). A *theoretical perspective* is a philosophical stance that informs the methodology, providing a research context for the process and its logic and criteria. The*ory of knowledge* refers to theory embedded in theoretical perspective and; therefore, in the methodology.

Crotty (1998). suggest a hierarchical arrangement of these four elements showing how they inform one another Figure 23
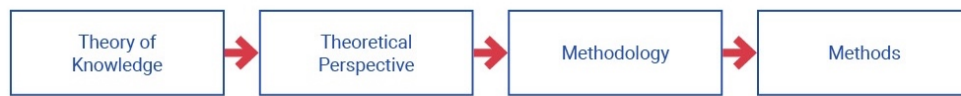
Figure 23: Four research elements (adapted from Crotty. 1998)

Therefore, the structure of this chapter adopted these four elements of research theory of knowledge, theoretical perspective, methodology and methods. In addition, it provides the sampling strategy and quality criteria of this study. It is important to notice that methods refer to the instruments used to collect and analyse data. This chapter is structured as follows. 3.2 provides an overview of the research foundations of this research. It provides a theory of knowledge, theoretical perspective and the research methodology chosen to conduct this research study. 3.3 offers the research design of this study. The research design comprises the research strategy utilised, and the sampling strategy and the criteria considered to guarantee the research quality of this study. 3.4 introduces the data collections methods used in this study which include literature review, semi-structured interviews, field notes and unobtrusive measures. Finally, 3.5 shows the process adopted to analyse the data collected. Chapter 8 also introduces a critical framework developed to construct the case stories of this research study.

Figure 24: Structure of Chapter 2

3.2 Research Foundations

This chapter explores the foundations of this research. It shows the different approaches that define the researcher stand in the investigation and the most adequate methodology for conducting this study. It describes the theory of knowledge, theoretical perspective and research methodology and for conducting this research.

3.2.1 Theory of knowledge

Theory of knowledge refers to the research paradigm that describes the perspectives of how researchers see reality. Thus, the study of *being* is called *Ontology,* which implies the study of the nature of existence.

On the contrary, *Epistemology* studies *what it means to know* through a philosophical background that decides what type of knowledge is valid or adequate (Gray, 2014, p. 19; Silverman, 2013, pp. 111–112). It is essential to notice the difference between these perspectives because they can help to clarify the issues of the research design. For this study, an epistemological approach was used because it helps to answer the research questions from the study from both theory and practice.

From an epistemological perspective, three positions have emerged. Table 18 describes the epistemological points of view. (Gray, 2014, p. 20)

Table 18: Epistemological viewpoints

Epistemological viewpoint	Description
Objectivism	**The reality is independent of consciousness 'out there', rejecting the subjectivity, and indeed, not including feelings or values.**
Constructivism	**The meanings are constructed from the human's interactions with the world.**
Subjectivism	**The subjects construct the meanings of the objects**

Based on these classifications, this research study adopted a constructivism approach. The reason for selecting constructivism is because this approach focuses on human interactions, which is relevant for the study of how social entrepreneurs perform and interact within a particular context.
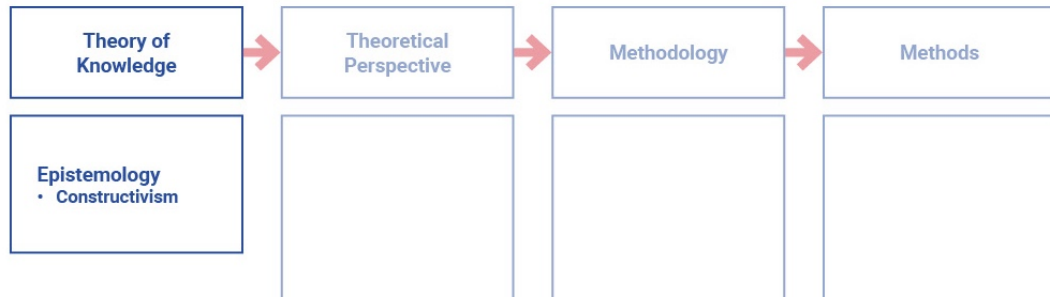
Figure 25: Theory of knowledge selected

3.2.2 Theoretical Perspective

Theoretical perspectives refer to the "beliefs and assumptions about the development of new knowledge", providing a research context for the process and its logic and criteria (Crotty, 1998, p. 3). They are informed by the theory of knowledge selected. Therefore, the next are brief descriptions of theoretical perspectives related to the chosen theory of knowledge, epistemology. Table 19 provides a succinct summary of theoretical perspectives.

Table 19: Theoretical Perspectives

Theoretical perspective	Argument
Positivism	The social world is external to the researcher, and its properties are measurable by the senses (Gray, 2014, p. 22)
Interpretivism	To understand the social world is necessary the interpretation of a researcher to grasp the subjective meanings of the human interactions (Bryman, 2012, p. 30).
Critical inquiry	Meta-process of investigation which research questions aim to challenge the conventional 'social structures' (Gray, 2014, p. 28).
Feminist	This approach argues that the women perspective is less distorted to research a men-dominant society (Gray, 2014, pp. 28–29).
Postmodernist	This approach is about the deconstruction of texts (often in themes within advertisement, lifestyles, fashion, sub-culture, and gender) to understand the representation of the world and the production of meanings.
Pragmatic approach	This approach relies on the foundation that ideology is valid only if it works, and it generates practical consequences for society (Gray, 2014, pp. 21–29).

As 2.2 *Social Issues* articulates, when defining social issues (the core of social initiatives), there are uncountable factors that affect that definition. Furthermore, social issues are constructed by individuals that are affected by them; therefore, an

interpretation of the real-world is required for conducting this research. For this reason, and based on theoretical perspectives highlighted, this thesis adopts an interpretivism perspective. The following is an in-depth discussion of the interpretive paradigm.

i)   Interpretivism

The main focus of interpretivism is to investigate the ways that humans make sense of the world (Saunders et al., 2016, p. 134). In this study, an interpretive framework was adopted as it aimed to understand the social entrepreneurs (participants) experience from their perspective. As such, the researcher immersed himself within the narratives of the social entrepreneurs about their processes and addressed the research questions by adopting an empathic understanding of participants. Figure 26 provides a succinct summary of the different interpretivist approaches.
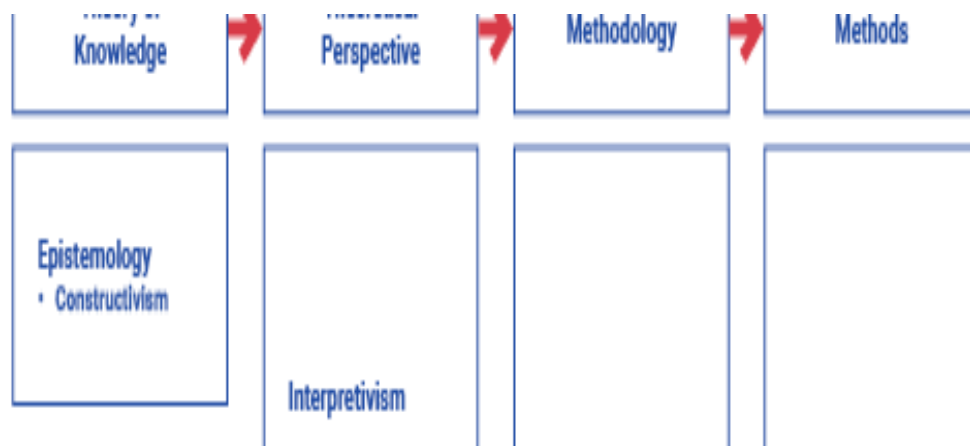
Figure 26: Theoretical perspective selected

3.2.3 Research Methodology

The methodology of research is informed by theoretical perspective selected. Hence, in this research project, the methodology is informed by epistemology interpretivism as its approach. Also, the choice of a research methodology concerns multiple factors such as the purpose of the research, strategies of enquiry, type of data collection and timeframes for research.

i)   Purpose of the Research Study

The purpose of the research refers to the possible forms of conducting the study. There are four forms of study: (1) exploratory, (2) descriptive, (3) explanatory and (4)

evaluative studies. Table 20 shows a succinct description of the different purposes of research studies.

Table 20: Purpose of the research

	Aim	Questions
Exploratory	To *explore* what is happening and to collect insights about a research topic (Saunders et al., 2016, p. 174)	'How' or 'What'
Descriptive	To deliver an accurate account of some phenomenon, the patterns of relationships in some social context, at a particular time (Blaikie, 2010, p. 71).	'Who', 'What', 'Where', 'When' or 'How'
Explanatory	To investigate the relationships between causal relationships between variables (Saunders et al., 2016, p. 176)	'Why' or 'How'
Evaluative	To identify how good or bad something has worked out based on people's experiences (Gray, 2014, p. 37; Saunders et al., 2016, p. 176).	'What', 'Why' or 'How'

This research used combined studies that aim to achieve the purpose of the research. This study combined exploratory, descriptive and explanatory research. The following is a detailed description of the studies conducted and their implications within this research study.

- *Exploratory research*

Exploratory studies are used to answer research questions that are likely, to begin with 'What' or 'How'. Exploratory studies can be undertaken by:

- A review of the literature.

- Conversations with experts in the field.

- In-depth individuals or focus groups interviews. (Gray, 2014, p. 36).

Exploratory interviews are relatively unstructured built upon the narratives of those who contribute to the research (Saunders et al., 2016, p. 175). The advantage of exploratory studies is that they are flexible by nature, so they can be adaptable to change.

In this research, exploratory studies were conducted to understand the social entrepreneurship context in Chile, specifically in the social incubator in which this research was conducted. For this purpose, exploratory interviews were conducted with key informants (members of the social incubator and social entrepreneurs). Moreover,

the flexible nature of the exploratory studies allowed the researcher to adapt the methods of inquiry according to the circumstances encountered during the primary data collection (see page 314)

- *Descriptive research*

Descriptive studies seek to provide a comprehensive image of the situation, person, or event as it is and also showing the relationships among each other (Gray, 2014, p. 36). This type of study is normally used as an extension of a piece of an exploratory study or a forerunner to a piece of explanatory research (Saunders et al., 2016, p. 175).

In this research, descriptive studies were used to illustrate the relationships between the circumstances that social entrepreneurs encountered during their incubation process with the social entrepreneurship process (see page 55) and the use of design during this investigation.

- *Explanatory research*

Explanatory studies aim to explain descriptive information (Gray, 2014, p. 37). Therefore, the emphasis of explanatory studies is to study the situation to explain the relationships between variables (Saunders et al., 2016, p. 176). In this research, explanatory studies were conducted to present the relationships between the variables that affect social entrepreneurs as well as how design was used by social entrepreneurs through their processes.

ii) Strategies of Enquiry: Narrative Research

The strategy of enquiry is a plan of action that the researcher defined to answer the research question (Saunders et al., 2016, p. 177). In answering the research question, the researcher may combine different research strategies and methods in the research design (Gray, 2014, p. 164). Table 21 shows the key features of different research strategies.

Table 21: Strategies of Inquiry

Strategy	Features
Case Studies	Case studies is a research strategy that aims to empirically investigate multiple sources of data of a particular contemporary phenomenon within its context (Saunders et al., 2016, p. 711). According to Yin (Yin, 2014, p. 4) *"case studies allow investigators to retain the holistic and meaningful characteristics of real-life-events"*. This method is associated to qualitative research because it permits the generation of multiple perspectives through the data collected from different methods or through the same method but different accounts (Gray, 2014, p. 163). The case study method is useful when a 'how' or 'why' question is asked to understand a contemporary event over which the researcher has little or no control (Yin, 2014, p. 13).
Ethnography	Ethnography research involves the long-term immersion into a culture in order to capture cultural aspects, such as language use, rituals, ceremonies, relationships and the use of artefacts (Tracy, 2013, p. 29).
Ethnomethodology	Ethnomethodology studies focus on the ways that people make sense of their context and accomplish their daily lives (Gray, 2014, p. 167). This strategy of inquiry is based on three basic assumptions: (1) Interactions are structurally organised; (2) contributions of interactions are shaped by the context but also renewed by the context; (3) no order of detail can be dismissed as a disorderly, accidental or irrelevant (Flick, 2009, p. 60). Thus, ethnomethodology focuses on how people produce their reality through an interactive process.
Grounded Theory	The grounded theory seeks to build theories from the data (Corbin & Strauss, 2015). The grounded theory comprises theories that are discovered, developed and verified through a data collection and analysis of the data of a certain phenomenon (Gray, 2014, p. 694). One of the main characteristics of grounded theory is that it does not use deductive approach, which means that it does not begins with a hypothesis, research questions, or using literature to underpin the study (Gray, 2014, p. 694).
Participatory Action Research (PAR)	Participatory Action Research builds upon Action Research methodological approaches but incorporating participants in the reflection of the political and cultural contexts in which the action takes place (Gray, 2014, p. 168).
Narrative Research	Narrative research aims to view stories as fundamental human experiences (Tracy, 2013, p. 29). Narrative analysis is an analysis of how stories are told chronologically, paying attention to the description of sequences of events and the various elements that compose the stories (Gray, 2014, p. 168). In organisational research, narrative stories are considered as essential constituents of organisations itself (Gabriel, 2015). In other words, narratives stories represent not only what happens within an organisation as a *closed box*, but also as something that helps to construct the *box* itself. Narrative researchers gather stories from field notes, narrative interviews, oral tales, letters, or autobiographies.

This research adopted a narrative research strategy. This strategy allowed to collect stories that describe the different circumstances and issues that the social entrepreneurs met during their journeys. The following is a description of this strategy.

- ***Narrative Research***

Narrative research refers to a research strategy in which stories are used to describe human experiences (Tracy, 2013, p. 29). Narratives research involves the elicitation and analysis of discourses that shows temporal sequences of what people detect in their lives (Bryman, 2012, p. 582). These discourses consolidate events, happenings and human actions into goal-directed processes (Polkinghorne, 1995, p. 5). This strategy pays attention to how people *make sense* of what is happening, rather than what *actually* happens. Unlike chronology, narratives communicate the events in the order of importance that the narrators give to them (Chase, 2008, pp. 64–65). In this fashion, narrative research provides explanatory knowledge of why a person acted in a specific way through a series of anecdotal descriptions of particular circumstances (Polkinghorne, 1995, p. 11).

There are five lenses used in narrative research. First, the narrative is a distinct form of discourse of retrospective meaning-making. Second, narratives are verbal actions in which the narrator explains, describes, entertains, informs, defends, confirms, or challenges the status quo. Third, stories are enabled and constrained by social circumstances and resources. Fourth, narratives are produced in specific settings, for an audience and purposes. Fifth, researchers are also narrators of the interpretations that they develop (Chase, 2008, pp. 64–66).

The narrative research commonly uses interviews as a primary method of data collection, emphasising the biographical experiences of the respondents (Gray, 2014, p. 168). Interviews include questions designed to elicit stories, for instance, questions such as 'tell me what happened', followed up with 'and then what happened' or 'what were the circumstances for this particular action' (Bryman, 2012, p. 582; Slembrouck, 2015, p. 241).

Through narration, the interviewee describes how events unfold. The narrative writing style is informal, with verbatim quotations, illustrations and metaphors (Zeller, 1995, p. 78). Key elements of this strategy include predictive frames that people use to describe events and evaluative elements that reveal the narrator's viewpoint (Gray, 2014, p. 168). These frames, also known as *plots*, are conceptual schemes used to display the contextual meaning of the event displayed by the narrator (Polkinghorne, 1995, p. 7).

Narrative research, then, is a strategy that aims to present qualitative data through the lens of the stories that people employ to describe their experiences. The narrative analysis approach enabled to collect the stories of the social entrepreneurs as they perceive them. In this way, it was possible to understand the social entrepreneurship process and the different circumstances that the entrepreneurs encountered from their point of view. This perspective allowed the researcher to structure the cases from the stories told by the entrepreneurs and to formulate the findings of this study based on their experiences on the social entrepreneurship process. The process of data analysis in narrative inquiry is introduced in 3.5, data analysis.

iii) Type of data collection: Qualitative Research

There are two types of data collection methodologies: quantitative and qualitative research. *Quantitative research* is used to describe, simplify and generalise things (Muratovski, 2016, p. 37). The main characteristics of quantitative research are the examination of the relationships between different variables of the data collected and theory. After collecting the data, this is numerically measured and analysed by the use of statistical methods (Saunders et al., 2016, p. 166). Quantitative research is usually associated with methods such as surveys and analysis of existing databases. The main criticisms towards quantitative research are that by numerically analysing the data collected, this type of research usually fails to represent the reality of the social world or the real-life (Bryman, 2012, p. 178). Consequently, quantitative research, as a data collection method offered a type of data that was not suitable for this research study. This research aimed to understand the different circumstances that social entrepreneurs faced during the incubation process, which could not be obtained by a positivist approach based on numerical analysis.

Alternatively, *qualitative research* is used to analyse the ways the individuals perceive and experience the world (Muratovski, 2016, p. 37). As its name suggests, qualitative research is a term that focuses on the quality of the things rather than the quantity (Bazeley, 2013, p. 3). Qualitative research is typically associated with interpretive philosophy because researchers make sense of the subjective and socially constructed meanings of the social phenomena studied (Saunders et al., 2016, p. 168). This research study adopted a qualitative approach since it allowed the collection of experiences and

interpretations of the social entrepreneurship process and the utilisation of design by the entrepreneurs.

iv)   Timeframes for research

There are two types of studies regarding the timeframe of the research: Cross-sectional and Longitudinal. The selection of the timeframe depends on the timescale available to conduct the research study (Gray, 2014, p. 36).

- ### *Cross-sectional Study*

Cross-sectional studies involve a phenomenon at a particular time. These studies are also known as *snapshots* taken at a particular time. They describe the incidence of the phenomenon or explain relationships of factors in different organisations (Gray, 2014, p. 36; Saunders et al., 2016, p. 200).

- ### *Longitudinal Study*

Longitudinal studies enable the study of changes and developments. Longitudinal studies are a series of *snapshots* that represent the events over a given period (Gray, 2014, p. 36; Saunders et al., 2016, p. 200).

This study adopted a longitudinal timeframe because it seeks to analyse the *journeys* of four social entrepreneurs across an incubation programme that lasted six months. This study involved three key stages: (1) pre-intervention (June - December 2016), (2) intervention (January – February 2017) and (3) post-intervention (March – December 2017) (see Research Design, 3.3)

Figure 27 shows the methodology selected for this research study.
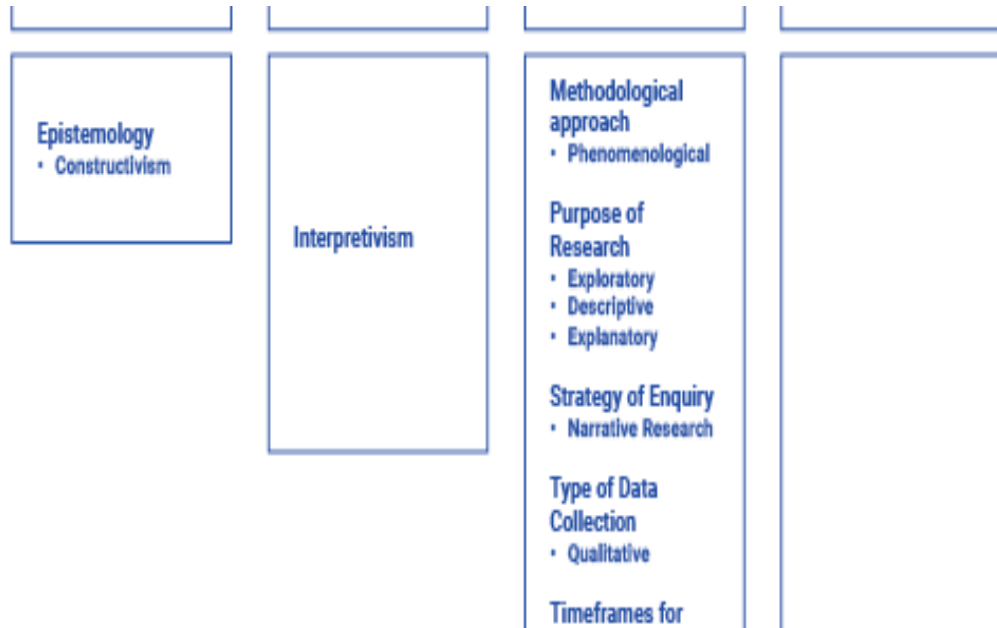
Figure 27: Methodology selected for this research study

3.3   Research Design

The research design is the overarching plan for integrating the different elements of the study a coherent manner. A research design is the plan for collection, measurement and analysis of the data (Gray, 2014 p. 132). This chapter explores the research design of this study. It shows the various stages of the data collection, the strategy for selecting the sampling and the criteria to secure the quality of this investigation.

Figure 28: Structure of Chapter 6

3.3.1 Research Strategy

The research design is the configuration of the research, involving the questions or pieces of evidence gathered and the interpretations of the data (Saunders et al., 2016, pp. 148–149). The research strategy is crucial to define the methods of data collection and analysis used in the investigation. The following is the strategy composed of four stages: (1) theoretical exploration, (2) pre-intervention, (3) intervention and (4) post-intervention. Figure 29 shows a diagram of the Research Design.
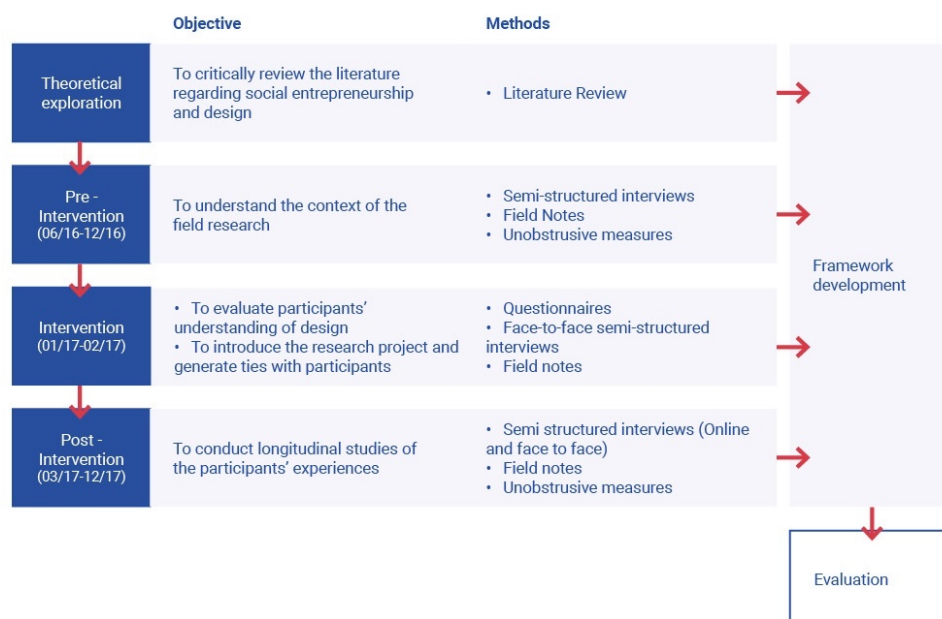
Figure 29: Research Design

i)   Theoretical exploration

The initial stage aimed to review the literature related to the research topic to minimise theoretical assumptions and to gain an in-depth understanding of what was studied in the field. Theoretical exploration also was used to develop the research question and develop the first iteration of an initial conceptual framework.

ii)   Pre-Intervention (June 2016 – December 2016)

The first stage of the fieldwork was a pre-intervention, exploratory study. During this stage, the researcher travelled to Chile to understand *(feel)* the context of the study. The researcher conducted three semi-structured interviews with staff members. Through the interviews, the researcher aimed to collect data that allows him to understand the internal processes of the organisation, the different type of social entrepreneurs as well as the perception of social entrepreneurship in Chile. In this stage, the researcher was invited to take part as a mentor of the incubation programme from November 2016-January 2017. Nevertheless, due to the delay in the review of the applications by the funding organisation, the programme started in January and finished in June 2017.

iii)   Intervention (January 2017 – February 2017)

Initially, the intervention was going to be conducted between November 2016 - January 2017. However, due to the change of the dates, this stage was conducted between January and February of 2017. The intervention stage aimed to collect data from social entrepreneurs participating in an incubation programme. Initially, an action research study was planned in which the researcher was going to participate in the incubation process as a guest mentor. The initial plan included interventions in which the researcher was going to guide the adoption of Design Management by the entrepreneurs.

Nevertheless, due to the new dates, it was impossible to conduct an action research study because the researcher could not participate in the entire process in person but for three months. This limitation caused a change in the research design. The research adopted a narrative approach instead of action research as it was initially planned.

Thus, the researcher conducted structured interviews to evaluate the understanding of design by social entrepreneurs. These interviews established a baseline that enabled the researcher to prepare and conduct a presentation about general concepts regarding design, and how social entrepreneurs could use them in their ventures. The presentation included a workshop facilitated by a staff member of the incubator, in which the participants designed a service. After the presentation, the participants completed an online questionnaire (survey) that allowed the researcher to evaluate the impact of his intervention and set a common language between himself and the participants regarding design issues. The results of both diagnoses can be found in each case story introduced in Case Stories' sections Design Understanding.

Figure 30: Service design workshop

iv)   Post-Intervention (March 2017 - December 2017)

From March 2017 to December 2017, a post-intervention or follow-up process was conducted by distance. After the intervention, the researcher had to return to Lancaster, United Kingdom. Since the entrepreneurs were based in Chile, the data collection was undertaken by three to four online interviews with each entrepreneur and two interviews with the mentor of the programme (see more details of the Semi-structured interviews conducted with participants in, page 126). In sum, the post-intervention involved twelve in-depth interviews with social entrepreneurs and two interviews with the mentor of the programme. In this way, it was possible to collect stories from the participants regarding their processes, issues and use of design. On the other hand, the interviews with the mentor of the programme captured her perspectives on the entrepreneurs' processes and served to the data collected from the entrepreneurs. This process had some limitations.

The distance made it difficult for the researcher to maintain engagement with the entrepreneurs. For example, a fifth organisation that was taking part of the study dropped out when the researcher returned to the UK. Similarly, the fourth case story, Municipio Verde, did not participate in the last round of interviews. Therefore, the researcher finished the data collection using the unobtrusive methods, specifically utilising the information published in social media by the organisation.

In sum, the post-intervention stage showed advantages and disadvantages regarding the frequency of the interviews and the presence of the researcher during the data collection. A positive aspect of this stage was that due to the low frequency of the interventions of the researchers, the entrepreneurs had to reflect on the *life stories* of their processes to answer the questions of the interviews. In this way, the answers were more reflective and focused on the issues that affected them the most, instead of being focused on irrelevant or specific issues for the overall process. The researcher used the entrepreneur's reflection to identify the key *moments* of their processes and explore in detail how design was utilised in each of them. On the other hand, the low frequency of the interviews affected the level of engagement of the participants. One of the participants dropped out of the research and a second one did not participate in the last interview conducted.

3.3.2 Sampling Strategy

Sampling in phenomenological qualitative research is the selection of individuals that share everyday experiences; hence behavioural patterns of meanings and relationships can be identified (Gray, 2014, p. 208). Sampling in qualitative research relates to the notion of purposive sampling. Purposive sampling seeks to select participants strategically to address the research questions (Bryman, 2012, p. 418). In this research study, the sample criteria used was to choose meaningful cases that have the necessary knowledge and experience of the phenomenon studied (Flick, 2009, pp. 122–123).

The participants of this investigation have relevant experience (Merkens, 2004) working with social entrepreneurs or working as social entrepreneurs themselves. All the participants were related to the same organisation, a Chilean business incubator with a focus on social enterprises. The organisation acted as a context of the study in which the four cases and the key informants were embedded. Table 22 summarises the criteria used to select the participants across the research project

Table 22: Sample strategy across the research project

Stage	Sample
Pre-Intervention	**Key informants: Staff members of a Chilean social business incubator (one designer, one project leader, one social mentor)**
Intervention – Post-Intervention	**Cases: four social entrepreneurs that took part of the same business incubation programme.** **Key informants: one mentor in charge of the incubation programme that the participants were involved.**

The pre-intervention stage aimed to explore the context of research. In this case, three staff members were interviewed as key informants to understand the operations of the organisations, their point of views about the use of design by social entrepreneurs, the profile of the social entrepreneurs that participate in their programmes, as well as social entrepreneurship as a national phenomenon. During the next two stages of Intervention and Post-Intervention, four social entrepreneurs, participants of the same business incubation programme were selected as the case studies of this investigation. The reason for choosing them was that they were participating in the same programme (hence receiving the same support), were non-designers, and were in the same initial stage of the social entrepreneurship process. Additionally, the mentor of this incubation

programme participated as a key informant of this research study. Her participation served to validate the data collected from the entrepreneurs and gain insights of issues not mentioned by the cases during the interviews. The validation given by the mentor involved the discussion of the different *moments* that entrepreneurs encountered in their journeys. A description of the use of moments in this research is given in 3.5 Data Analysis.

3.3.3 Research Quality

To assure the quality of the research is necessary to ensure four aspects: credibility, transferability, dependability and confirmability. Credibility, also known as *Internal validity,* refers to the accuracy of the documentation and the reliability of the person that is producing these documents (Flick, 2009, p. 258). Transferability refers to how detailed or *thick* the descriptions of the cases are in order to make comparisons between them (Gray, 2014, p. 185) and how the findings apply to different contexts (Bryman, 2012, pp. 390–392). Dependability refers to the use of audits to ensure that the research documentation is kept during all the stages of the project in an accessible manner (Bryman, 2012, p. 392; Flick, 2009, pp. 392–393). Confirmability is ensuring that the researcher has acted in good faith (Bryman, 2012, pp. 392–393). The following is a description of the research process in which the various stages of the research project are described.

i)   Qualitative research process

The following steps represent the qualitative research process (Bryman, 2012, pp. 384–387), reflecting the research activities conducted in this research study.

- Step 1. General Research Question(s). The first step is to define the research question and the objectives of the investigation. For this purpose, it is necessary to investigate the information available before the investigation to identify the focus of the research. This research initially aimed to investigate the adoption of design management by social entrepreneurs. However, the research question iterated during the collection and interpretation of the data (see Step 5.b of this process). The new research question aimed to investigate how social entrepreneurs use design during the social entrepreneurship process.

- Step 2. Selection of relevant site(s) and subjects. The second step is to identify the relevant participants in the investigation. The fieldwork of investigation was conducted in a Chilean business incubator (see page 144) with a focus on social entrepreneurship. In this organisation, four non-designer social entrepreneurs were selected as participants. The reasons for choosing are described in the sampling strategy (see page 121)

- Step 3. Collection of relevant data. The third step is to define the research methodology and methods for the data collection, and subsequently, collect data using these methodologies and methods. This research was based on the collection of qualitative data through semi-structured methods following a narrative inquire methodology (see Strategies of Enquiry: Narrative Research, page 111, and Data Collection Methods, page 126). The collection of data focused on the stories about the social entrepreneurship process and the use of design by the participants. All data recorded by audio from interviews was carefully transcribed and stored for retrieval during the data analysis.

- Step 4. Interpretation of the data. To recognise the emerging themes and findings from the data. The data was interpreted analysing the emphasis given on certain stories by social entrepreneurs. The attention on the emphasis on certain stories enabled the researcher to identify the emerging issues that affected the social entrepreneurs' processes and the utilisation of design (see 3.5).

- Step 5. Conceptual and theoretical work. Once the data is collected and interpreted, the researcher can proceed to give form to the study's findings. In this research, the conceptual and theoretical work comprised the triangulation of the literature regarding design, entrepreneurship and social entrepreneurship and the data collected. The review of the literature and the analysis of the data collected enabled the researcher to draw upon findings that reveal the interdisciplinarity of social entrepreneurship in which design was used intentionally and unintentionally throughout the social entrepreneurship process.

- Step 5a. Tighter specification of the research question(s). Qualitative research is often iterative; this step and the following step represent two frequent iterations of

qualitative research. In some occasions, the interpretation of the data illustrates that the research questions are too open and do not provide a significant contribution. In these cases, it is necessary to revisit and re-define the research question(s). The first reason for re-defining the question was that the data showed emergent topics that were not foreseen during the definition of the initial questions and represented a major contribution to the knowledge. The second reason for re-defining the research question was that the methodology of this research changed during the investigation due to the limitations of this research (see page 314). This methodological change was caused primarily by the modification of the dates of the incubation programme (see 6.4 Limitations of the Research Study)

- Step 5b. Collection of further data. In qualitative research, there is a constant interplay between the interpretation of data and theorising. Therefore, due to the interpretation of the data collected, it is common to conduct further data collection to avoid speculations on emerging ideas or findings. In this research, further data was collected in an interview with a social entrepreneur based in Israel. This interview allowed the researcher to validate the approach and findings encountered with someone external to the investigation and to test the framework introduced in 3.5 Data Analysis.

- Step 6. Writing up findings/conclusions. The final step is to make the research available to the audience. The writing up process has to show credibility and significance of the interpretations offered. This thesis and the academic publications writing during this investigation represent the last step of the qualitative research. Four conference papers allowed the researcher to share and collect feedback of early-findings of the research. These insights were used throughout the investigation to reflect and analyse the significance of the project. This thesis is the main outcome of this investigation which also includes the reflection of the numerous insights received during these 4 years.
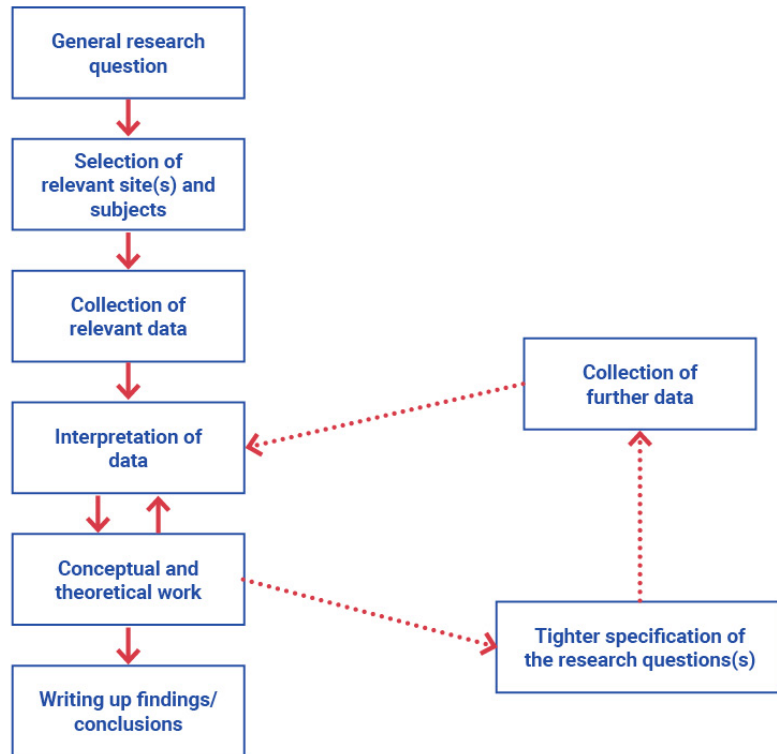
Figure 31: The main steps of qualitative research (adapted from Bryman, 2012)

3.4 Data Collection Methods

Research methods are the techniques used to collect and analyse data related to a research question or hypothesis (Crotty, 1998, p. 3). The choice of research methods is informed by the methodology chosen, theoretical perspective and the epistemology. Therefore, the methods chosen allowed to collect data and make sense of the phenomenon immediately as they unfolded. The following are the data collection methods used in this research: literature review, interviews, questionnaires, field notes and unobtrusive measures.

Figure 32: Structure of Chapter 7

3.4.1 Literature Review

The literature review, presented in Chapter 2, allowed to illustrate the main issues of this study and to focus the research questions of this investigation (Gray, 2014, p. 56). Therefore, this review aimed to critically examine and to gain a deeper understanding of what has already been studied in the fields related to the research question of this investigation. Since this research seek to understand how social entrepreneurs utilise design in their social entrepreneurship process, the literature review focused on the fields of design and entrepreneurship. Moreover, 2.2 provides contextual information on the social dimension of this investigation.

3.4.2 Semi-structured interviews

Interviews are the most used tool in qualitative research (Forsey, 2012, p. 364). This uses guided question-answer conversations with a specific structure and purpose (Tracy, 2013, p. 131). The benefit of this approach is the face-to-face dynamic. This technique allows the interviewer to collect data but also to observe and analyse behaviours of the interviewee (Stickdom & Schneider, 2012, pp. 162–163). Thus, it is

a flexible tool that ranges from highly structured to unstructured (Blaikie, 2010, p. 24). The different types of interviews will depend on the purpose of the data collection (Saunders et al., 2016, pp. 392–393).

- Structured interviews begin with a tentative purpose, targeting the interview in a direction through standardised questions. Through structured interviews, the interviewer asks predefined questions in order and then record them on a standardised schedule using pre-coded answers (Saunders et al., 2016, p. 391). Structured interviews are known as questionnaires conducted by an interviewer (see p. 128).

- *Semi-structured* and *unstructured interviews* are non-standardised and aim to collect in-depth data. While conducting semi-structured interviews, the researcher uses a list of issues or questions to be covered concerning the research topic (Saunders et al., 2016, p. 391).

- *Unstructured interviews* are informal, and they do not have a structure or predefined questions but rather a clear aspect to explore (Saunders et al., 2016, p. 391). The process involves asking open-ended questions, which allow participants to express their points of view on the topic of interest.

In this research, semi-structured interviews were the main method for data collection. During the pre-intervention phase, the researcher conducted interviews with staff members of the business incubator and experiences social entrepreneurs to make sense of the context. To do this, the interviewees were invited to describe their experiences and opinions about social entrepreneurship, the characteristics of social entrepreneurs, their role in the organisation, for instance.

Later, semi-structured interviews were used in the intervention and post-intervention phases with the social entrepreneurs and the mentor of the programme. Face to face interviews were conducted during the intervention stage, whereas digital methods such as instant messaging and videoconference were used during the post-intervention stage. The type of questions used with social entrepreneurs aimed to explore the different emerging themes through three lenses. Therefore, the interviews started with an open question such as *What is going on?,* or, *How are you guys doing?,* to invite participants

to describe their experiences from their perspectives. These first open questions were critically important for the data collection because they served multiple purposes. First, it allowed the participants to take ownership of the conversation, putting the researcher aside to minimise the imposition of his presuppositions. Second, it enabled the participants to emphasise the issues that mattered them the most. In this way, the participants were prompted to build the narratives of the events as they unfolded throughout their experiences (see page 113). The second and third *questions* focused on the social entrepreneurship process and their use of design. Once the interviewee reached a point in which the answer to the first question was repetitive or there was nothing else to say about, the researcher guided the conversation using specific concepts, such as, *At the moment, are you prototyping your idea or testing it already?* (see social entrepreneurship process page 55)*, How has design appeared in your organisation?* These open-ended questions allowed the researcher and the participant to discuss certain issues of the research question but from the perspective of the participants.

Semi-structured interviews were used with the mentor of the programme. The questions asked to the mentor were reflective, asking her to reflect on the progress of the social entrepreneurs during the incubation programme.

The researcher, for subsequent analysis, transcribed all the interviews conducted in this research.

3.4.3 Questionnaires

Questionnaires are all the methods in which people are asked to respond to a set of specific questions (Gray, 2014, p. 352; Saunders et al., 2016, p. 436). A questionnaire can be conducted by an interviewer (structured interviews) or by the respondents (self-completion questionnaires) (Bryman, 2012, pp. 232–244).

This method is often used in quantitative research because its structured form allows quantifying the answers of the participants; however, it can also be used as a mixture of quantitative and qualitative. The qualitative approach of a questionnaire is, for instance, when it contents open-ended questions that will produce a text that can be analysed

subsequently. Open questions allow participants to answer using their terms, to collect unusual responses and to explore new areas in which the researcher has limited access.

On the other hand, closed questions present a fixed alternative of answers from which the respondent has to choose. The analysis of closed questions is easy because the respondents mechanically choose one of the alternatives offered.

In this research, questionnaires were used to evaluate the understanding of design by participants before and after a presentation about design given by the researcher during the intervention stage. Before the presentation, the researcher conducted a face-to-face questionnaire or structured interview as a design audit. The questions aimed to reflect what the participants understood by design, whether they have planned to use design in their ventures, and they had assigned specific budget or resources to design. After a presentation given about design, participants were invited to complete an online survey to analyse their views on design after the presentation given. Figure 33 shows the online questionnaire used in this research.

Figure 33: Screenshot of the online questionnaire used in this research

3.4.4 Field Notes

Field notes are the process of writing in proximity to the field research. This process involves notes about facts observed during the data collection (events, conversations, and behaviours) as well as reflective notes based on the feelings and opinions of the researcher (Bryman, 2012, p. 711; Gray, 2014, p. 441). In this research, field notes were collected physically (two notebooks) and digitally using Evernote software. The record of notes allowed the researcher to reflect in action (Schön, 1983, pp. 49–69) upon the issues as well as to make sense (Kolko, 2010) of emerging themes encountered throughout the investigation.
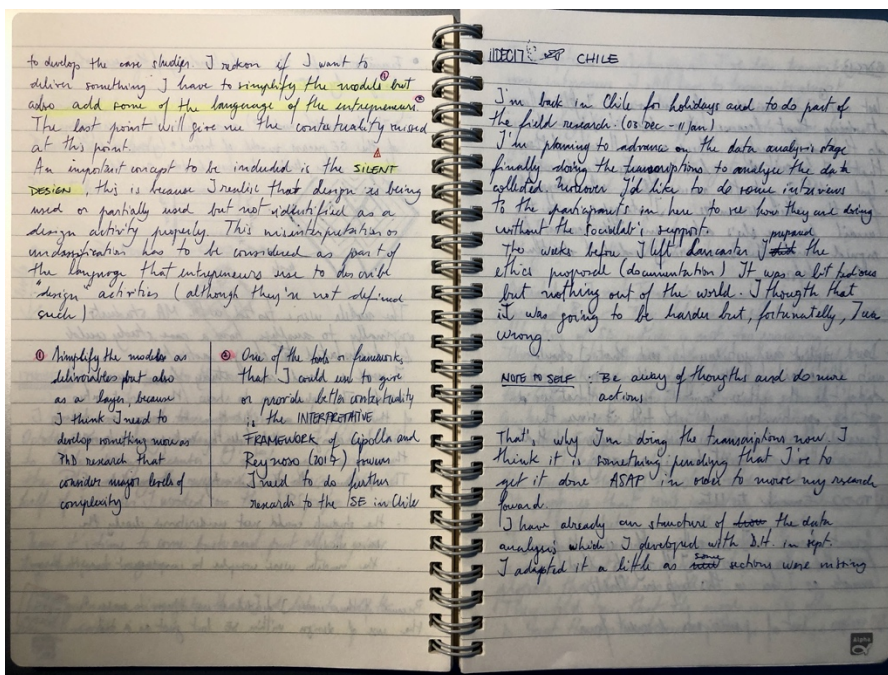
Figure 34: Field Notes

3.4.5 Unobtrusive measures

This method involves the collection of information from documentary evidence, physical evidence and archival analysis (Gray, 2014, p. 490). One of the characteristics of this method is that the researcher does not have direct involvement in the collection. In this research, this method was used during the intervention and post-intervention stages. During the intervention stage, the researcher obtained access to the application forms of the participants to the incubation programme. This information allowed a

diagnosis of the organisations because they reflected initial ideas and plans of the social entrepreneurs for their organisations. Later, in the post-intervention stage, digital information about the ventures in the form of documentation provided by the business incubator and as social media publications uploaded by the participants was used as a source of information for this study.

Figure 35 shows the data collection methods used in this research.
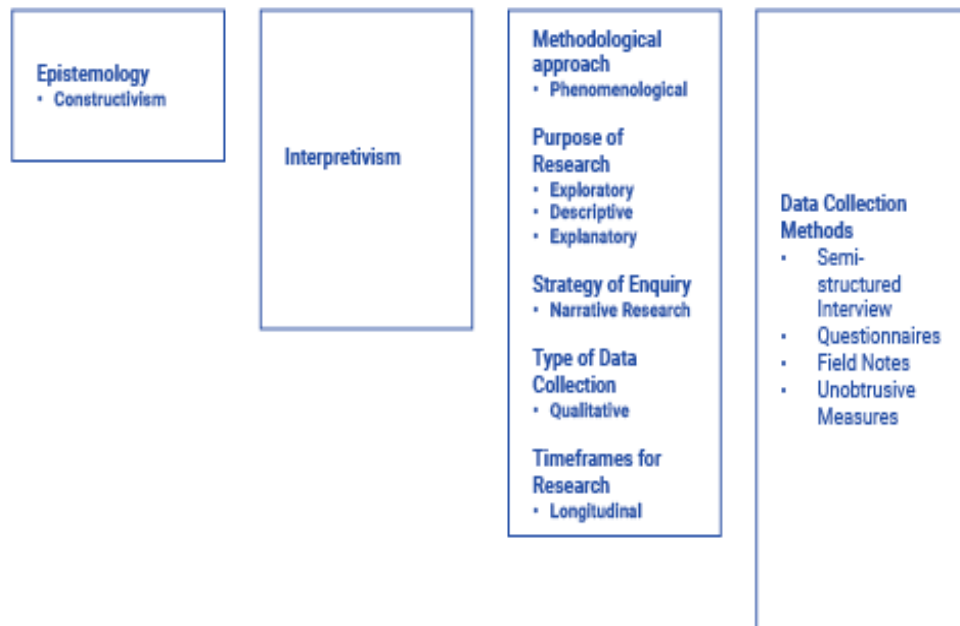
Figure 35: Data Collection Methods selected

3.5 Data Analysis

This research uses a narrative inquiry strategy. Therefore, the analysis and selections of themes in this research aimed to highlight the "identity work" which is how people engage within organisational and local cultural contexts (Chase, 2008, p. 67). The analysis focused on the way that interviewees narrate their experiences in the business incubator (as a context) as staff members, mentors or social entrepreneurs. Moreover, in this strategy, the researcher also has a voice in the narratives introducing the interpretations were developed during the data collection.

The interpretation of the data comes from the attention to the narrative linkages that the storyteller introduces (Chase, 2008, p. 73). The analysis of the data of this study adopted the Fischer-Rosenthal and Rosenthal process (Rosenthal & Fischer-Rosenthal, 2004, p. 261). The process consisted of a sequence of six stages used for the analysis and reconstruction of the stories. Figure 36 illustrates the Fischer-Rosenthal and Rosenthal process
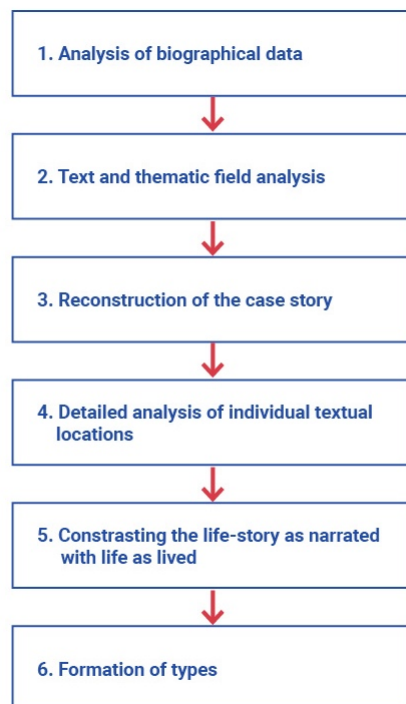
Figure 36: The Sequences of Stages in Practical Analysis (adapted from Rosenthal and Fisher-Rosenthal, 2004)

3.5.1 Using Narrative Analysis in this Research

The following is a description of the five stages used to conducte the Narrative Research and its analysis.

Understanding participants' contexts. The first stage consisted in the analysis of primary and secondary data of the participants. The aim of this analysis is to understand the context of their organisations and to evaluate their prior design knowledge. For this purpose, a questionnaire was conducted to evaluate their understanding of design. Also, a review of the application forms to the business incubation programme provided background information of their organisation. This data allowed the researcher to design identify the type of organisations and profile of the entrepreneurs, as well as to design the questions for the semi-structured interviews.

Conducting Interviews and Analysing the Data. Semi-structured interviews were conducted with participants which provided rich qualitative data of each case. The data was analysis using thematic analysis. This analysis consisted in coding significant **"moments"** where the participants emphasised their attention in the conversation (e.g. describing in detail what happened in a specific workshop, activity or collaboration). These moments represent the challenges and relevant circumstances that affect the entrepreneurs along during the incubation programme. The identification and analysis of these moments is crucial for this research as they allow the researcher to organise the data according to the relevan issues that entrepreneurs encountered in their journeys. These moments were organised using a temporal order as well as a relation to the stage of the social entrepreneurship process (i.e. a workshop in April 2017 in the prototyping stage).

The moments were used as a unit of analysis for each case. The analysis was done by coding significant sentences and narratives in which the participants described the stages of the social entrepreneurship process (see Social Entrepreneurship processes, page 55) that they were facing as well as the use of design explicitly and silently (see Silent Design, page 88) during these stages. The process of coding was conducted manually over the interviews transcribed by the researcher.

Validation of the data. The moments were identified and selected as they emerged during the interviews with entrepreneurs and validated in separated meetings by the mentor of the programme. In this way, the selection of moments was curated by the interviews conducted by the researcher as well as by the observations of the mentor.

Reconstruction of the case stories. A critical framework was used to analyse and reconstruct the case stories. The reconstruction of the stories, in a narrative and an illustrative form (framework), allowed to analyse the individual textual locations in detail. This analysis enabled the creation of the participants' profiles; in essences, the profiles of 4 non-designers Chilean social entrepreneurs using design within their processes.

At this stage, a *life-story* of each social entrepreneur was built describing the overall experience during the incubation programme. This process consisted of the reorganisation of the moments as a series of temporal arrangements that describe the courses of actions taken by the entrepreneurs. This arrangement enabled to understand the influence of the factors that affect their social entrepreneurship processes (e.g. an insight from a community made entrepreneurs re-formulate their business idea). Moreover, it allowed the researcher to conduct a comparative analysis of the four cases.

As a result, four case stories were produced (one per social entrepreneur) with 3-4 moments described narratively and additional observations and discussions about each case.

Additional Data. In addition to the narrative analysis of the four cases, the semi-structured interviews conducted to the staff members during the pre-intervention stage were analysed thematically. This analysis was conducted through a process of coding and pattern finding. Thematic analysis of the interviews conducted to this group of participants allowed to describe the context of the research (see 4.2). Figure 38 illustrates the methods used in data analysis.

3.5.2 Social Entrepreneurship and Design Framework (SEDF)

A critical framework called **Social Entrepreneurship and Design Framework (SEDF)** was used to analyse and reconstruct the case stories. This framework illustrates the multiple variables that affect the process and the non-linear nature of the social entrepreneurship process. The data was analysed, considering three main dimensions. (1) The social entrepreneurship process, (2) the key *moments* and the variables that affect the decisions taken by the entrepreneurs, and (3) the way that design was throughout the process. The analysis allows the understanding of how social entrepreneurs operate in practice, the type of considerations and insights that social entrepreneurs encounter and the decision-making process they employ.

The first dimension is about the social entrepreneurship which is a triangulation of the definitions found in the literature and the empirical process used by the incubator (see page 152), in which the research was conducted. This analysis divides the social entrepreneurship process into three stages (see page 55). **Opportunity creation**, which goes from the research to the definition of the social problem; **Prototyping**, that involves from the development to the test of prototypes; and **Social Impact**, in which the organisation moves to a level of establishment in which has to guarantee the economic sustainability for the subsequent growth.
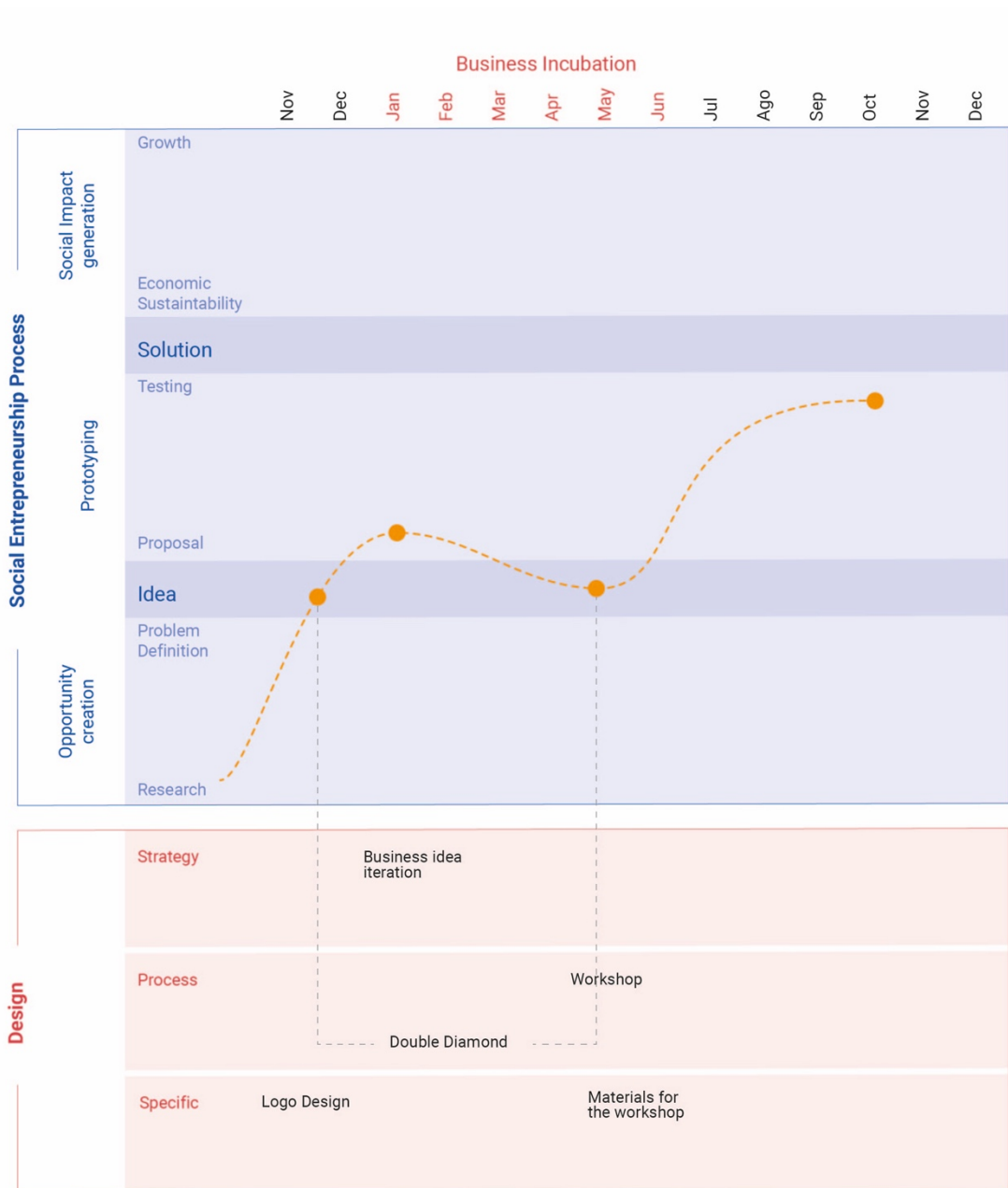
Figure 37: Social Entrepreneurship and Design Framework (SEDF)

A second dimension, represented by the dots in Figure 37, shows specific moments throughout the social entrepreneurship process (see step 2)

The third dimension aims to understand how social entrepreneurs utilised design. In this respect, the framework shows the different uses of design: specific, as a process, as a strategy.
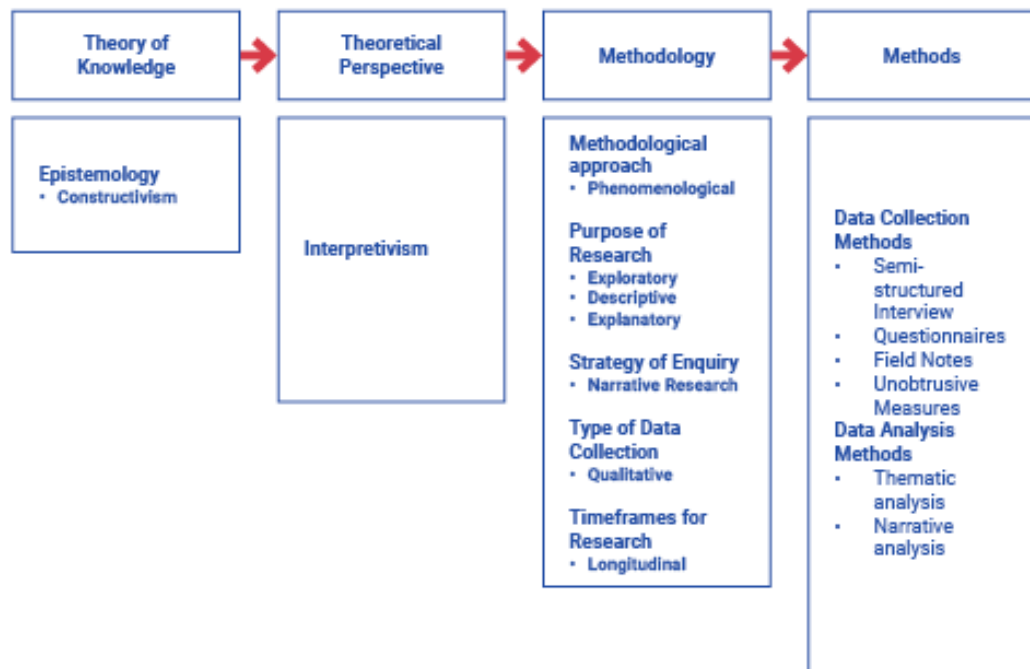
Figure 38: Data Analysis Methods selected

3.6   Summary of Chapter 3

Chapter 3 discussed the research methodology, research design and methods used in the data collection and data analysis of this study. In addition, it introduced the strategy used to select the participants of this study as well as the criteria considered to assure the quality of this investigation.

The research methodology of this research study adopted a narrative inquiry approach. This strategy was chosen because the data was collected in the form of stories captured by semi-structured interviews with staff members of a Chilean business incubator and four social entrepreneurs that participated in a programme organised by this incubator.

The research design comprised the research and strategies adopted in this study as well as the criteria to secure the quality of this research project. The research strategy is composed of four stages: (1) theoretical exploration, (2) pre-intervention, (3) intervention and (4) post-intervention. Theoretical exploration consisted of a review of the literature regarding design, entrepreneurship and social entrepreneurship to minimise theoretical assumptions and to gain an in-depth understanding of what was studied in the field. The pre-intervention stage consisted of semi-structured interviews with staff members of the social incubator to generate a profile of the entrepreneurs that they incubate and to understand the incubation process of the business incubator. During the intervention stage, the researcher participated in the incubation process as a guest mentor. In this stage, the data were collected in the forms of structured and semi-structured interviews and field notes. The post-intervention stage describes the period when the data was collected through online semi-structured interviews with the social entrepreneurs and the mentor of the programme. This research design adopted a longitudinal approach to explore the experiences lived by the entrepreneurs and the utilisation of design during the entire incubation process. Lastly, this chapter discussed the strategy adopted to select the participants during the three stages of the research design, as well as the criteria used to guarantee the quality of this research. This chapter concluded with a reflection of the different activities conducted throughout the qualitative research process.

The process of analysis comprises six stages in which the stories are reconstructed and compared to each other (see page 134). A critical framework was developed to conduct the analysis (see page 136). This framework illustrates the different *moments* (see page 134) that entrepreneurs encounter in the different stages of the process. These moments represented the emphasis that entrepreneurs gave to specific circumstances of their processes. For instance, entrepreneurs explained their process using as an example of a specific workshop or activity undertaken. These moments were placed in a framework that contains three dimensions: temporal, the social entrepreneurship process, and design. This framework enabled the reconstruction of the stories taking into consideration these three different dimensions that relate to the research question (social entrepreneurship – as a process of three main stages and as a series of moments during the incubation process – and design).

Chapter 4 introduces the context and the case stories of this research study. 4.2 introduces the analysis of the data collected through theoretical exploration and pre-intervention stage. This analysis set the context of this research study because it describes the Chilean social entrepreneurship ecosystem and the business incubator selected to conduct this study. Furthermore, it introduces initial findings that describe the characteristics of the social entrepreneurs who participate in the incubation programmes of the business incubator. Finally, it outlines the social incubation programme and process in which the four social entrepreneurs of this study participated. 4.3 shows the analysis of the four case studies. The analysis of the cases utilised the Social Entrepreneurship and Design Framework introduced in 3.5 Data Analysis. Each case story provides a synopsis of the case, the context, organisational matters, the journey (which is structured following the described *moments*, page 134), an analysis of the use of design and the social entrepreneurship process of each organisation illustrated in the critical framework (page 136) designed in this study.

Chapter 4   Data Analysis

4.1   Introduction to Chapter 4

This chapter introduces the analysis of the data collected in the different stage of the research study. First, 4.2 introduces the data collected in the pre-intervention stage. This data provides the context of the research study. It describes the social entrepreneurship ecosystem in Chile and the business incubator in which the field research was conducted. Subsequently, this chapter provides initial findings that aim to describe the type of entrepreneurs that this business incubator support. These initial findings are drawn from semi-structured interviews conducted to staff members of the business incubator during the pre-intervention stage of this study. The findings show issues such as the lack of entrepreneurial knowledge in early stages entrepreneurship, the importance of external support and networking, and different ways that design support social entrepreneurs. 4.2 continues with a description of OpenGate, an incubation program conducted by Socialab in which six nascent social entrepreneurs working multiple problems related to education, health, the pension system, and the environment were supported. This program represents the context of this field study.

4.3 introduces the analysis of four case stories of four Chilean social entrepreneurs. These entrepreneus participated in OpenGate programme. Miaum was a company that developed mobile games to support language and mathematics learnings in children from five to seven years old. Haedus was an organisation that promoted socioemotional education for children from deprived areas. La Polla Energética aimed to democratise access to solar energy to low-income communities. Municipio Verde aimed to increase citizen participation in environmental initiatives conducted by municipalities.

Figure 39: Structure of Chapter 4

4.2   Context of the research study

This chapter describes the results of the analysis of the data collected in the fieldwork. The analysis begins with the description of the data analysis of the first stage of pre-intervention. This analysis describes the profile of the social entrepreneurs of the business incubator, how they used design as well as their vision of the social entrepreneurship phenomenon in Chile. This analysis allowed the researcher to plan and conduct the intervention and post-intervention stages of the fieldwork.

Figure 40: Structure Chapter 9

4.2.1 Pre-Intervention

In June 2016, the researcher conducted an exploratory research in Chile about the social entrepreneurship context in the country. Although the researcher is Chilean, it was his first time to be in the country performing the role of a researcher. In the beginning, it was overwhelming to identify multiple opportunities for research back home. He went to seminars, spoke with his family and friends about the project, and everything indicated that the prior assumptions regarding the research topic were right. On the other hand, the researcher came back to Chile equipped with design theories and methods primarily developed in the Global North. Therefore, his perspectives on the research were influenced in two ways. First, his experiences as a Chilean allowed him to play the role of an 'insider' in the entrepreneurship ecosystem, whereas his role as a UK based researcher allowed him to play the role of an 'outsider' of the research context. This paradox become relevant later in this thesis when triangulating the data with theories in the discussion chapter.

i)   Socialab

Socialab is an organisation that aims to expand and to provide visibility of the concept of social innovation through an online open innovation platform. In this platform, the organisation, in collaboration with external supporters, launches social challenges competitions that invite the public to initiate discussions and ideas about how they can be solved. The winners of the competitions have access to work at the co-working space within the Socialab facilities (Figure 41). In that space, entrepreneurs can interact with other social innovators and receive mentorship from experts. The entrepreneurs receive training that allows them to build leadership and teamwork skills necessary to succeed in their ventures (Ashoka, 2014). The role of Socialab is to transform people with good ideas into nascent social entrepreneurs.

Figure 41: Co-working space at Socialab

From a service design perspective the organisation offers collaborative services. The focus of these services is to provide a space for developing business ideas, products and services in an open and collaborative environement. The development of the organisations occurs due to the constant interactions with mentors and other entreprenuers. All the members of the organisations and the new enterprises share the

same space and activities which fosters the cross-pollination of ideas and experiences among people. These dynamics serve as a catalyser for the organisations supported by Socialab. The exchange of experiences with members of the organisation allow entrepreneurs to reduce the risk of failure and to accelerate the impact of their solutions.

4.2.2 Pre-intervention data analysis: What the staff members say

Before the intervention, the researcher conducted semi-structured interviews with the members of the staff. The interviews captured valuable insights about the profile of the social entrepreneurs, how they use design, and how the incubator operates. The following chapters introduce the main themes found in the data collected. The analysis includes the triangulation between "raw data" and the literature review.

Table 23: Data analysis of the pre-intervention stage

Raw data	Themes
When we started, we didn't know what meant being an entrepreneur	**Lack of entrepreneurial knowledge**
At the beginning, and like most of the entrepreneurs, we thought that we didn't need external support, but we were wrong. Always it's necessary to have someone who knows better about your industry, your market, who has experience in this, because one doesn't have the answers for everything, and it is important to recognise that you need help from someone that supports you with knowledge and experience, that is key.	**External support**
Design for us is essential; our banner is to develop technology as easy to use as a pencil and paper.	**Design as a core**
The development of a good brand image it gives the sense of professionalism, it produces closeness, and confidence, that is something imperative, that the user feels that is dealing with something real and not fake.	**Design as a brand image**
One of the biggest issues of other companies is that they don't have the user as a centre of the problem. Many companies see the problem as the centre, and at the end, the users run away from them.	**Design as a user-centred approach**
Design helps to reduce entry barriers for clients.	
Most of the entrepreneurs we receive are engineers; they don't know about the value that design has	**Entrepreneurs do not know about the value of design**
We have received entrepreneurs that are very open to listening and very keen to accept that their projects are going to change. However, we also received entrepreneurs that were just making mistakes they recognise that they have to listen	**Internalising external support is necessary for entrepreneurs**
One of the projects that grew up most was using design intensively.	**Design for growth**
I've been working (designer) with one entrepreneurship, and since that they have done well.	**Design increases performance**
There are many entrepreneurship, many people with ideas, although most of them are redundant.	**Entrepreneurship as a mainstream**
Many entrepreneurship starts doing something before to understand the business, and with an infinite ignorance about similar projects	**Lack of knowledge about entrepreneurship**

4.2.3 Initial Findings – The social entrepreneurs' profile

The analysis conducted allowed to draw some key insights that were utilised at the moment to plan the intervention and post-intervention stages. The following are the insights identified during the pre-intervention stage.

i)   Social entrepreneurs lack entrepreneurial knowledge

Social entrepreneurs lack entrepreneurial skills in the early stages. This condition arises from the transformation of an individual has a personal motivation of the willingness to create social change (Dees, 1998). In practice, there are a substantial number of people who are seeking to improve the social conditions within their communities. They commence their initiatives with fresh ideas about how to tackle the problems found, but

without the necessary experience to create, develop and lead a new venture. The latter is both an opportunity but also as a problem. The opportunity is that many people are trying to undertake the challenges that neither private nor public organisations are addressing (Martin & Osberg, 2015). The problem is the way to deliver practical training for these people. This training should be able to provide them with adequate resources to transform their initiatives into solutions that create social impact.

This insight is in alignment with the literature regarding the entrepreneurship and social entrepreneurship challenges (see page 41 and 61).

ii) External support is necessary for social entrepreneurs

The literature review shows that entrepreneurs suffer from a lack of resources and knowledge when starting a new enterprise initiative (Austin et al., 2006; Dees, 1998; Kochargaonkar & Boult, 2014). For these reasons, the model of the business incubator is essential for social entrepreneurs, because it helps to leverage external resources and to acquire the knowledge necessary for their companies (see page 45). Social entrepreneurs of Socialab admit the importance of the organisation in the early stages. The support provided is significant, because it helps social entrepreneurs to leverage financial resources, to have access to networks and physical space for working on the initiatives, as well as facilitating the entrepreneurial process through mentorships in entrepreneurship (Ashoka, 2014). Mentors of Socialab said that one of the essential characteristics that a nascent entrepreneur needs is the capacity to listen and accept the support of external sources. Those who follow the recommendation offered by the incubator have a wider variety of options to move forward in their initiatives.

iii) Working with others, the power of networks and teamwork in social entrepreneurship

The literature review shows the social entrepreneurship ecosystem involves multiple stakeholders and networks that provide resources, information and knowledge. In Socialab, networking and working in collaboration are two key elements of entrepreneurial success. At the organisational level, the Socialab's network is one of the principal intangible assets that the incubator offers to the entrepreneurs. The organisation has built its reputation among the private and public sector with which they have access to resources and experts to support social entrepreneurs. Therefore, part of

the mentorship supplied consisted of preparing social entrepreneurs to negotiate and develop their networks.

> *Initially, we were a brand that was building their reputation based on projects [social entrepreneurs] that aim to change the world. We had to be aware of how the entrepreneurs spent their money, and at the beginning, we had many contacts to achieve that. For instance, if we had a project related to the internet, the CEO used to take them to talk with the president of Telefonica. In that way, we made many mistakes because we realised that the projects were not prepared to have that type of conversations.* **R.C., Innovation Manager, Socialab**

For Socialab, the abilities to build networks and to work collaboratively in teams are fundamental aspects that they consider when evaluating a social entrepreneur. In fact, entrepreneurs that already have networks, or that show an explicit awareness of the networks that they need to gain access to develop their projects are better evaluated in the selection process.

On the other hand, it is also crucial that the applicants work in teams rather than individually. The project evaluators consider the team and leadership capacities as fundamental elements of social entrepreneurship. The incubator evaluates these aspects over aspects such as the business model design. They consider that business models can be changed, adapted or improved, but teams are tough to change.

> *For us, the team is important because it doesn't matter if they [social entrepreneurs] do not have a business model, we can help them find their business model. But the team, it is something very difficult to change as well as the person who is leading the project. Therefore, for us, it is a filter that we have also learned by making mistakes, now we have learned to evaluate this aspect over other issues.* **N.C., Designer, Socialab**

The capacity of working with others is fundamental for social entrepreneurs. In the data collected, the team members of the business incubator interviewed showed explicitly that networks and teamwork were relevant aspects of developing by social entrepreneurs. This collaborative approach is encouraged by the business incubator. The

service that the business incubator provides follows the notion of *collaborative services* described in the literature, in which the incubator serves as a space for learning, exploring and sharing. Therefore, engaging with multiples stakeholders at different stages of the social entrepreneurship process appears as one of the critical issues for social entrepreneurs.

iv)   The different ways that design aids social entrepreneurs

At the beginning of the incubation process, social entrepreneurs do not show a clear understanding of the value of design. Most of the cases, they arrive with a business idea and their technical expertise but not showing awareness of the importance of design for their organisations. In many cases, the entrepreneurs are engineers who have scarce or non-understanding about design.

> *I have the feeling that most of the entrepreneurs come without a clear idea of how important it[design] is. Many of the entrepreneurs are engineers, so they find it difficult to value it. I feel that a significant majority do not know the value that it has.* **N.C., Designer, Socialab**

Nevertheless, social entrepreneurs in advanced stages, as well as mentors, recognise the contribution of design in social organisations.

> *Design for us is essential; our banner is to develop technology as easy to use as a pencil and paper.* **Advanced Social Entrepreneur**

There are several advantages when using design in social institutions. Firstly, through the user-centred approach, companies can develop product and services that are suitable for customers or users.

> *One of the biggest issues of other companies is that they don't have the user as a centre of the problem. Many companies see the problem as the centre, and at the end, the users run away from them.* **Advanced Social Entrepreneur**

Secondly, through the same approach, they develop solutions for actual user needs rather than allocate time and resources in overdeveloped solutions that in practice, are hard to use for the customers. Thirdly, design helps social entrepreneurs to set up a robust image of the company, which allows them, for example, to leverage more resources and build trust in their clients.

> *The development of a good brand image it gives the sense of professionalism, it produces closeness, and confidence, that is something*

> *imperative, that the user feels that is dealing with something real and not fake.* **Advanced Social Entrepreneurs**

Finally, mentors found that design enables social entrepreneurs to take strategic decisions about their businesses. For example, in one of the activities that the research assisted, social entrepreneurs had to use creative approaches to define and present their business idea (i.e. using storytelling). These findings taken are in alignment with the advantages of design suggested by Mulgan: visualisation, prototyping and a systemic approach (Mulgan, 2014).

This insight clearly shows that social entrepreneurs not only use design for social innovation but also design in organisational contexts.

v)   Interpretation of findings: Design skills can be delivered through the incubation process

Social entrepreneurs often do not have enough resources (Austin et al., 2006) for their organisations. The lack of resources means that there is an immediate need to take as much advantage as possible of any resource they have available (Lettice & Parekh, 2010). Therefore, it is vital to notice that social entrepreneurs might not have enough resources to hire designers or consultancies and; therefore, to acquire the benefits of Design.

In this scenario, the business incubator arises as a platform for the adoption of these practices. Their experience of training social entrepreneurs has shown that design is a distinctive capacity that allows organisations to increase their performance and growth. Moreover, experienced entrepreneurs add that the user-centred approach of design allows them to reduce the entry barrier to clients.

In this exploratory study, it is possible to conclude that design contributes to social entrepreneurs in different ways. Considering this insight, the next stage of this investigation was to analyse the various ways that design emerges throughout the incubation process.

4.2.4   Open Gate by Socialab

During the first half of 2017, Socialab led an incubation programme called Open Gate. This programme was funded by the Chilean Government to support different initiatives that deal with social problems. Thus, Socialab opened a call for participation in a program called Open Gate which objective was to support social entrepreneurs working on the following areas: employability, incomes, environmental issues, social capital and human capital. The participants had to complete a form in which they had to describe: the solution proposed, and social impact estimated, business opportunity, business model and the team. The call received 160 proposals which were collaboratively evaluated with the Socialab community and internal experts through an online platform supported by the organiastion.

Open Gate supported six nascent social entrepreneurships working multiple problems related to education, health, the pension system, and the environment. In the program, the entrepreneurs had access to mentorship, networks and the facilities of the organisation. They were under the supervision of a mentor (C.U.) who guided them through all the process.

The project started with a kick-off event the 22 December 2016. The event was a breakfast in which entrepreneurs and staff members of the business incubator introduce each other. In this opportunity, the person in charge of the process introduced the rights and duties for the entrepreneurs as beneficiaries of the programme. Moreover, the entrepreneurs had to present an update of their initial plans according to the changes requested during the application.

i)   Incubation Process

The incubation process comprised numerous activities such as workshops and key speakers' presentations that aimed to support the early stages of the social entrepreneurship process. Experts from the incubator and external guest mentors conducted the activities. The incubation programme of OpenGate lasted from December 2016 to June 2017. This programme had six areas which not necessarily ran in parallel but were classified as areas to consider during the incubation process. Furthermore, each area consisted of presentations, workshops and activities conducted

either staff of the incubator or external speakers. Table 24 shows the areas comprised during the OpenGate programme.

Table 24: Areas comprised in the OpenGate programme

Stages	Activity
Project Kick-Off At the beginning of the programme, the entrepreneurs had to update their initial plans according to the changes requested during the application. In this stage, the incubator introduced the rights and duties for the entrepreneurs as beneficiaries of the programme.	Kick-Off Event Expectation workshop and rules of the "house" (incubator) Accountability, Re-Itemization and Expenses workshop Diagnosis Milestone 0 Re-Itemization
Problem Definition This stage equipped entrepreneurs with tools and methodologies for identifying and defining a social problem.	Problem definition workshop Organisational Canvas Workshop Theory of Change Workshop Research and Ethnography workshop Field Research Stage Research Findings Presentation Social Indicators and Result Measurements
Prototype This stage sought to offer different ways to build products or services. It aimed to enable entrepreneurs to interact with the communities, analyse the needs that they have, offer them products or services that solve those needs, and evaluate them.	Co-Creation Speech Project Speed-Dating activity Product Prototyping Workshop Service Prototyping Workshop Prototyping and Co-Creation Plan Prototyping and Co-Creation Presentation Prototyping and Co-Creation on the Field Prototyping and Co-Creation results Presentation MVP Building MVP Validation
Business Model In this stage, the entrepreneurs learn how to build their business models thinking of the short and long terms strategies for their ventures.	Business Model Workshop Business Model Mentoring Advanced Business Model Workshop Scalability Workshop Investment Speech
Communications and Sales The Communications and Sales stage offers multiple tools to support the communication to the different audiences of the activities conducted by the entrepreneurs as well as the social impact that they are producing. Moreover, it gives the foundations of sales practices to facilitate the leveraging of financial resources.	Basic Advertisement and Marketing (Branding) Workshop Communications Advise Sales Workshop Pitch Speech Public Relationships
Legal Advice This stage aims to introduce legal aspects necessary at the moment of starting an organisation	Basic Legal Advice and Enterprise Formation Taxation and Patents Speech

4.3 Case Stories

This chapter introduces the narrative analysis of four Chileans non-designer social entrepreneurs that took part in an incubation programme. The analysis consisted of (1) a synopsis of the case; (2) the context of the social issue that the entrepreneurs aimed to solve; (3) the organisation, aims and objectives; (4) the understanding of design; (5) the social entrepreneurship experience during the incubation process (the journey); (6) the use of design; and (7) the use of design framed in the social entrepreneurship process. design throughout this process.

First, the synopsis of the cases offers a summary of the case story, describing the organisation and the social entrepreneurship process. Second, the context sections provide the social context and issue that the entrepreneurs aimed to undertake, and the pertinence of the solution proposed. Third, the organisation, aims and objectives are described in detail. This section shows how the teams were formed, the service they offered and the social mission of the organisation. Fourth, the results of the diagnoses before and after the intervention of the researcher are provided (See Apendices A.1-A.5). This section serves as a baseline to show the level of design understanding of the entrepreneurs before the data collection conducted through semi-structured interviews (see page 126). Fifth, social entrepreneurship processes are described as *the Journey* of social entrepreneurs. This section analyses the different moments that the entrepreneurs encountered in their process. Each moment is analysed using the Social Entrepreneurship and Design Framework (SEDF) described in 3.5 Data Analysis, page 136. Sixth, the use of design by social entrepreneurs is described by themes. In this way, it is possible to identify how different design initiatives were used for multiple purposes (for instance, the development of a character for a game also was used as a part of the brand identity of Miaum). Lastly, a general analysis of the moments that entrepreneurs described, and the use of design is described in the last sections of the cases.

Figure 42: Structure of Chapter 10

4.3.1 Miaum

Miaum was an organisation established in Valdivia, the South of Chile, that develops *freemium*[1] mobile games to reinforce Math and Language. The games were developed for children between 4-6 years old following the curriculum of the Ministry of Education. Thus, children can play, learn and revisit the contents learned in classes.

The CEO mentioned that the organisation had three main pillars: Programming, Content Creation and Design (Figure 43). The three pillars set the foundations of the organisation because they rely on each other to achieve their objectives. In this manner, the three pillars constitute a threefold value of the products composed of (1) a stable and robust mobile application, (2) adequate contents, and (3) attractive and accessible interactions.

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[1] Freemium is a blend of two words: Free and Premium. This term is used to describe a pricing strategy by which a product or service is provided free of charge for the access of basic features, but money is charged for additional features (see more (Osterwalder & Pigneur, 2010, p. 96).
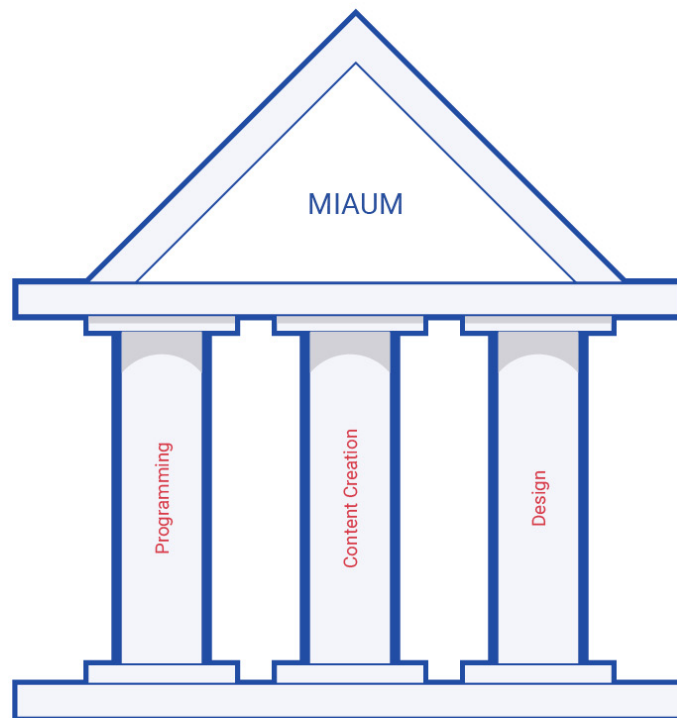
Figure 43: The three pillars of MIAUM

These pillars show the interdisciplinarity to the organisation. This diversity allowed them to create contents and the dynamics of the games, while others are programming or creating the visual elements that support the attractiveness of the games. Table 25 shows the structure of the team now of the data collection.

Table 25: MIAUM's Team composition

Area	Team Members
Programming	**3 Programmers (CEO included)**
Content Creation	**1 Psychologist**
Design	**1 Designer**

The CEO, the designer and the psychologist represent the core team of the organisation. To keep his core team, the CEO offered them participation in the profits of the company. Hence, the team members receive a lower salary than the market but also a stake of the organisation as to compensate for their participation. In this way, the CEO could cope

with the low wages that he could offer them. The attractiveness of this model is that the team develop a sense of ownership and commitment to the success of the organisation.

The games aimed to help the learning outcomes of children at home and larger groups such as a class or a school. In this way, the entrepreneurs gained the support of teachers who had seen the value of these applications in reinforcing their work outside of the classroom. The CEO considered teachers as potential partners that could become part of their sale force by promoting the games amongst their colleagues and parents in the schools.

The business model has a pricing strategy called *freemium*. This strategy offers essential functions for free (initial stages of the games) and more advanced features are charged (advanced stages). The applications games were available to download through online platforms, such as the Play Store for Android devices and the AppStore for Apple devices. The games were publicised digitally by social media platform and the organisation website, also through a launch event that was attended by authorities, educators and parents. Since the games were available online, the entrepreneurs expected to scale their organisation in Latin America.

During the incubation process, the organisation encountered multiple challenges. The first challenge was the time spent in the development of the apps for different mobile operative systems (IOS and Android). Due to the different structure of the operative systems, the organisation had to spend extended time in developing the apps on both platforms. This problem implied the definition of an effective way to manage their operations and team.

The second problem was the coordination of the team. The team composed of three programmers, one psychologist that worked as an educator and one designer faced difficulties in communicating with each other in the *same language.* For this reason, the CEO, who was one of the developers, developed a platform that allowed them to work more efficiently.

This new platform allowed members of the team to upload content and images and automatically develops a mobile app for a determined platform. By doing this, the

programmers could release the pressure of translating content and images into code and deliver apps in less time.

The benefits of this platform also showed potential to be commercialised as a parallel product of the organisation. The target group for this product were organisations without in-house programming capacities such as design or marketing agencies, that require the development of mobile applications. This opportunity would help them to generate new sources of income to the organisation, thereby reducing the dependency on external funding.

i)   Context

In the digital era, children spend a significant amount of time on digital devices. So, what would happen if those devices reinforce children education?

The Programme for International Student Assessment (PISA) is a triennial international survey that evaluates the educational levels in multiple countries. The Organisation for Economic Co-operation and Development (OECD) surveys the level of education on countries. The objective of the surveys is to evaluate the education system worldwide by testing the 15-year-old student in three areas: Science, Mathematics and Reading. The results have shown that Chile is below the average of the OECD countries in these three subjects. Despite these bad results, Chile has the best performance in the region. This is an alarming situation at the regional level because it means that all Latin-American countries are underperforming in these subjects.

For this reason, entrepreneurs aimed to develop mobile games to improve learning through a more entertaining approach. The organisation started in Chile, but due to the digital nature of their products, the entrepreneurs expected to scale their venture to whole the Latin American and Caribbean market.

ii)   Design understanding

Table 26: Miaum's understanding of design

Design Understanding	
BEFORE	AFTER
Design is self-explanatory drawing or illustration.	**Design is a way of working that allowed us to make better and more informed decisions regarding a specific problematic.**

The initial definition of design by the entrepreneur was based on the experience of having worked with a designer in the team. The role of the designer was crucial for the organisation. The designer oversaw the development illustrations and the user interface of the applications.

Thus, when the CEO defined design as a self-explanatory drawing or illustration. He considered that self-explanatory characteristic of design was relevant for the development of mobile games because it allowed the development of intuitive and straightforward experiences. In this way, design enabled the development of usable games, a fundamental reason for the success or failure of a mobile application. Additionally, design provided graphic elements that made an application attractive. For these reasons, the entrepreneur considered design, from the beginning, as one of the pillars for the organisation.

He said that design represented a third of the organisation, together with content development and programming. He added that design was "essential", saying that if he takes design out of the organisation, "the other two areas would be reduced to zero". He exemplified this comment, adding that "the programming area would not be able to work without design". He utilised design in multiple ways, such as developing mock-ups, interviewing people, graphically developing new algorithms, prototyping and testing ideas, for instance. Nevertheless, he could not articulate the relationship of design with strategy nor design thinking. When the researcher asked him if he utilised design as a strategy, he answered that he developed "a design" (referring to a graphic material) to advertise on Facebook. Similarly, regarding design thinking, he claimed that "he did not know *that tool"*.

After the presentation provided by the researcher, the entrepreneur identified some practices from the design process that had been used by the team in the development of the games. He mentioned that the design process introduced reflected their way of working. Nevertheless, he pointed out that they had adopted this approach intuitively according to the needs of their process. He said:

> *We have implemented the [design] process to build all our development, but I would like to have a structured methodology as a guide or reference. Today, we do it, but perhaps using an artisanal approach. (**A.B., CEO, Miaum).***

He concluded that knowing the design process (double diamond) would have helped him to manage more efficiently their development process. Therefore, the CEO claimed that development processes involves discovery, definition, development and delivering of games.

The diagnoses conducted before and after the presentation described an initial baseline of what design was for MIAUM. The main difference between the two diagnoses was the entrepreneur's realisation of the similarity between their development process with the design process. He emphasised that they had been using the design process unconsciously throughout all their developments. This organisation used design in different *orders*: as graphics (illustrations, advertisement in social media) and as interactions (user experience design, design as a process, prototyping).

iii)   The Journey

The social incubation process of this venture comprised three key moments.

- **M1 – Problem definition and first developments –** This moment describes how the entrepreneurs defined the social problem they wanted to meet, and the development process of the games
- **M2 – Launching –** This moment shows the launch event of the games.
- **M3 – New Platform Development, New Opportunities and New Directions –** This moment shows what occurred after the organisation concluded with the incubation programme.

- *Moment 1: Problem definition and first developments (before incubation – January 2017)*

There were two key activities that the entrepreneurs had already done at the moment of starting the incubation process: problem definition and initial versions of the games.

The entrepreneur claimed that through market analysis, they found the following:

> *When we applied to Socialab we conducted a market analysis that said that 50% of children could not solve mathematical problems such as adding and subtracting. Also, the 50, between 30 and 50, I don't remember well the number, cannot understand what they read. (A.B., CEO, Miaum)*

These number turned into the social mission of this organisation. The entrepreneurs aimed to provide an alternative way to support the learning process of mathematics and language through mobile games.

> *So, what we proposed was to make an app based on the Ministry of Education's curriculum. The idea was that it had to be helpful and children learn the subjects that they have to learn, but by playing. And, because it is supposed that everybody has Android, and the children have access to that – because, to say, there are more mobile phones than people in Chile – we are going to launch an app in Android, for free, but with advertisement in order to generate more income and to be able to keep making these type of apps. So, they can play without paying. (A.B., CEO, Miaum)*

The organisation had already developed an app in Android, which was in the process of refinement to be launched in April 2017. The operations of the team worked as follows. First, the content creation conducted a research stage in which they collected the contents defined by the Ministry of Education. The collection of the contents involves the supervision and validation from two external educators that worked in local schools. After the research stage, this area *designed* the dynamics of the games in collaboration with the educators. The dynamics of the game meant the ways that the contents are transformed into activities of the games. For instance, in a stage of the game in which children learn to count the entrepreneurs designed an interaction in which the child has to connect an image with its corresponding number. The dynamics were prototyped in paper and tested by a five-year-old child who was the son of one of the team members. In this way, the content creation team worked collecting and validating the contents, as well as transforming them into playful activities.

Second, the designer took the outcomes of the content creation team, refined them and made digital versions of the graphic elements required for the activities. This development included the creation of characters as well as the interface of the game. The designer, additionally, curated the graphic contents of the game, keeping a consistent visual language across the activities and the games. In this way, the organisation kept a corporate identity among the games.
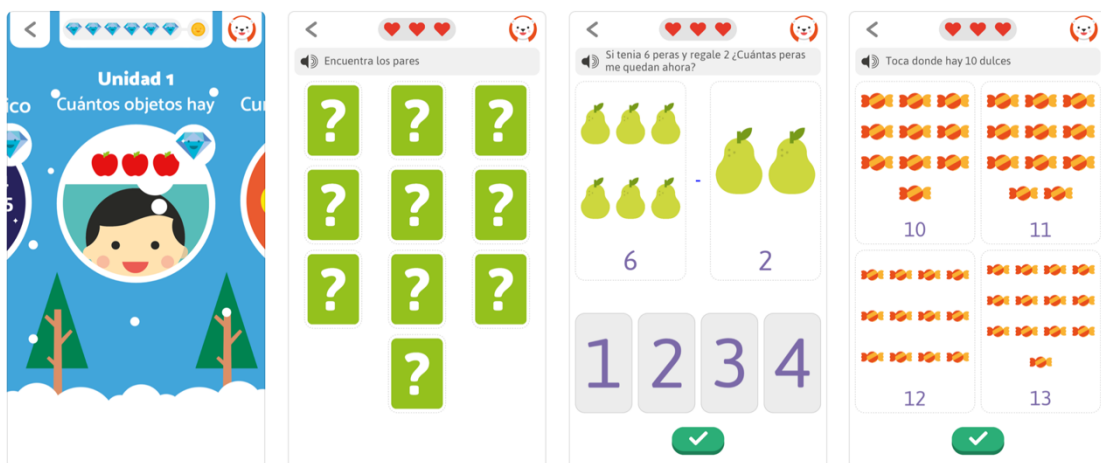
Figure 44: Examples of dynamics of the game

After the production of the contents, dynamics and graphics, a group of programmers collected and coded them. To design the algorithms of the games, the CEO made graphic visualisations (wireframes). These wireframes allowed him to understand the functionalities of the app by the integration of the work produced by his colleagues. Thus, the developers integrated the contents, dynamics and graphics of the game is a code. At the end of this stage, the application would be ready to be used in a mobile device.
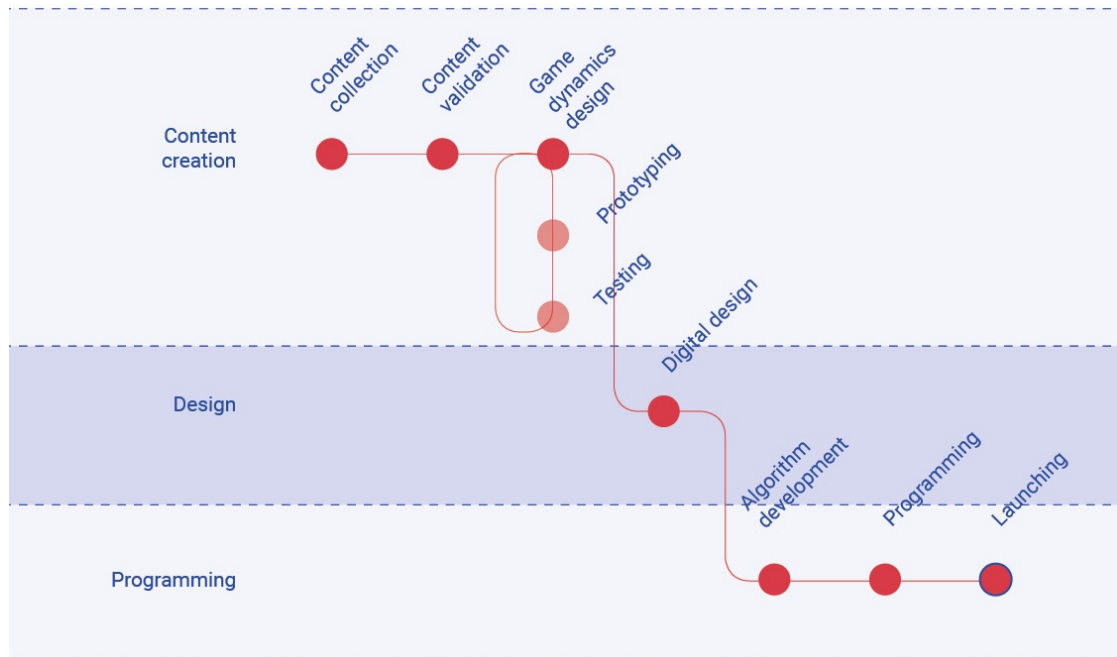
Figure 45: App development cycle

The entrepreneur said that originally each activity meant a separate piece of programming. Thus, the coding of the entire game required a complex programming infrastructure, which made the development process slow and demanding.

> *The story is long. We started last year. We made a prototype and tested in a school, also with parents. We saw the problems that it had and launched an improved product. And then, the big problem that we had was that it took us a very long time to launch this new version because the process was very slow. It was me, I'm the programmer, the designer and the girl who created the contents. The designer sent me the images, and the girl that creates the contents sent me the audios. I also produced some audios, and she sent me*

the questions and the games. You got me? So, I passed the questions, games and images to code, so I compiled the app. After, I checked the app, and then, for instance, it showed up a typo that we had to change. So, I had to change that in the code, and it took me a morning in doing that. Or [she] sent me audio, and the audio had a different word than the other ones, so I had to change the name of the audio, and that was a hassle. (A.B., CEO, Miaum)

The developing process was the main challenge for this organisation. The CEO was an expert in programming, and he could see potential improvements for this process. The capacity to foresee potential improvements could be a strength, but at the same time, it was a weakness. The organisation spent most of their time in developing a better version of their administration platform.

So, I made an administration system where the girl uploads the audios, uploads the images, uploads the games, and the artist uploads the images. Everything is in the same system. The girl doesn't have to send me the things, for example, a drawing of how the games are going to be. So, she can make the games in the system. And then, I download a folder for Android or iPhone and create the gameplay in JSON, which is a type of programming language. And then, I read that through Android, and the app is automatically generated. That is why we are behind. I had to create that large system. (A.B., CEO, Miaum)

When the entrepreneur described the main issues of this venture, he focused on the internal challenges of apps development. The consequence of this focus on the development area is that the organisation loses sight of other essential aspects of early stages entrepreneurship. For instance, they did not pay much attention to how to maximise the social impact created or how to build trust and gain access to networks.

After the presentation conducted by the researcher, the CEO recognised that they were using design *without knowing.*

The truth is that I was already using it [design]; the only thing is that I wasn't aware of it. (A.B., CEO, Miaum)

This comment referred particularly to the Double Diamond Process of design (see page 72). Further, he gave some examples of how they were using design

> *All my mindset about how to build an app, the process… for instance, the girl who works with me makes the games on paper and shows them to the little one [5-year-old boy], and the little one said: no, this has to be dragged in this way on the paper, not in the mobile phone, so it was like a mock-up.*
>
> *[…] So, we used those things from your area [design], and testing prototypes.* **(A.B., CEO, Miaum)**

The first example that he gave was about prototyping; nevertheless, after the researcher prompted him with another design area that they were using, user interface design.

> *Well, user interface design, […] well in general terms, we use design a lot to achieve results. We begin drawing in a whiteboard, to see how the game will look like until we can say, ok, this is how it is going to be.* **(A.B., CEO, Miaum)**

This entrepreneur showed a broad understanding of the benefits of design for his organisation. At this moment, they used design techniques, such as brainstorming, graphic visualisation, or to develop their apps. For instance, the programmers typically start the development of their algorithms *sketching* their ideas in a paper. In this manner, making the *code visual*, they could explore a range of alternatives before starting the actual coding. They also used visual communications within the team to share ideas between the areas. This type of communication was necessary because it turned in a neutral language that allowed the team to express themselves visually. Rapid prototyping was used to test ideas with users. Through these design-related practices, the entrepreneurs could develop the apps considering the capacities of the team (visualisation of algorithms), the implementation of the actual educational contents.

Analysis of Moment 1 of Miaum using the Social Entrepreneurship and Design Framework

Figure 46 shows the first moment of Miaum in the SEDF. In terms of the social entrepreneurship process, the first moment is placed in the solution stage as they had already developed games for the Android platform to be launched in April 2017. In terms of design they used design in specific and process levels. They use design in a specific way for the development of characters, visual communications within the team and in the development of rapid prototypes. They also used design as a process, particularly as the Double Diamond process, for the development of their applications. They also used user experience and interface design as a process led by the designer.
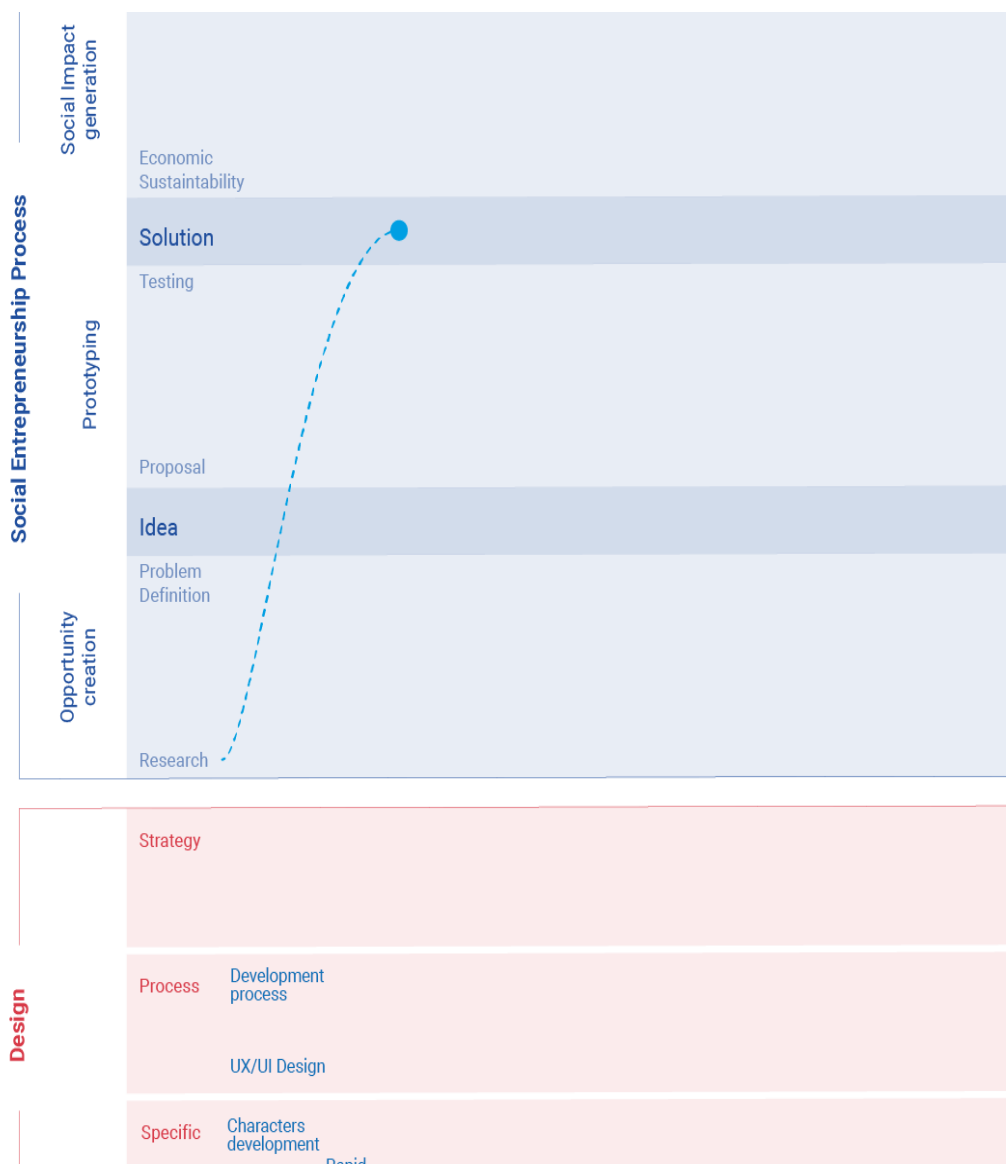
Figure 46: Miaum – Moment 1: Problem definition and first developments

- ### *Moment 2: Launch Event (April 2017)*

In April 2017, the organisation had finished three games related to Mathematics. The applications were developed for children between 4 and 6 years of age.

Figure 47: Games developed

After developing the apps, the entrepreneurs organised a launch event in which they invited different stakeholders. They used social media platforms (Facebook) and email communications to promote the event.

Figure 48: Facebook banner used to promote the launch event

The launch event intended to present the three games that they had developed to interested parties to position the games and to accelerate the sales of the app.

> *The idea is to launch the six apps. That is the 3 of them, 3 for Android and 3 for iPhone. […] We want to do a very cool launch event. We want to do it in the auditorium of the German School. We are going to invite all the pre-*

school teacher, and education authorities of the Los Ríos Region, also CORFO, and people from The Cloud [co-workspace]. (A.B., CEO, Miaum)

The idea is to make much noise, to make it famous quickly and to sell. We want to sell a lot.

Figure 49: Images from the MIAUM's launch event

The launch event was held in a prestigious school of Valdivia. In this opportunity, they invited schools' directors of the region as well as public authorities and parents to let them know the benefits of the applications. The goal of this activity was twofold: to introduce the applications to the community, but also as a political event as the entrepreneurs recognised the support received by the incubator and the funding institution. The entrepreneurs expected from this group to get their support by approving the benefits of the games, and so, to influence parents to buy the game. The event involved the design of invitations before the event as well as all the promotional material and the presentation used during the event (Figure 49).

Apart from the launch event, the entrepreneurs developed different channels to promote their apps. For instance, a communication strategy through social media channels. The

strategy consisted of a series of communicational messages to different target groups depending on the devices that they utilised.

So, the only thing [advertisement] that I tried was, for instance, Facebook ads. In a day we had about 700 people. 95% of them got there using Android devices and 5% using an iPhone. So, I stopped the campaign because I didn't have the product that they were looking for. Once I relaunch the products, we will start with the advertisement campaign, at least through Facebook. We will test other sources of traffic and check which one is the best. But the advertisement is mainly online. Do you remember when I wanted to launch an event and to invite all the teachers from the region? That is because if they really like it, and I can make a good speech, they will be my sellers, for free, with the parents. **(A.B., CEO, Miaum)**

The communication strategy followed the target groups defined by the entrepreneurs. The main target group were parents because they had the possibility of buying the premium features of the games if they perceive the benefits of the games on their children. The channels defined to reach this audience were Facebook, the company's website and articles published on the press. Design was used to create banners for social media and the development of the website.

The second group is composed of teachers and educational establishments. This group is interested in the overall performance of the children in Mathematics and Language. The idea was to position the games in schools to reinforce the learnings from the classroom, and therefore, to improve the overall results of children in national evaluation tests. The entrepreneurs expected that teachers would influence parents on buying the apps for their children.

Analysis of Moment 2 of Miaum using the Social Entrepreneurship and Design Framework

Figure 50 shows the second moment of Miaum in the SEDF. In terms of the social entrepreneurship process, the second moment is placed in the solution stage as they had the solution developed and launched. Nevertheless, this event did not mean that the organisation had reached economic sustainability to be placed in the next stage of the

process. In terms of design, Miaum continued the development of the games between moment 1 and 2. Therefore, the design activities described in SEDF of the previous moment (Figure 46) remained similar (character design, visual communications, rapid prototypes, development and UX/UI design).

Nevertheless, at this moment, Miaum also used design as a process of development of their brand identity. The organisation developed their social network channels and organised a launch event in which they used the materials developed for the games such as character design and illustrations. Thus, design appears a process of brand development and used for specific purposes in the design of graphics for their social channels and promotional materials for the launch event.
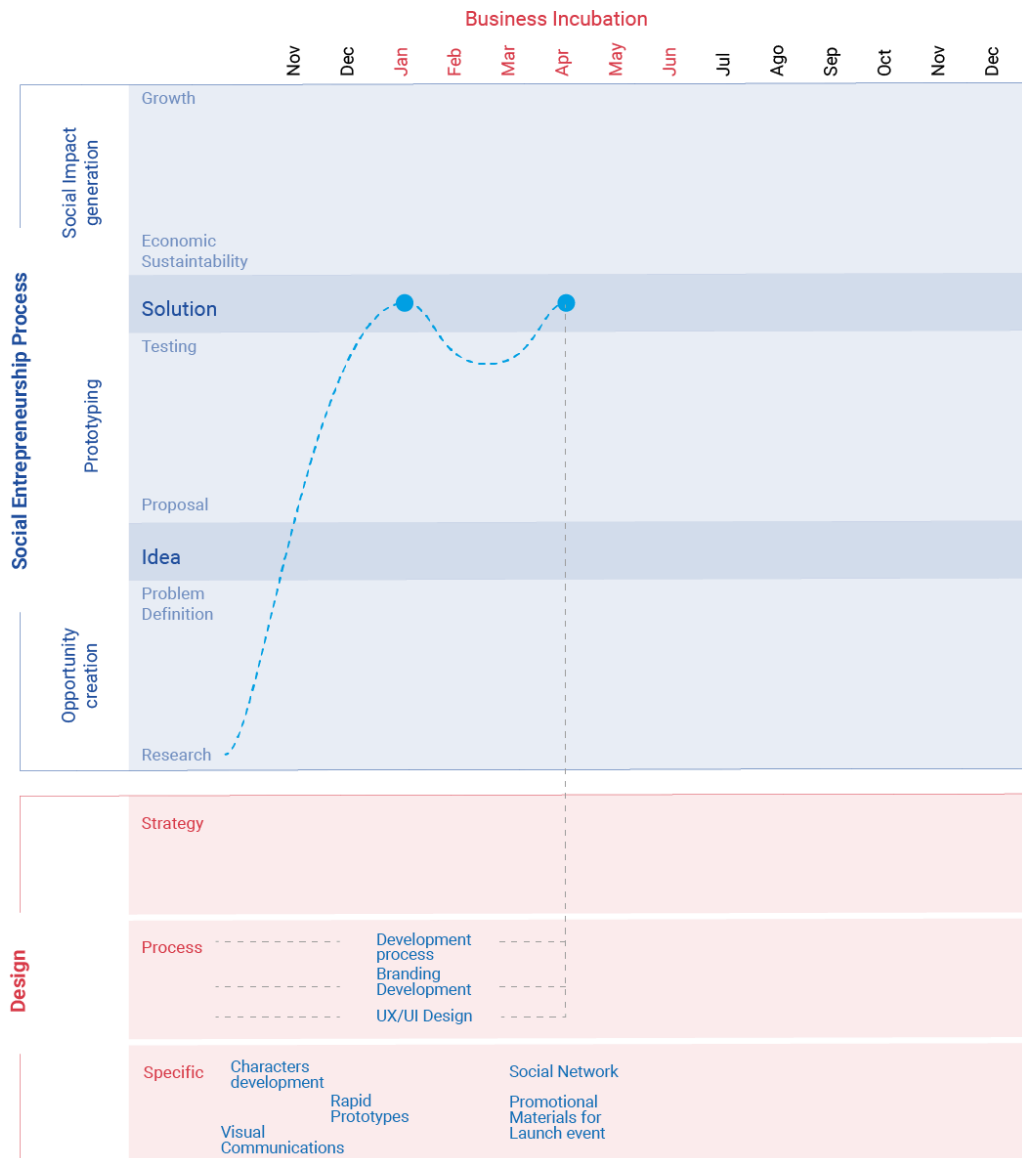
Figure 50: Miaum - Moment 2: Launch event

- ***Moment 3: New Platform Development, New Opportunities and New Directions (September 2017 – end of data collection)***

After launching the product, the entrepreneur realised that the sales were not doing well. After a year from the start of the incubation programme, he said that they had sold around 20 games and the games had more than 1000 downloads.

> *It hasn't been so good [sales], we haven't even done that much advertisement for sell. [...] I believe that the Latin American market is too*

small because I just launched an iPhone version and in Chile and Latin America, the market for iPhone is low. It has been downloaded a lot, though. I would say more than 1000 downloads. But in terms of sales, we have sold around 20 units, at the most. **(A.B., CEO, Miaum)**

In the meanwhile, due to personal reasons, the CEO moved to Canada and started a new job in an international company as a programmer. When asked about MIAUM, he said that he and his partner, the content developer, were planning to relaunch everything but in a better organised manner.

I talked with my partner, the psychologist, so the idea is to make everything again, with the same images, but more organised. The problem was that the child [5-year-old child. See moment 0] never played again, it was like he didn't realise that he was learning. He was motivated at the beginning but not much later on. **(A.B., CEO, Miaum)**

He pointed out that the game needed a re-development because the child that tests the games was not using it again.

Those feedbacks implied for the entrepreneur the re-development of all the games. In this way, he started a *new project* and abandoned the progress of the current versions of the games. This mindset kept him busy writing codes and even more complex platforms. However, at the organisational level, the company did not show significant advances; for instance, positioning the games in new markets or collecting feedback from other users.

In the last interview, he was building a *new system* that was going to make the development more efficient.

At the moment I am building a new system, but it is taking me long, because I am developing new technology, and building a new system that I am going to use with Miaum and the girl will use it over there, from Valdivia. **(A.B., CEO, Miaum)**

He argued that this project could be sold to design agencies that do not have in-house programmers.

*Now I'm developing two projects at the same time. I mean two programmes.
The first project is for organisations that work like graphic design agencies
and building apps. So, you upload an image, and the app cut the image for
you for the devices that you want, either for iPhone or Android or iPad, or
any other. It optimises and reduces the size of the images because it saves
them in TIFF and PNG. So afterwards you can download all the images of
your project directly to your Android as XCode so that you can write the
apps directly.* **(A.B., CEO, Miaum)**

This new project will help the entrepreneur to work remotely with his team in Valdivia
while he was in Canada.

*So, the idea is to finish that development and use it with Miaum. I will start
the other part of MIAUM. So, the girl from Valdivia will be able to assemble
all the designs.* **(A.B., CEO, Miaum)**

This new opportunity made the entrepreneurs reconfigure their target markets. In fact,
besides the mentioned target groups (parents, teachers and schools), they expanded their
markets to design agencies. Having a profitable product would allow them to reduce the
financial pressures of the organisation. In this way, they could be able to focus on the
scalability of their organisation, creating new games and affecting more children.

At the end of data collection, when the researcher asked about the turnover of the games,
the entrepreneur recognised that they stopped promoting them until finishing the
development of the platform to develop new versions of the games using that system.
Therefore, they do not use earlier developments as means for consultations about the
usability, performance, contents or issues regarding the experience with the
organisation. The main challenge of this organisation is to move from development to
commercialisation stages.

Analysis of Moment 3 of Miaum using the Social Entrepreneurship and Design Framework

Figure 51 shows the third moment of Miaum in the SEDF. In terms of the social
entrepreneurship process, the third moment is placed in the stage of the idea as it
represents the formulation of a new business idea. After the launch event, the

organisation did not show any progress in the social entrepreneurship process regarding mobile games. The games were uploaded to Play Store and App Store platforms, but the CEO ceased the promotional activities of them due to personal reasons (moved to Canada) and new development. The CEO mentioned that at this moment, he was developing a new platform for the development of the games which could facilitate the creation of the games with his team while he was in Canada. This platform also showed potential to be commercialised to new markets, primarily to organisations that needed to develop mobile apps. Design did not appear At this moment of the social entrepreneurship process of Miaum.
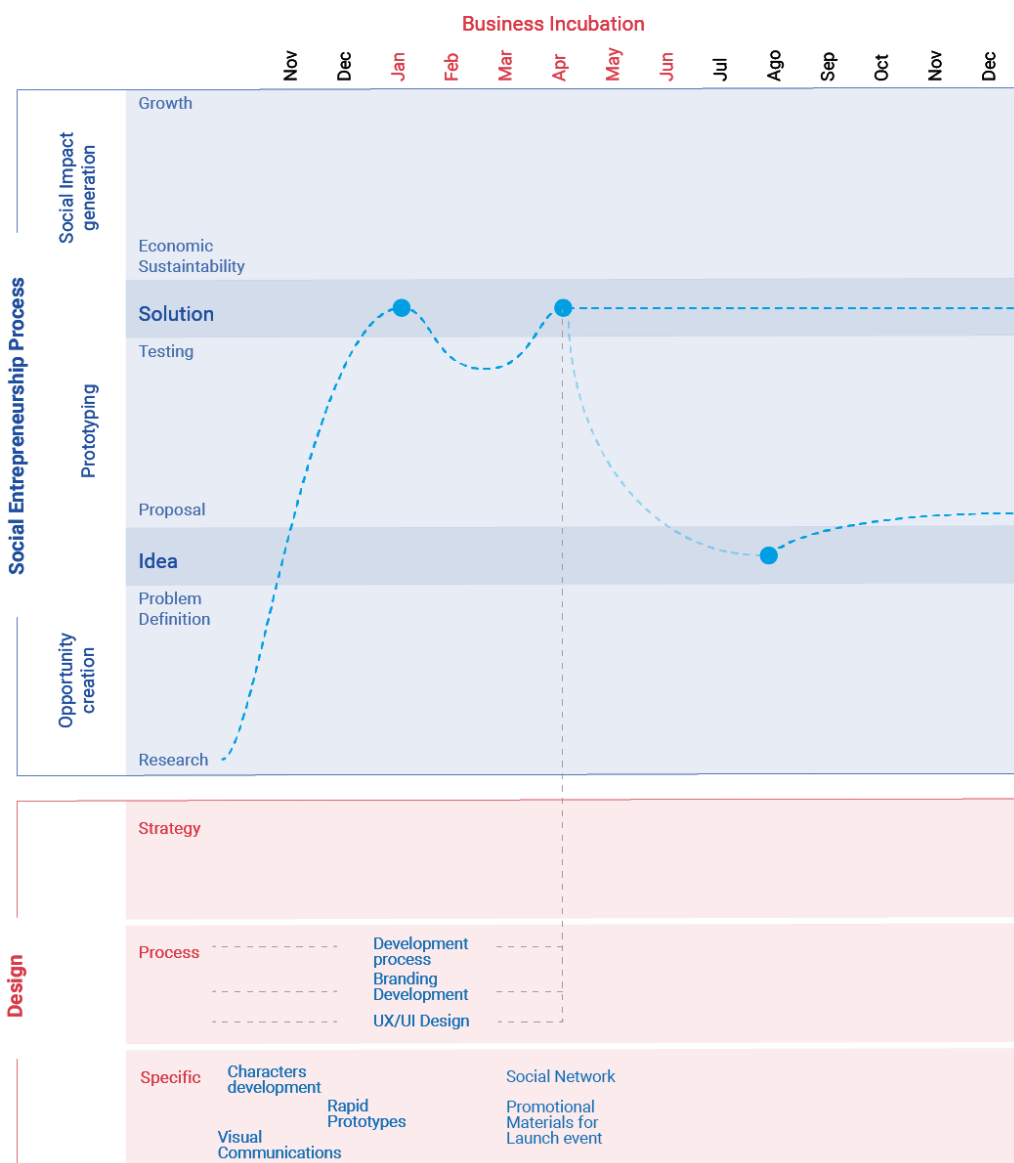
Figure 51: Miaum - Moment 3: New Platform Development, New Opportunities and New Directions

iv)   The use of Design

Initially, when the researcher asked the CEO about what design meant for him, he replied that it was *a drawing or illustration that explains by itself*. At this point, he considered design as an image or symbol that communicate their messages. The key role of design for this organisation was the production of the graphic elements of their apps. The organisation had an in-house designer who produced all the graphics such as the interfaces and characters of the games and communications. The CEO pointed out that design was one of the pillars of the organisation. Design, programming and the creation of contents are the three primary areas of this entrepreneurship.

In practice, this organisation used design in multiple ways. In the development level, they used design as a development process of their games, to develop their brand and as user experience and interface design. In the specific level, they used design to develop the characters of the game, to communicate visually between the team, to create rapid prototypes to test the dynamics of the games and also for promotional purposes in social networks and during a launch event (Figure 52). The following shows the different uses of design by Miaum. In these descriptions, it is possible to see how the organisation used design in the different levels, and how design practices were used to fulfil various purposes.
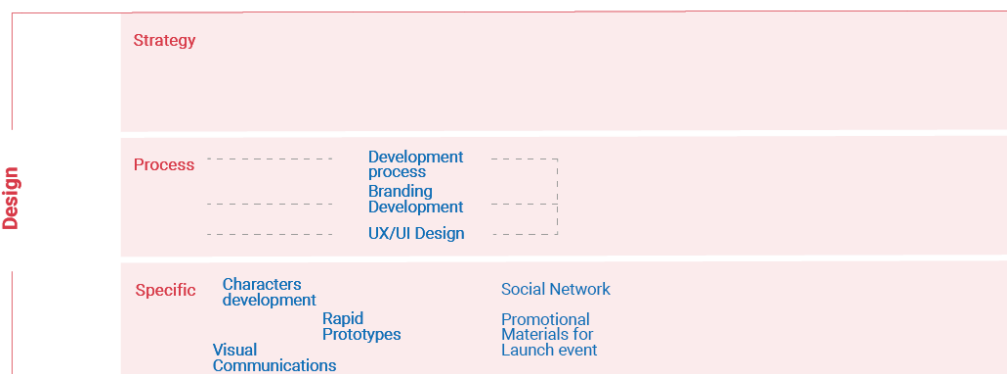
Figure 52: Miaum – The use of Design

- *Design as a development process*

After the presentation conducted by the researcher, the entrepreneur recognised some principles of design that they were already using. The entrepreneur said that he used that approach to develop the algorithms of his software, namely the divergent thinking to solve specific problems. In this way, he could develop creative solutions to the problems that he was facing in terms of programming.

The CEO admitted that they were using design as an overall process. Nevertheless, design was used *silently* (see page 88). The process allowed them to work collaboratively and interdisciplinary. After the presentation given by the researcher, the entrepreneur commented that having a structure, such as the double diamond, helped them to have more clarity in their processes.
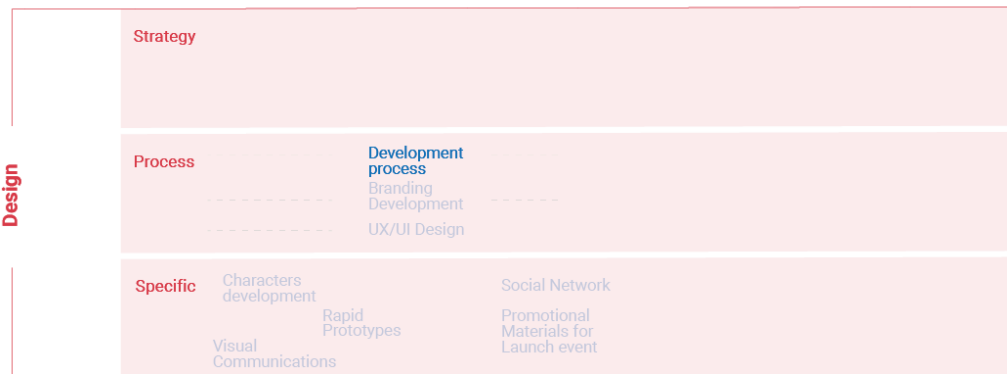
Figure 53: Miaum - Design as a development process

- *Visual communications within the team*

The organisation used different mediums of visual communication to communicate within and across the different departments of the team. The content creation area used prototypes to test the dynamics of the games with users. They also used these prototypes as insights for the graphic designer. In turn, the designer used the prototypes to create the interface and illustrations of the games. Similarly, the programmers used sketches as a quick prototype to visualise their algorithms before coding,

Design was used not only for the creation of attractive graphics but also for the visual representation of ideas, prototyping and testing activities, and more importantly, as a development process of the games.
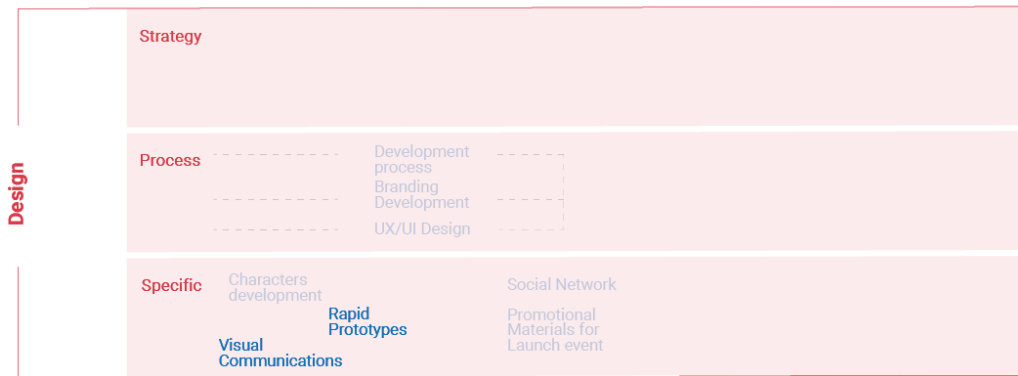
Figure 54: Miaum - Visual communications within the team

- ### *Prototyping and testing ideas*

The content creation area also utilised design in their process. The principal activity of this team was to transform the contents suggested by the Ministry of Education to attractive game dynamics. To do this, the team developed quick prototypes and tested with a 5 years old child. This practice allowed the team to test their ideas before the designer developed the graphics and interfaces, and the programmers wrote the code. By prototyping and testing the dynamics in advance, the team reduced their development cycles, making the processes more efficient. Nevertheless, this organisation tested their ideas just with one child. The reduced number of testers could have biased the decisions taken by the CEO. For example, he mentioned that because the child was not using the app they would develop a new game from scratch to make it more attractive.
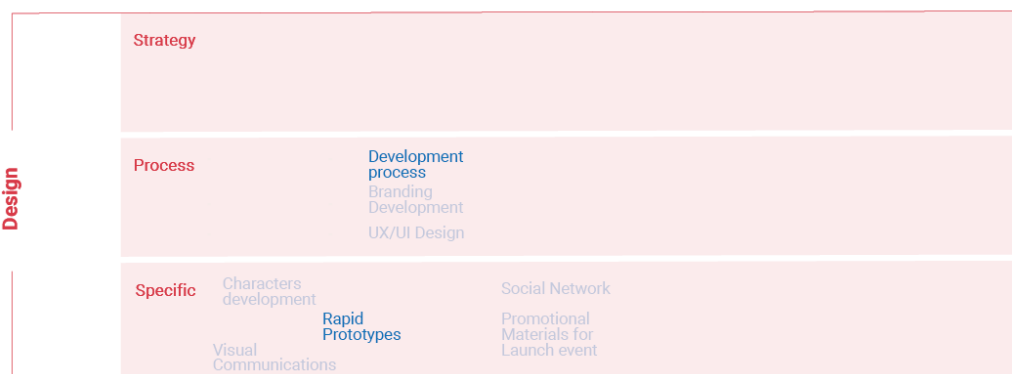
Figure 55: Miaum - Prototyping and testing ideas

- *Branding Development*

The graphics materials developed for the games such as characters and interfaces also served for their branding, including their communications and promotional campaigns. These materials were repurposed for the developing of their brand identity. They used the graphics of the games in their social media platforms and website, as well as in the launch event to communicate the benefits of the games to their stakeholders. In this way, the organisation maintained a coherent graphic identity that expresses the ludic character of the games as a part of their brand. Although, the brand development seems appropriated in terms of the use of the graphics of the games, there were no indications that the communicational messages and graphics were tested with their target groups.

Figure 56: Miaum - Designing for Interactions

- *UX/UI Design*

The development of the games required user experience and interface design. Both were developed in house by the designer. These activities were crucial for the organisation because implied the usability and; therefore, the attractiveness of the games. The attractiveness of the games was important because they acted as an alternative to the content's delivery at schools. In other words, they had to engage students in a better manner than the traditional approaches but keeping the educational relevance.

Figure 57: Miaum - UX/UI Design

• *Character Design*

Design was important for the creation of attractive graphics elements that captivate players with the games. The graphics ranged from illustrations of characters to the interface (menus, buttons, animations, for instance) and interactions of the game. The characters, in addition to the background and all the audio-visuals, are the world of the game. That world was a fundamental element to captivate and engage users. This was the primary responsibility of the designer.

This process of development was conducted in parallel with the UX/UI process.
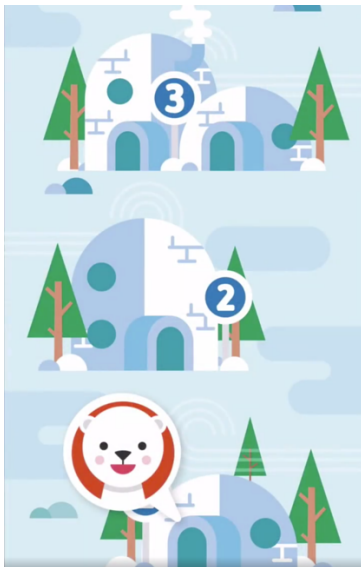
Figure 58: Character and background of a game
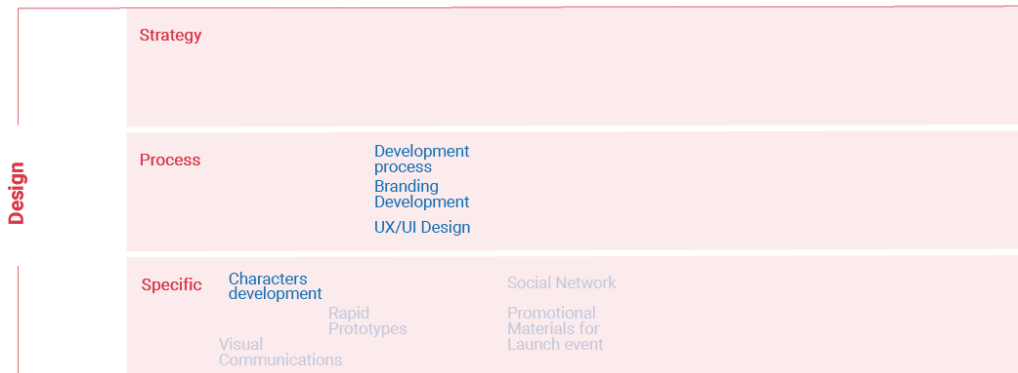
Figure 59: Miaum - Character Design

v)   The social entrepreneurship process of Miaum and their use of design.

Figure 60 represents the social entrepreneurship process of Miaum and the use of design (page 175) in each of the moments analysed in this case (page 161).

This representation shows that the social entrepreneurship process of this organisation moved rapidly from a process of research to development of a solution and launching of the games. Accordingly, the design activities conducted by this company covered the stages of development and launching. In the stages of development, the CEO recognised that they used a designerly approach to develop their projects. The team used design elements such as rapid prototyping and visual communications to gather insights from users as well as to communicate concepts and ideas within the team. Moreover, the designer developed all the graphic elements used in the games (characters and interface) and their visual identity. In this way, the graphics also supported the development of promotional and supportive material for the launch event.

After the launch event, the entrepreneur stopped the development and sales activities of the games and focused his attention on the development of a new platform. This new platform aimed to help the team to work by distance, making the development process more efficient. This new product development also was considered as a new product line for the organisation. At the moment of the last interview, the entrepreneur was developing this new product but not using design in any way for this purpose.
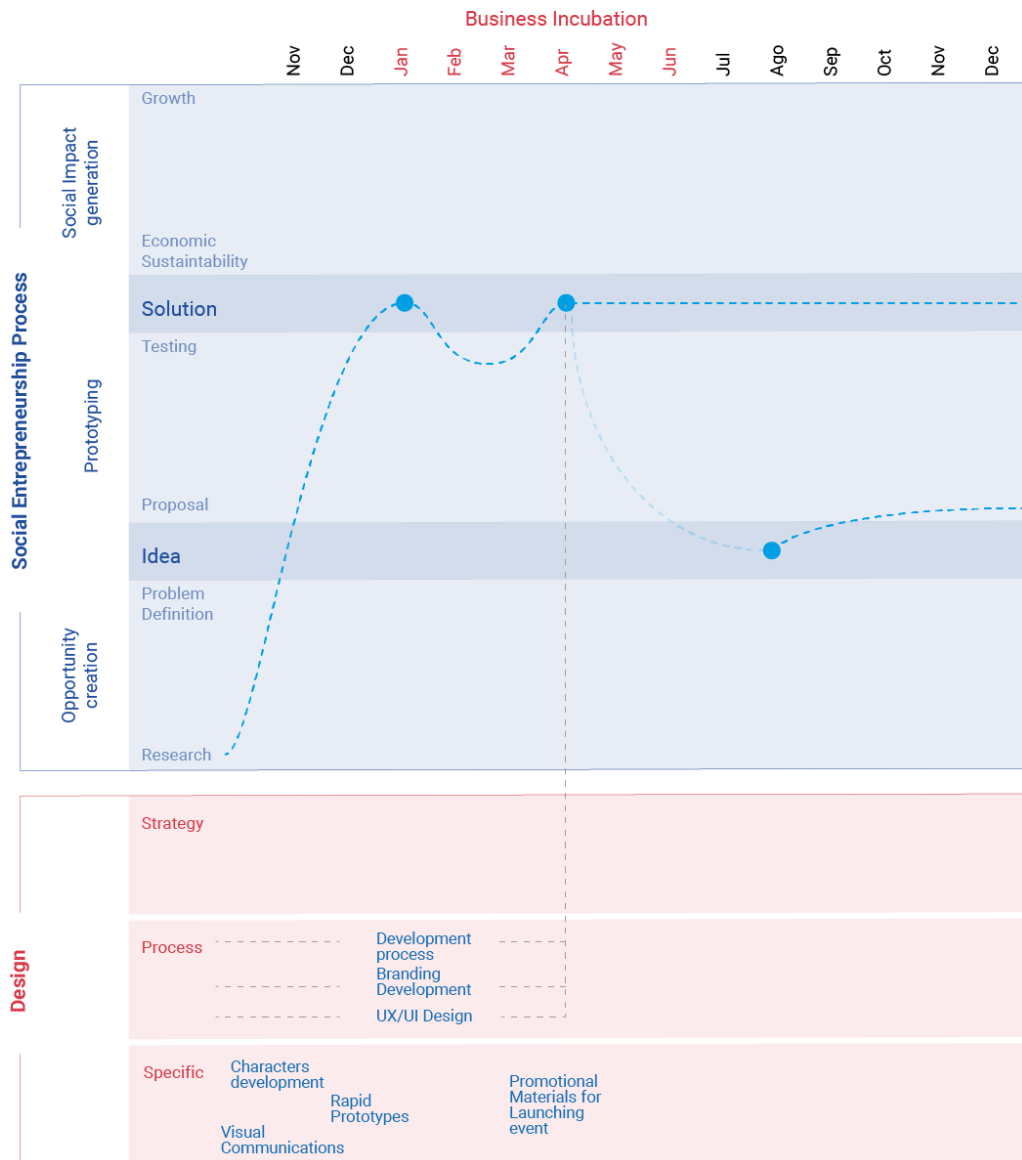
Figure 60: Social entrepreneurship process and use of Design of Miaum

4.3.2 Haedus

Haedus aimed to provide socio-emotional education to children from deprived communities. The entrepreneurs found out that socio-emotional education is important for the development of children because it provides mechanisms to support people's life satisfaction. Therefore, they designed workshops that seek to reinforce socio-emotional skills through learning programmes based on Neuroscience, pedagogy practices (such as Problem Based Learning (PBL) and Science, Technology, Engineering, the Arts and Mathematics (STEAM)), and Design Thinking. These approaches aim to develop skills and competencies in children such as collaboration, creativity/innovation, critical thinking, problem solving and communication.

The first programme that they developed had specific stages that involved diagnosis, review of the proposal with clients value proposition design and implementation, evaluation of the implementation, the involvement of the school community, and integration of the different people that have participated in the programme. The problem with this programme was its duration and cost. Schools, as primary beneficiaries, could not afford the cost of the programme or were not interested in investing such amount of money in a new, and inexperienced, enterprise. Thus, during the incubation, the organisation reacted and developed different shorter versions of the programmes to meet customers' requirements.

Moreover, to expand their social impact, they developed partnerships with other organisations. The partnerships offered new capacities to develop physical and digital products related to socio-emotional education. For instance, as a result of the partnerships, the organisation developed a physical toolkit that could be used by teachers in schools. Additionally, they also developed a mobile application with which they gained access to broader markets. Through the partnerships, the company could expand its social impact offering a variety of products and services related to their social mission.

i)   The organisation

The creation of Haedus is mainly due to the prosocial motivation of its CEO. In an interview with an important Chilean newspaper he said:

> *So, I started with Haedus, social entrepreneurship that now is a foundation, in which I aim to teach children the skills that allowed me to overcome the poverty gap (La Tercera, 2019).* **(R.A., CEO, Haedus)**

The organisation changed their services in multiple times during the incubation process. For instance, instead of focusing on delivering educational programmes, they became specialists on the creation of contents related to socio-emotional education. In this way, they collaborated with different partner organisations for the development of toolkits and digital platforms to deliver socio-emotional education to wider audiences.

ii)   Context

Are traditional educational models preparing children for the challenges of the future? Are schools giving the tools to children to overcome their social issues? What do the children need to succeed in the twenty-first century? These and other questions triggered a group of three entrepreneurs that created Haedus. The team was composed of a commercial engineer, a psychologist, an educator and a team of tutors that help to deliver the workshops.

Emotional health is the prime factor that determines life-satisfaction. According to Layard et al. (2014), children and adults can learn emotional health, which is a process that allows them to understand and manage emotions. In this way, they can achieve positive goals, establishing and maintaining positive relationships (CASEL, 2018).

Children from deprived communities face psychosocial risks. Thus, developing socio-emotional competences is particularly relevant for them. However, due to the context, it is unlikely that they receive this type of education in their houses (Marchant et al., 2016). Schools, in this context, offer the right environment to support children to overcome the challenges that they face in their communities. Nevertheless, the entrepreneurs realised that schools only supplied traditional education based on the retention of knowledge and skills rather than the development of socio-emotional intelligence. They argued that children from deprived communities would benefit from socio-emotional education to overcome the difficulties that affect them.

Additionally, according to the entrepreneurs, children that have grown in a violent environment are challenging for educators. The reason is that they often replicate those violent behaviours in the classrooms, being disrespectful between each other and disinterested in the classes. Educators claim that socio-emotional education would prevent or reduce these conflicts, allowing them to conduct their classes peacefully.

iii)   Design understanding

Table 27: Haedus understanding of design

Design Understanding	
BEFORE	**AFTER**
Before starting the entrepreneurship, I related Design with graphic design or fashion design. Afterwards, once we started the venture, I found industrial design and its relation to creativity. Moreover, our perspective expanded once we found out design thinking. Design is design thinking	**Design is a discipline (for instance, service design, graphic design, industrial, etc.), a process, creativity.**

Initially, this entrepreneur related design to a couple of disciplines such as fashion and graphic design. He added that during the incubation process, they *discovered* industrial design. He realised that "many entrepreneurs were industrial designers"; thus, he investigated the reasons behind, and he found out that "industrial design relates to creativity". Haedus developed an educational kit in partnership with an organisation that had its design department. Precisely, the design department of the partner organisation led the design process. The entrepreneur experienced the value of design, claiming that designers added creativity to the process.

After the presentation provided by the researcher, the entrepreneur identified new design disciplines and approaches. When he was asked for a second time about what design meant for him, he added service design to the list of disciplines, as well as design as a process or creative act. He also expressed that he learnt from the presentation that design is "a simple way to solve problems collaboratively and creatively".

Additionally, design thinking was used by entrepreneurs as a part of their service. They "promoted the development of a creative mindset in children, and they do that through design thinking". He added that they sought to "develop them a structural mindset that allows them to overcome day-to-day problems through ideation, prototypes and test as the design cycle is". In this way, design was also associated as a cognitive element used

to solve problems. This understanding of design thinking allowed him to talk about design as a process. In that respect, he argues that "design gives a way to undertake a plan or objective".

Despite the understanding of the benefits of design, he commented that they do not plan to hire a designer in the short term. He said that *"if the organisation grows, maybe in 5 years, they would hire a graphic designer"*. This statement is relevant because it shows a dissociation between the role of design and the role of the designer for the organisation. A designer in the team was as an operational resource that could develop and provide graphic materials rather than supporting them in organisational processes or strategies. For instance, they worked with an external designer in the development of their brand identity.

The core team, which did not have a designer, conducted the design-related practices. Nevertheless, the CEO recognised the importance of design for their organisation, claiming that they assigned resources to design. For instance, he claimed that "they do have resources assigned to design because what they do is to *design* the educational programmes". On the other hand, the organisation outsourced all the *traditional design* approaches, such as the creation of images, graphics, or objects.

These diagnoses provided a baseline regarding the understanding of design for this organisation. The only apparent difference found in the definition of design by the social entrepreneur was the inclusion of service design as one of the design disciplines — the rest of the comments given after the presentation related to their first understanding of design thinking. In fact, in both diagnoses, the entrepreneur related design to a creative process to solve problems. Moreover, in both diagnoses, the entrepreneur showed an interest in using design at the organisational level by themselves rather than to have a designer to lead the internal design processes.

iv)   The Journey

The social incubation process of this venture comprised four key moments.

- **M1- First Iteration – short programmes –** At this moment, the entrepreneurs were redefining their programmes based on the feedback collected in testing sessions.

- **M2- Development in partnership 1 – Toolkit –** This moment shows the experience of developing a product in partnership with a company that developed educational products.

- **M3- Development in partnership 2 – Platform –** This moment shows the development of a digital platform, also in collaboration with an external organisation.

- **M4- Focus on Communications and sales –** The last moment showed when the entrepreneurs realised that they had to focus on sales and communications.

- *Moment 1: First Iteration - short programmes (before incubation – January 2017)*

When the incubation process started, the entrepreneurs had already developed and ran two prototypes with 25 children each and one prototype with 16 adults. These opportunities helped the entrepreneurs to test their programmes and to evaluate the responsiveness of the schools upon the service that they were offering.

Figure 61: Programme testing sessions

Although the CEO realised that there was an imminent market need for socioemotional education products and services, they found it difficult to sell their services. They aimed

to position this type of education into communities to help children in vulnerable situations.

> *The project was born with a focus on the children's empowerment. This, from the point of view… well, you live in a vulnerable situation, but you have this, and this tool. You can overcome your vulnerable situation with these tools. But how do we do that? It is very difficult to do that only in communities, like going to each village to do that. Because you need to get the resources, etc. So, the best way is to introduce it in the educational aspect, that is in schools. (R.A., CEO, Haedus)*

To reach these children, they approached multiple schools. However, the entrepreneurs argued that they did not receive a positive answer from them because of the length and cost of the programme offered. This circumstance triggered the first moment of this analysis, the exploration of new alternatives to offer their services and the dilemma between economic sustainability and social impact.

> *Our main challenge is the permanent search for ways to achieve our purpose [social mission]. That is the main one, that is also very difficult, because many times when you start evaluating the economic sustainability of the project, many times you crash a bit with the purpose. And then you say, well, this is misaligned, or it is related or not. Then, you get very stuck when you have to decide, or sometimes the process is slower. (R.A., CEO, Haedus)*

> *[…] When you start paying attention to the economic sustainability, clearly you will always find stuff that tells you, ok, in here you have to leave a little of your purpose, or you are not going to… Let me see, in a few words, sometimes in some of the lines that we are developing, we know that they do not cause the deep impact that we would like. But we analyse the data, and… well, it does not undermine it either. So, we say, ok, let's do it. At least we are going to introduce the concepts and leave children with some methods. Knowing that in a week, we are not going to change the life of these children. (R.A., CEO, Haedus)*

The entrepreneurs developed shorter programmes to overcome this problem. The new programmes were shorter and tailor-made programmes of half of a day to a couple of days long. These programmes were more accessible for the schools but also allowed them to inform them about the benefits of implementing socio-emotional education within the schools. Nevertheless, the entrepreneurs faced the dilemma of whether to deliver more extended programmes that could create a more significant social impact or to opt for the delivery of shorter versions that could guarantee incomes.

Therefore, they reflected on the social mission of the company. They found that providing shorter programmes would help them to increase the cash flow and, in turn, secure financial resources to create a more significant social impact in a different form. By increasing the cash flows, the entrepreneurs could release the financial pressures of early-stage ventures.

Analysis of Moment 1 of Haedus using the Social Entrepreneurship and Design Framework

Figure 62 shows the first moment of Haedus in the SEDF. In terms of the social entrepreneurship process, the first moment is placed in the solution stage. The course of action shows an iteration in the social entrepreneurship process. The iteration shows the moment when the entrepreneurs realised that the first programme was expensive and therefore difficult to commercialise. In this way, they redefined their idea and developed shorter versions of them. Haedus used design in the process level for the creation of the programmes and contents and in the specific level for the delivering of prototyped programmes.
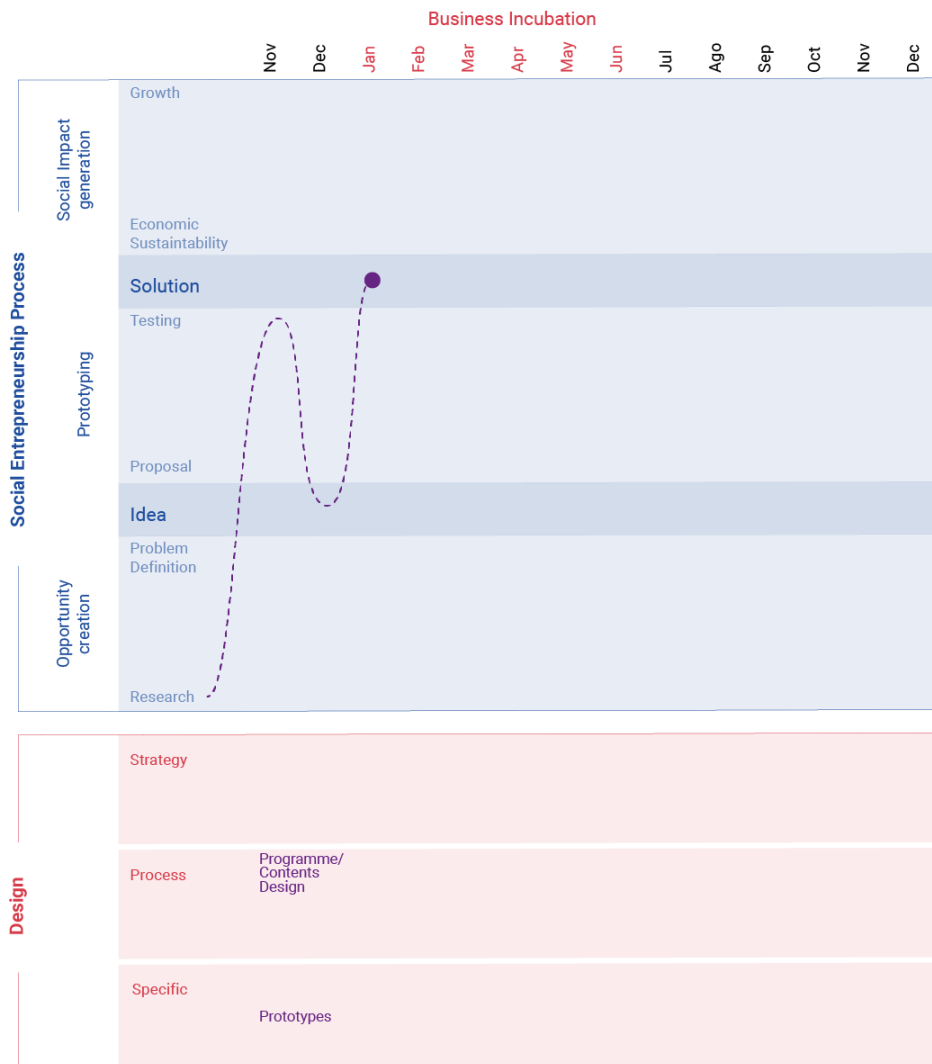
Figure 62: Haedus - Moment 1: First iteration - short programmes

- *Moment 2: Development in partnership 1 — Toolkit (April 2017 — June 2017)*

In parallel to the project supported by the incubator, the entrepreneurs explored other alternatives to deliver their idea. Thus, they built a partnership with a company that produces educational materials for schools called Efecto Educativo. Together, they developed a toolkit that supports the learning process of socio-emotional skills.

The creation of the product comes from a design process. Because that product was born as a result of a meeting where they detected that we were the experts in this area, the socioemotional area, and they were expert in the development of pedagogical contents and sales. They said, well, why don't we get together and you contribute with the content, and we do the rest. And then, what happened was we began to iterate, to iterate with them, and to identify which skills were the most required. Afterwards, we worked on how we could make it. In turn, it was a lot of product design. Or rather, it was entirely product design, from scratch, from zero, until we started talking about the games that we were going to make, how those games were. And then, how the games could be designed and transformed into materials. And then, how the format of the games will be, the length of them. Afterwards, we had to create a manual so the teacher could run the activities alone, without us. After, we had to make a graphic book, with photos, and important stuff for the games. Actually, we worked a lot with their departments of marketing, design and sales. **(R.A., CEO, Haedus)**

The collaborative work with the Efecto Educativo worked as follow. During a scoping meeting, they identified the skills that each organisation had. After that meeting, they agreed that Haedus was going to develop the contents and the partner organisation the design of the tools and graphics of the manuals and the book of the toolkit. Despite the definition of the roles, the process involved the participation of both companies during the entire development process. As a part of the collaboration agreement, the partner organisation was in charge of marketing and sales. This agreement was due to the partner organisation had already developed the sales and distribution channels. At this moment of the process, Haedus offered workshops to schools, so the sale of physical,

educational materials was not as a part of their target market. Therefore, by working in partnership, they could reach new market segments.

As a result, they developed a product to be used in schools by teachers. The product is a toolbox called *Locos de Patio* (in English, Playground's crazies) that enhances empathy, curiosity and creativity of the school community. This toolbox also became part of the materials used by the entrepreneurs in their workshops.

This collaborative project allowed them to incorporate new capacities to the team; in this case, knowledge of the educational market and industrial design. They recognised that without the partnership agreement, it could be impossible for them to develop this type of product.

Analysis of Moment 2 of Haedus using the Social Entrepreneurship and Design Framework

Figure 63 shows the second moment of Haedus in the SEDF. In terms of the social entrepreneurship process, the second moment is placed in the idea stage. This moment was placed in that stage because the entrepreneur emphasised the collaboration with Efecto Educativo as a partner organisation as a new business idea that would allow them to explore new markets. This moment, however, also describe the process of development of the toolkit developed in partnership with Efecto Educativo. The use of

design at this moment comprises the three levels of analysis. At the strategic level, design was used as design thinking to define the ways to undertake a plan or objective for the organisation (see page 184). Design was used at the process level in the development of the toolkit. The design process involved the collaboration of both organisations in a collaborative project led by the design department of the partner organisation. Haedus contributed to this process in the creation of contents and dynamics of the toolkit. At the specific level, the entrepreneurs used design for the creation of graphic materials of the book and instructions of the toolkit.
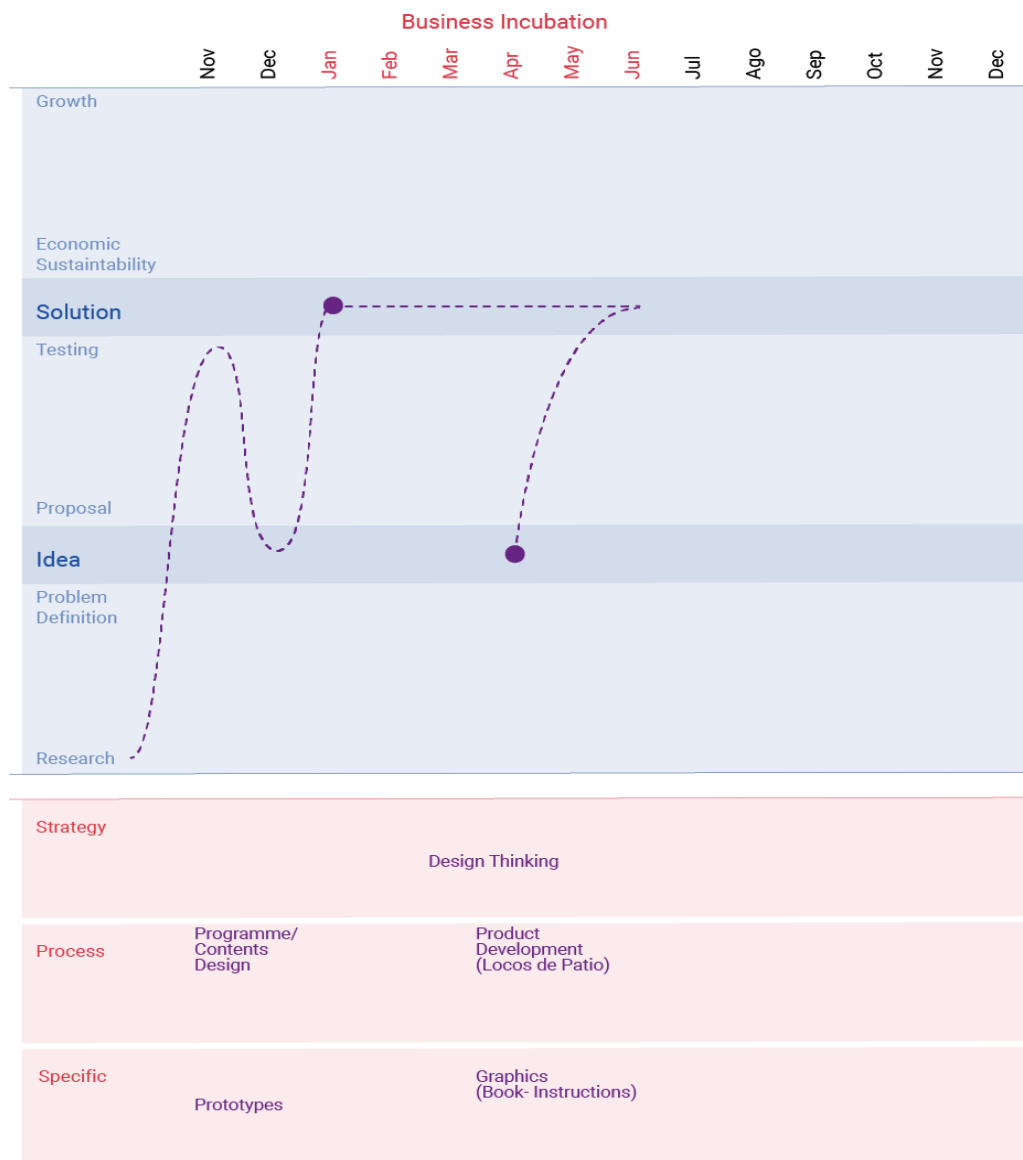
Figure 63: Haedus - Moment 2: Development in Partnership 1 - Toolkit

- *Moment 3: Development in partnership 2 — Redefining the value of the organisation (August 2017 – to the end of the data collection)*

Following the experience of working in partnership, the entrepreneurs applied to a public fund to develop another product in collaboration with a different partner organisation. This new partner organisation had already developed a digital educational product called the knowledge tree. Haedus saw an opportunity to co-develop a digital product based on their experience in socioemotional education and the technical expertise of this partner.

> *We've got the innovation voucher [public funding] (CORFO, 2019), to which we applied with a digital product of what we do. And then we talked with some guys that are part of Start-Up Chile. An Ecuadorian company called MOI. They developed a digital tree in which each branch has academic contents, but it grows while the child solves its challenges. So, the branches that grow the most represent the areas that the child develops the most. So, we said, well, why don't we do the same for socioemotional education? We talked with them, applied to this fund [innovation voucher] and we won it. That is 7 million pesos [£7,500]. (R.A., CEO, Haedus)*

The product developed was called Árbol de Socio-Emocional Haedus (Socioemotional Tree Haedus). This product sought to promote collaboration, creativity, communication and critical thinking. The goal was to improve the school socialisation, the resolution of problems and personal relationships.

Figure 64: Árbol socio-emocional Haedus

The main advantage of the platform was that Haedus could deliver socio-emotional education digitally, without the need for tutors or facilitators. This product represented a new way to deliver its value proposition in comparison to the previous programmes.

> *We believe that this project is really important for us because we can use it as a prototype to apply to technology funds. On the other hand, because it will escalate the impact of the project. Because if we do it right with an interesting digital solution, that it could be a platform, a website or an app, obviously our project will be a lot more scalable. **(R.A., CEO, Haedus)***

The development of a digital platform allowed the organisation to reach more schools and; therefore, increase their impact. The CEO said that a digital platform could be used remotely by educators, not needing to have the team to facilitate workshops. In addition, they could reduce operational costs of workshops (contract of tutors or facilitators, materials, transportation) and therefore, the price of the service.

The development of this platform involved the collaboration of both organisations. Haedus contributed with their expertise in the creation of content related to socio-emotional education and the new partner organisation provided the infrastructure of the platform. A significant part of this joint work consisted in the translation of the contents into graphic elements for the platform. In this sense, design facilitated the materialisation of the knowledge and expertise of Haedus into graphic and material elements that composed the toolkit. The CEO said that expertise in socioemotional education became the principal value of Haedus.

Figure 65: Students testing the Árbol socio-emocional Haedus

Figure 66 shows the third moment of Haedus in the SEDF. In terms of the social entrepreneurship process, the third moment is placed in the idea stage. This moment was placed in that stage because the entrepreneur emphasised the collaboration with MOI allowed them to explore digital markets. In this stage, the organisation used design for the development of contents and the user interface and experience.
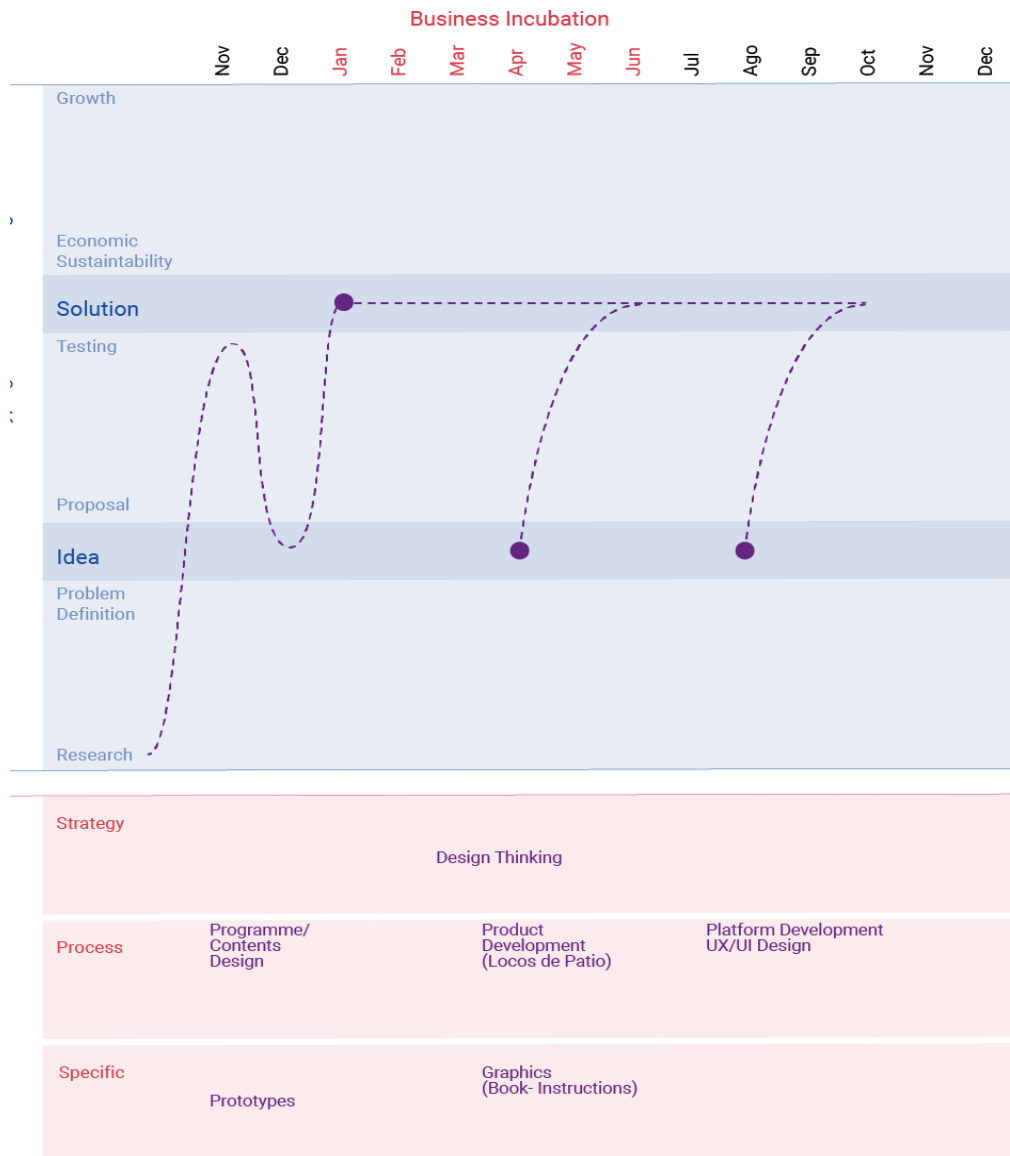
Figure 66: Haedus - Moment 3: Development in partnership 2 - Redefining the value of the organisation

- ### *Moment 4: Focus on communications and sales (December 2017 – to the end of the data collection)*

At this point, Haedus had developed three programmes, a physical toolkit (Locos de Patio) and a digital platform (Árbol socio-emocional Haedus). Nevertheless, they had not sold enough to achieve the economic sustainability of the organisation.

For this reason, they hired a business manager to support their sales and to apply for funding

This year has to be commercial. Sales, sales, sales! We already have a decent website, we have products to sell, and we already know that we can work with companies. To sell, to sell, to sell! So, Matias has to go every week to schools, knocking doors… he will have to go. To sell, sell, to sell. **(R.A., CEO, Haedus)**

After developing the programmes, toolkit and platform, the CEO shifted the activities of Haedus to sales and positioning their brand. Sales were supported by the development of their brand identity. The CEO linked the sales activities to the website development by claiming we have a decent website and products to sell. In terms of external funding, he added.

Since Matias (business manager) arrived, we have applied to two grants, and we won both of them. **(R.A., CEO, Haedus)**

In addition to this incorporation, and to support this focus on sales, they redesign their brand identity — they aimed to position their business in schools, funding bodies and the general public.

We heve been focusing on the development of our website. We changed the logo, made more formal structures, more formal presentations, proposals, all of that. **(R.A., CEO, Haedus)**

An external designer redesigned its logo, suggesting different alternatives. To select an adequate alternative, they asked children to vote for the most attractive alternative for them.

We developed our brand with a graphic designer. After, we sent the logos, for example, to children, to many children, for them to select the logo that they liked the most. **(R.A., CEO, Haedus)**

Figure 67: Haedus' logo evolution

All these actions represented an awareness of the importance of the brand identity for the organisation and the participation of beneficiaries in their development processes. The design of the brand identity occurred when the organisation was looking to develop its sale channels to attract funding for their organisation.

In addition to these developments, the organisation is active in social media to engage with the general public and to build their online reputation. In these channels (Facebook, Instagram), the CEO shares information about the different activities and projects that they conducted. Also, they use engagement strategies, such as posting ad-hoc messages according to the celebrations of the year. In December, they published Christmas and New Year greeting images to the people that have supported them or greeting educators on the teacher's day (16 October).

Figure 68: Seasonal greetings

Analysis of Moment 4 of Haedus using the Social Entrepreneurship and Design Framework

Figure 69 shows the fourth moment of Haedus in the SEDF. In terms of the social entrepreneurship process, the fourth moment is placed in the economic sustainability stage. At this moment, the organisation focused on communications and sales. After developing their products and services, the CEO mentioned that they had to shift to sales because they had spent enough time developing solutions and now, they had to focus of commercialisation of their products and services. The organisation used design at different levels. First, they used design specifically in the development of their brand

identity, developing a coherent message and imagery that represented their social mission, their products and services, and allowed them to engage with their stakeholders. This brand development was supported by specific uses of design, such as the development of their logo and posts for their social media platforms.
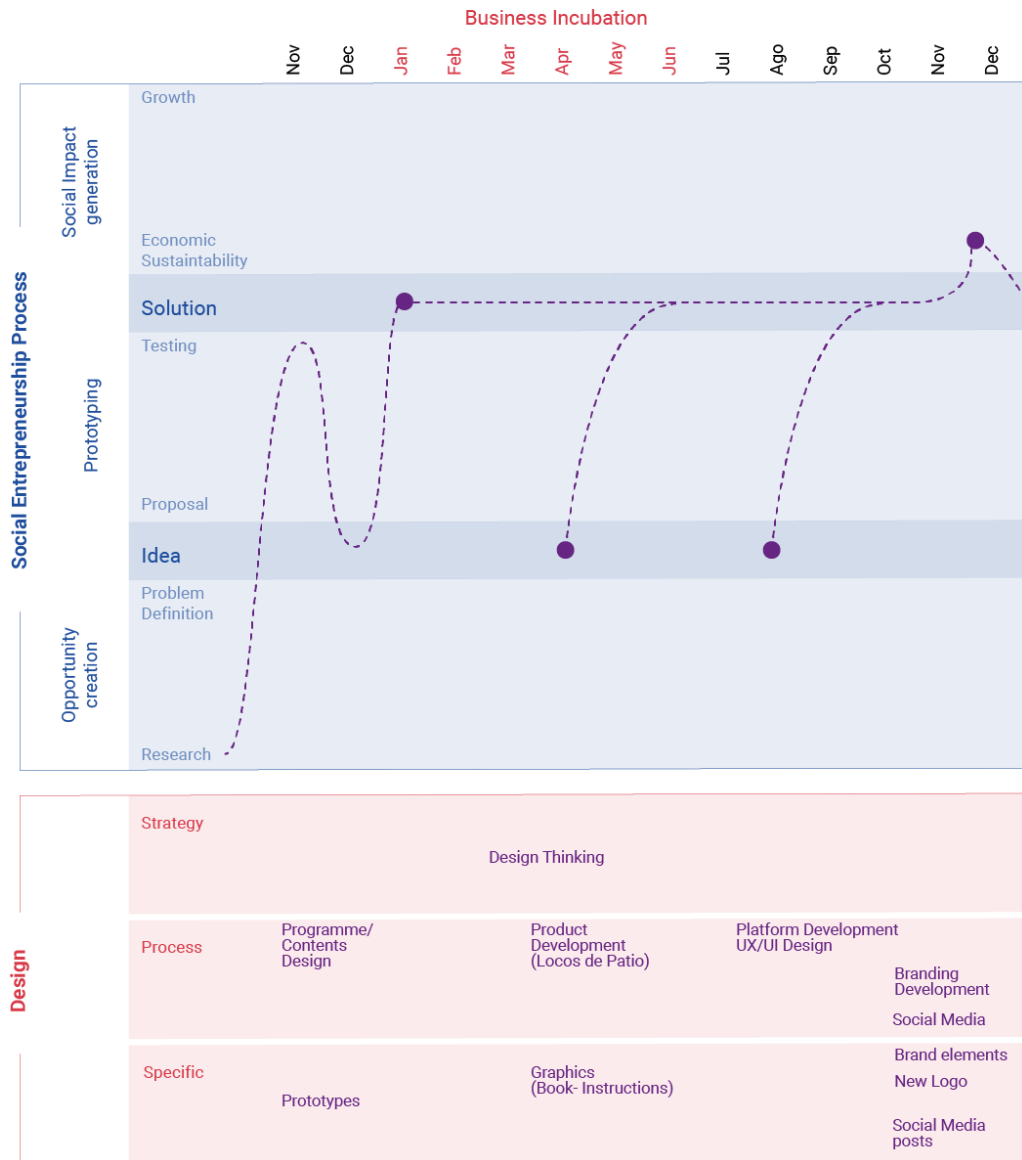
Figure 69: Haedus - Moment 4: Focus on communications and sales

v)   The use of design

The CEO of Haedus recognised the value of design from the first interview. This organisation showed a widespread utilisation of design principles and practices during the data collection period. Design thinking was considered vital for this organisation as it was used as a part of the content of their workshops but also as a strategic tool that allowed them to achieve their objectives. Moreover, design was also used as a process for the development of contents, products, platforms and branding. Therefore, Haedus used design in various levels of the organisation, from graphic elements to strategies (Figure 70).
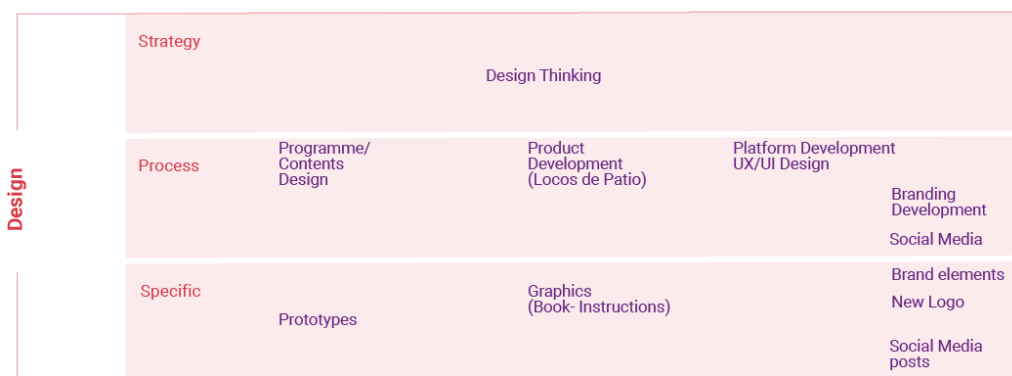
Figure 70: Haedus - The use of design

•   *Design Thinking*

During the diagnosis conducted during the intervention stage, the entrepreneur said that design thinking was important for their organisation. They used design thinking as a part of their services, to teach children how to be creative and solve their problems, and as a process that supports their strategic decisions. He added that design thinking involves multiple trial and error prototype test to gain the necessary feedback to solve a problem or to find an answer to a specific issue. This approach was introduced in workshops to children for them to solve problems their creatively.

At the organisational level, the CEO referred to the use of design thinking when redefining their product strategies. He points out that design thinking helped them to generate new business ideas and strategies. Design thinking offered a creative way to

overcome the various business challenges that the organisation encountered, such as redefining their programmes to match their social mission with their financial pressures.

Therefore, design thinking, at the strategic level, was linked to the process of programme and content design and the development of prototypes at the moment of designing their workshops. Design thinking also triggered collaboration with partnerships, so it was also linked to processes such as product and platform development. Lastly, considering that design thinking allowed them to plan and achieve their objectives, it is possible to see a connection between design thinking as a strategy for communications and commercialisation which was supported by process of brand development and social media communications. Figure 71 shows the connections between design thinking and processes.
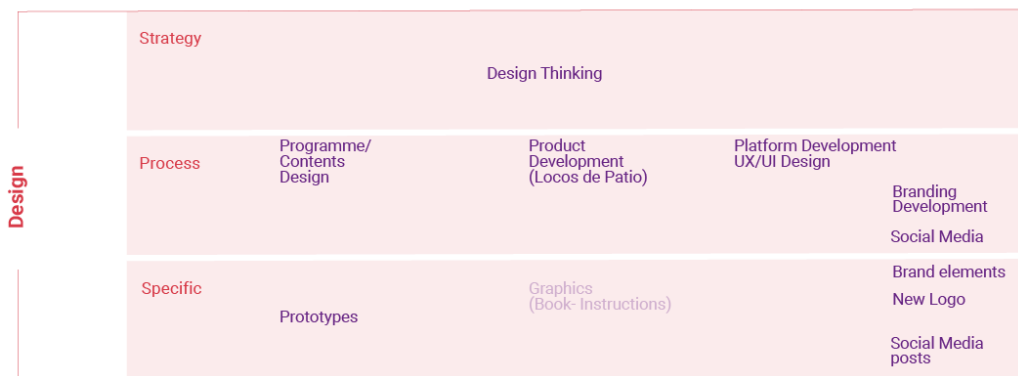
Figure 71: Haedus - Design Thinking

- ***Product Development***

Locos de Patio was the first physical object developed in partnership by the organisation, so they did not have prior experience in this type of development. In this development, the entrepreneur recognised the importance of their partner's design department in leading the process.

The entrepreneur claimed that this collaboration followed a designerly way. The "first meeting" with their partners corresponds to the first phase of the double diamond, *discover*. In this phase, the partner organisations shared their knowledge about markets, design and socioemotional education to *define* (second phase of the double diamond) an opportunity for collaboration and development. Subsequently, a phase of

development, in which both companies contributed with their expertise and knowledge, was conducted. In this phase, Haedus developed the contents and dynamics of the tools, instructions and the book. In parallel, the designers, from the partner organisation, had to make sense of the objectives and activities conducted by Haedus in their programmes and translated into tangible artefacts contained in the toolbox (tools and books) and graphics. The *delivery* phase of the double diamond, in this case, sales, was conducted by the partner organisation.
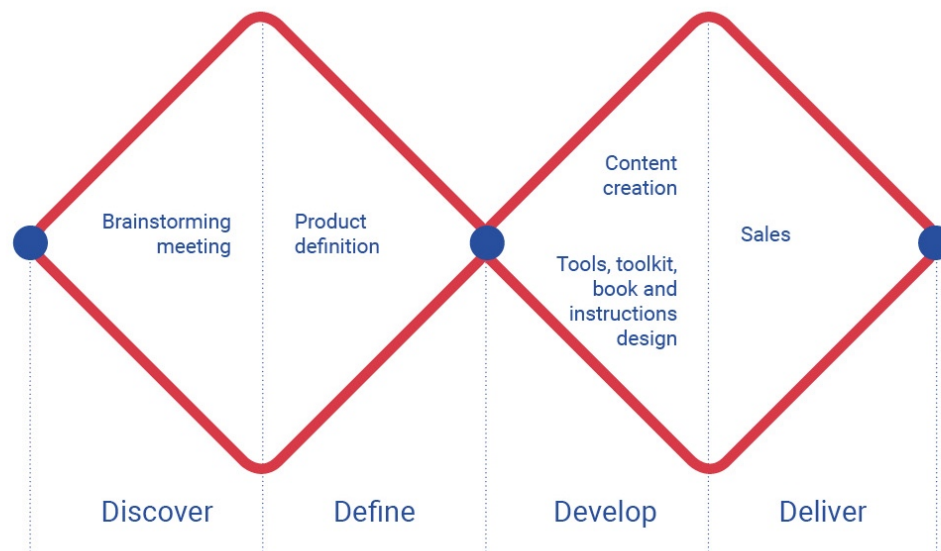
Figure 72: Design process of Haedus for the development of Locos de Patio

Even though the organisations worked independently in their areas of expertise, numerous meetings and workshops were required to reach a consensus between the two parties. The design department of the partner organisation led to the development process. The teams worked together in the conceptualisation of the toolbox, the ideation of contents and materials, and the definition of the final product. The partner organisation was in charge of the technical development of the product (for instance 3D modelling, technical specifications of materials, parts and objects, visual identity of the toolbox, editorial design of the instructions and book). Figure 72 illustrates the use of design as a process for the development of Locos de Patio

Figure 73: Haedus - Product development

· **Platform Development**

The development of the platform, in partnership with MOI, allowed the organisation to reach new markets. Haedus did not have experience developing digital products; therefore, the partnership allowed them to incorporate this capacity. The development of the platform was led by the partner organisation, which included design activities such as the design of the user interface and experience of the platform. Figure 74 highlights the platform development in the use of design of Haedus.
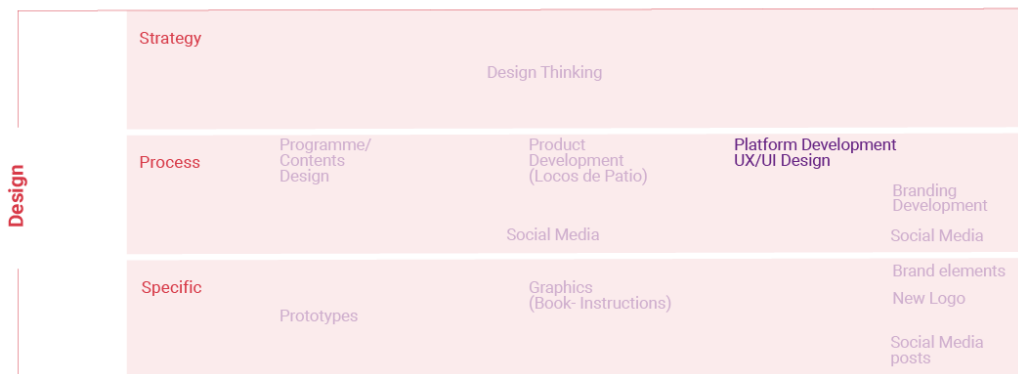
Figure 74: Haedus - Platform development

· **Brand Identity and Social Media channels**

The novelty of the programmes required intense efforts in communications and engagement with stakeholders. Haedus understood that effective communications needed a consistent brand identity to communicate the value of the organisation to its audience.

Throughout the entire process, the CEO actively used social media to communicate with their stakeholders and broader audience. To do this, the CEO utilised graphic tools to create attractive posts that support their communication strategy. For instance, during teacher's days, they posted images to celebrate teachers, and during Christmas, they posted holiday greetings for their followers. Similarly, they posted images of the different activities and projects they were conducting. Most of these images are accompanied by their logo to link the contents of the images with the products and services they offered.

After a year of developments, the organisation also realised that they had to invest more time in sales activities. In addition to the hiring of a business manager to increase their sales, they worked on the development of various brand touchpoints. These touchpoints included the redesign of the logo, the development of the website, the graphics of proposals and emails, for instance. The development of the logo was an example of the use of graphics as a channel to reach clients. The entrepreneurs mentioned that the decision of the logo and the colours used came from a consultation of a group of children. They asked them, from several alternatives, which logo and logo they liked the most. Thus, the children decided on the logo and the colour palette of Haedus. Figure 75 shows the use of design for branding development and social media as a process supported by specific materials such as a new logo, social media posts and brand elements such as proposals, letterheads and presentations.
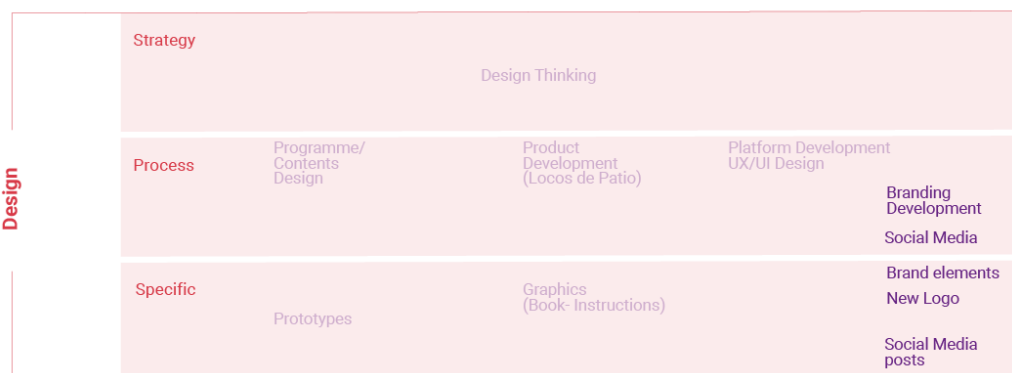
Figure 75: Haedus - Brand identity and social media channels

- ***Design for Knowledge Materialisation***

At the end of the data collection, the entrepreneur pointed out that the value of their organisation was not in the delivery of socioemotional programmes. Instead, it was in the creation and transformation socioemotional of contents into attractive dynamics for children. Therefore, the programmes, the toolkit and the platform developed were the means to deliver their socioemotional knowledge to different audiences.

In this way, design supported the *materialisation* of this knowledge. This process of materialisation was present throughout the entire development process. For instance, when the researcher asked about how they use design, the CEO mentioned that they used it in the *design of contents of the programmes* (see page 185). The design of contents refers to the integration of the different approaches considered to develop the socio-emotional capacities in children. The programmes (and further area of expertise of the entrepreneurs) were based on topics such as Neuroscience, pedagogy practices (such as Problem Based Learning (PBL) and Service, Technology, Engineering, the Arts and Mathematics (STEAM)), and Design Thinking. Therefore, they called design to the process of putting together these areas in logic and comprehensive way in the form of workshops, activities and tools used in the programmes.

Similarly, the process of materialisation was present in the design of the activities and facilitation procedures of the programmes, the functions of tools and instructions of the toolkit, the activities of the platform. In this way, the materialisation of knowledge regarded the transformation of socio-emotional education contents into educational programmes and workshops, or products such as the toolkit or the digital platform. Figure 76 illustrates the use of design as a programme and content development process.

Figure 76: Haedus — Design for knowledge materialisation

vi)   The social entrepreneurship process of Haedus and their use of design.

Figure 77 represents the social entrepreneurship process of Haedus and the use of design (see page 200) in each of the moments analysed in this case (see page 186).

The social entrepreneurship process of Haedus started with the development of educational programmes for children. This process included the iteration of the programmes and the development of a refined service based on the experience gained by testing their ideas with children and evaluation the acceptance of the offer by schools. In this stage, the entrepreneur attributed the use of design to the "design of contents of the programme". This activity implied the use of a creative mindset to put together the socioemotional contents with dynamics in engaging activities conducted throughout workshops.

The second and third moments represent the development of new products: a toolkit and a platform. During these moments, the entrepreneurs utilised external resources and capacities, including design, during the development stages. By drawing internal and external capacities to their development processes allowed the entrepreneurs to utilise design as a process of development and technical design expertise such as product design, user experience and user interface design.

After the development of the programmes, toolkit and platform, the organisation found the need to increase its sale force and reduce the time of development. This decision was taken because they had invested a year in developing solutions. Nevertheless,

during this time, they did not obtain enough incomes to sustain the organisation. For this purpose, the organisation utilised design to improve their brand identity to reinforce position in the market and support sales.
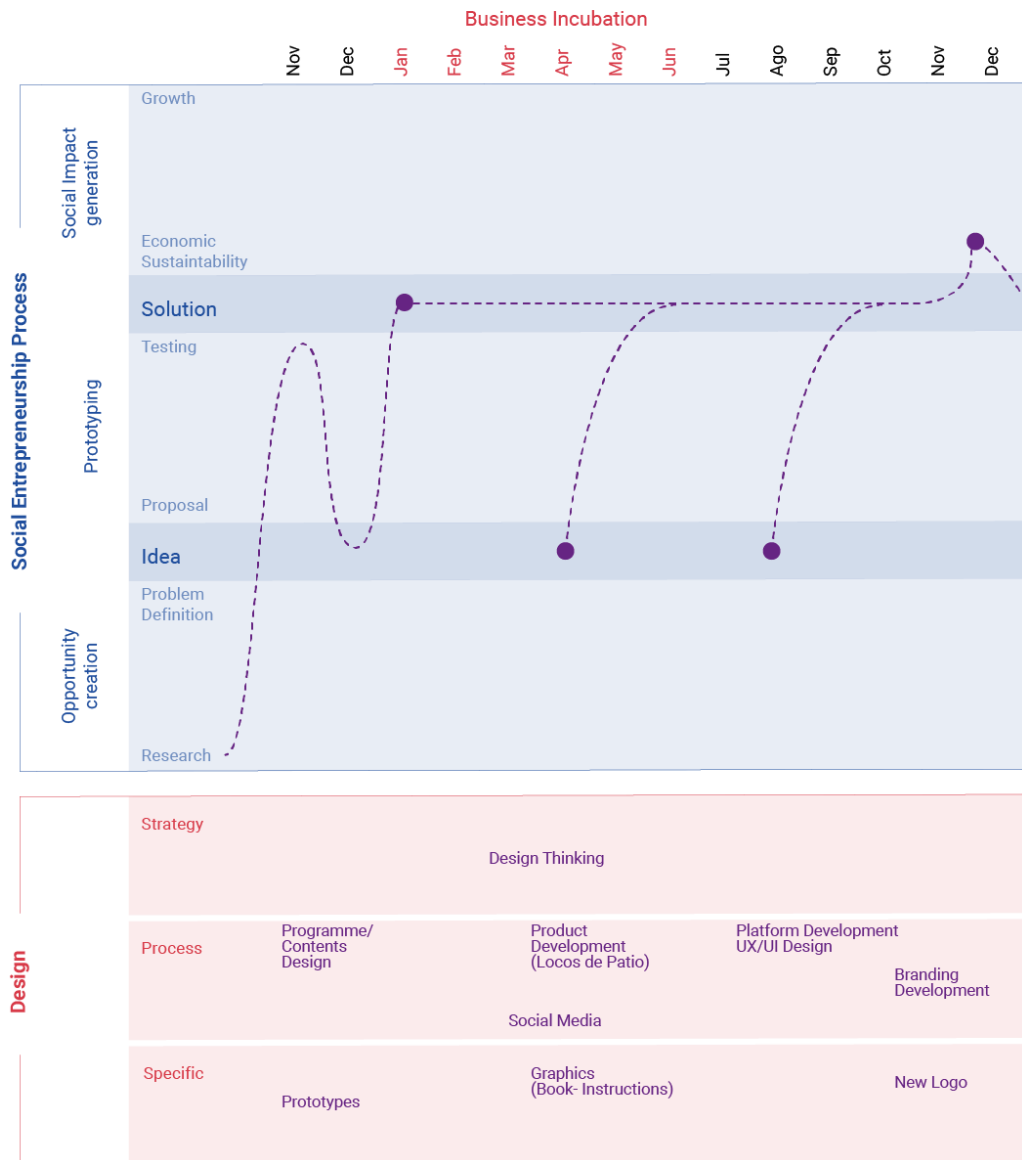
Figure 77: Social Entrepreneurship process and use of design of Haedus

4.3.3 La Polla Energética

This case study concerns a social organisation, composed of two engineers, which aimed to provide accessible, environmentally friendly sources of energy to low-income communities. This was an spin-off of a Cooperative that offered engenieering projects and the installation of solar panels and thermal collectors. The challenge that they encountered was how to make accessible the installation of renewable energies to everyone. They started creating the idea of evaluating the costs of implementation of the technologies that they work. From this evaluation, they decided that solar thermal collectors were the most cost-effective and affordable.

The initial business model of La Polla Energética consisted of getting people of communities together to pay the installation of solar thermal collectors (STC) in their homes. To facilitate the access of STC, the entrepreneurs suggested implementing a popular financial system used in Latin-American called *polla*. This financial system is a collective saving in which participants can use the savings upon an also collective goal. For instance, for the implementation of the STC in each of the houses of a neighbourhood.

Figure 78 shows a diagram of how the STC work. The principle of this technology is the exchange of temperature between a fluid heated by the sun and clean water contained in a tank. According to the website of the Cooperative (Red Genera, 2017a), the system could reduce the cost of energy up to 140.000 CLP per year (approximately £162), equivalently to the 50-70% of the cost of gas per year. The costs of the installation could be amortised in 4 to 6 years, and the lifespan of the system is 20 years. This technology could contribute to people living in places where access to hot clean water is limited.
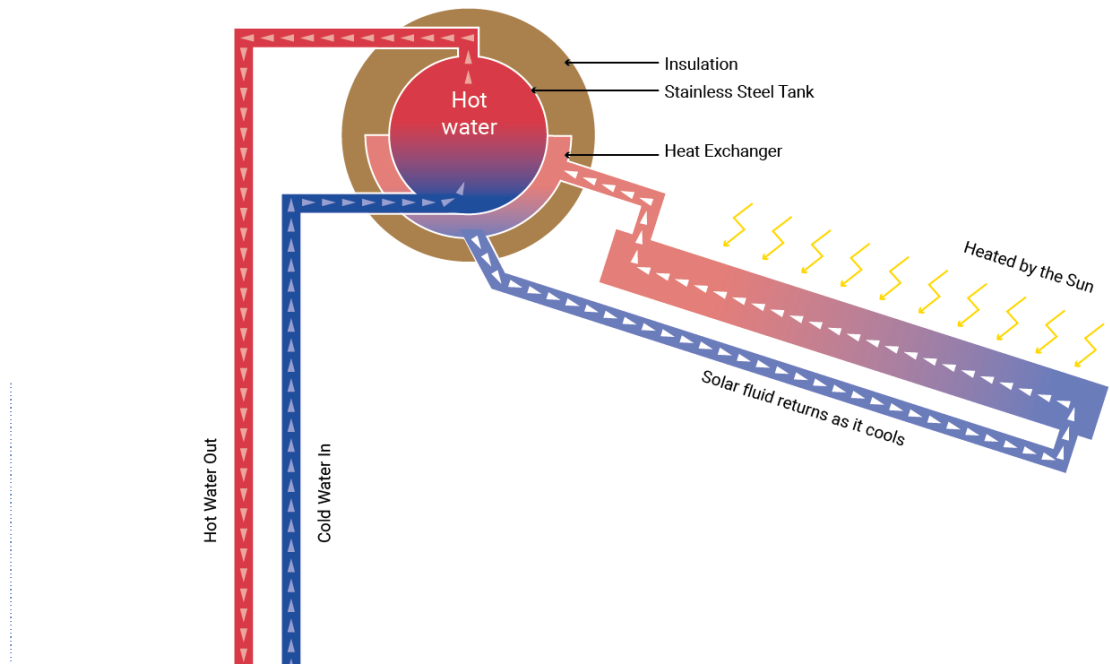
Figure 78: Solar Thermal Collector diagram

To define the payment mechanisms, they investigated different financial models that could be adjusted to the reality of low-income Chilean families. They choose a popular Latin American payment model called *polla*. This model followed a quota system, which seeks to get members of a community together to pay the implementation costs of the STC collaboratively.

The money saved collectively is used to cover the implementation progressively to each house of the community. In other words, each family would pay a monthly instalment that will allow them to save for the cost of the technology and installation of the STC. Thus, in an agreed period, every family would have an STC and reduce their billing cost due to the benefits of the technology, but also because of living in a community.

Figure 79: Installation of a Solar Thermal Collector

Initially, the entrepreneurs struggled to engage with communities to validate their ideas. Nevertheless, they gained access to three communities through the network provided by the business incubator. The entrepreneurs delivered three *co-creation workshops* in which they introduced the technology and their idea. The workshops aimed to evaluate and collect feedback from the locals.

The community members claimed that the financial model proposed would be difficult to implement because it could provoke tensions within the communities in case of unpaid payments. However, they would prefer to learn how to build the STC. The community offered their skills and resources that the entrepreneurs did not consider at the moment of designing the project. This insight allowed the entrepreneurs to change their business idea into a training programme.

The change meant the adoption of new team capacities to deliver this new service. They had to move from the installation of STC to the workshops in which they taught communities to fabricate the STC by themselves. The potential impact of this change is relevant because the locals become experts by building low-cost STC. In this way, they develop internal capacities not only for the construction and installation of the STC but also for the maintenance of them.

At the end of the data collection, the organisation was restructured. The initial two members of the team left and handed the project to new members with new visions and new capacities. The restructuring process responded to a need of including people in the team that had a social background. Consequently, the new members took the experiences learnt by the original team and changed the approach of the organisation to the collaborative production of products based on solar energy. This new perspective also was reflected in the change of the name of the organisation: Creasol.

i)   Context

The renewable energy is produced from natural resources such as wind, solar, hydro, tidal, geothermal and biomass. Moreover, renewable energies arise as sustainable alternatives to fossil fuels (European Commission of Energy, 2018). On the other hand, these sources of energy generate great benefits, not just ecological but also allows to reduce the cost of energies in the long term. Nevertheless, the upfront costs or initial investment of implementation was high (£1,000 approximately).

Chile is a country geographically rich with an extensive diversity of environments and climates. The country has the highest solar radiation in the world, strong winds to produce wind energy, a vast coast with a high potential for tidal energy, human capacities to produce biomass, and geothermal resources along with the mountain range (Ministerio de Energía, 2018).

Despite the benefits of the renewable energies and the geographical conditions of the country, the adoption of these technologies by the Chilean society is far from guaranteed because of their high costs of implementation. Consequently, only big organisations and affluent families have access to these technologies.

ii)   Design understanding

Table 28: La Polla Energética understanding of design

Design Understanding	
BEFORE	AFTER
Design is a creative besides the design of objects or graphics. Moreover, design thinking is a process of creation. It is like a process that goes from the conceptualisation to the construction of something (industrial design). It is useful to understand how to use an object	**Tools and methodologies to generate something new**

Initially, the entrepreneur expressed the idea that design meant something more than just objects and graphics. Intuitively, he related design thinking to a process of creation of objects (industrial design). He was aware of some stages of the process, such as the conceptualisation and the construction of objects. Nevertheless, he pointed out that the value of design relates to the understanding of how objects work rather than relating it to stages related to development or creation.

He argued that they would use industrial design to enhance the appearance of the solar collectors. He said that the "solar installations and collectors are ugly, so a thermal panel could benefit from the transformation of something functional into something that combines functionality with aesthetics". On the other hand, he recognised the value of graphic design as fundamental to communicate information. Nevertheless, he expressed that the team did not have the capacities and skills to produce attractive graphics. Therefore, he expressed that industrial and graphic design could help them to improve the aesthetic of the STC and to improve their communications.

During the design diagnosis, the entrepreneur claimed that they did not include design in their budget. However, after the interview with the researcher, the CEO argued that they should have considered a budget for design, specifically, for "web design and corporate identity".

After the presentation provided by the researcher, the entrepreneur's view on design changed. In fact, at this moment, he argued that design was a group of tools and methodologies for the creation of something new. The difference between the previous and this new definition of design was on the recognition of design in the creation of

"something" new instead of relating design with the understanding of the functionalities of an object, aesthetics and communications.

He valued the introduction of design as a process of convergence and divergence. The entrepreneur identified how design could contribute to their organisation. He said, "initially I would use graphic design, but afterwards, I would like to use it in all the creative processes of the Cooperative". The entrepreneur said that they would implement design within their organisation "because it is fundamental to solve actual user problems and not what *we think it would be better to solve"*. This new approach put design as a way to understand and offer solutions that solve real beneficiaries needs.

The diagnoses conducted before and after the presentation allowed to identify an initial baseline of what design is for La Polla Energética. The entrepreneur changed his definition of design from the creation of graphics or objects to a creative process for the creation of *something new.* This new understanding of design opened a space to use design across multiple creative challenges that the organisation (or the cooperative) might face. Moreover, the entrepreneur added a human-centred characteristic to their understanding of design. He recognised that design would be helpful to understand and offer solutions that satisfy actual beneficiaries needs.

iii)   The Journey

The social incubation process of this venture comprised three key moments.

- **M1- Defining the Idea –** At this moment, the entrepreneurs were defining their business idea. They were confident about the benefit of the technology and their capacities but having difficulties in defining the best mechanism for financing the project.
- **M2- Workshops and interactions -** This moment occurred when the organisation faced the need to engage with communities. Interacting with communities through workshops and round discussions allowed them to redefine the social challenge that they were addressing and the value proposition of their solution. The feedback received from the communities made the organisation change its business idea.

- **M3- Organisational Change, new members, new visions -** After a year, the organisation suffered a significant staff turnover. However, former members did a dedicated handover to the new members sharing, for instance, experiences, the progression of the projects and resources acquired during their participation. The new staff also brought fresh energy and new ideas to the team. They re-explored the needs of other communities and discovered new potential business ideas for the group.

- *Moment 1: Defining the idea (before 2017 – January 2017)*

The business idea arose from the technical expertise of the team and the latent demand for the use of renewable energies and the high energy costs in Chile. At the beginning of the Open Gate programme, the entrepreneurs claimed that they were facing a critical challenge in implementing their idea with communities. At this moment, the organisation had approached some communities and started some conversations. Nevertheless, there were still uncertainties about how they could implement their business idea.

The first idea to sustain the project was to use a collaborative financial system called *polla.* In this system, every householder of a beneficiary community has to pay a monthly quota, for a determined period, for the installation of an STC in their home.

The next example is to illustrate how a polla system operates. In a hypothetical scenario, the STC unit costs 100x, and the community has ten houses (10 householders). All the householders agree to take part in the polla paying a monthly quota of 10x each. In this way, every month, they would collect the money necessary to pay the costs and installation of one STC in a participant's house. The idea is that after ten months, the ten householders would have STC installed in their houses.

The problem with this system is that it is based on trust. The system assumes that every member would pay the quota during the period agreed. If one of the members fails to pay the quota, all the community will not reach the necessary funding. If this problem happens, it could cause severe issues within the community.

In diagnosis with the mentor of the programme pointed:

What you have to verify is whether people are willing to participate in a polla which means monthly savings. Also, whether they are willing to pay monthly for something which benefits could come in the long term. That's what you have to verify. So, you have to check: the capacity to pay, commitment to pay, and interest of the community on this investment. These are the main three pillars that you have to verify. **(C.U, mentor, Socialab)**

The entrepreneurs were aware of this issue. They recognised that the challenge of their venture was not related to technical aspects of the STC but the payment system.

The saving (in energy) is already predefined. 200 'lucas' [£210] for a family of four using an STC with a capacity of 200 litres. The saving will not increase if we do it better or worst. It is just because of the type of technology that it uses. That's why one of the indicators is related to the success of the investment system, or at least that's what we see. **(C.C., CEO, La Polla Energética)**

Another problem that the organisation encountered was how to build trust with the communities that they were trying to reach. The main concerns regarded the experience of the team. The CEO pointed:

We faced millions of doubts. The first thing that they arose was whether we were capable of doing the installation. Because they see us young.

That's hard [building trust] because we already did an installation and they look for... I don't know, 30 years of experience. The way that we have solved that is through an alliance with a person who has s been installing STC for 7 years. **(C.C., CEO, La Polla Energética)**

Building trust was particularly challenging because for them because their expertise was based on technical aspects rather than social engagement. Their background as engineers allowed them to be clear about the different alternatives for the implementation of the technologies; however, they lacked soft skills for engagement with the community.

Building trust is an essential element for social entrepreneurs. In this case, the costs of the implementation of STC required a critical investment for the beneficiaries. The beneficiaries could decide to invest that money in another pressing issue (for instance, bills, education, transportation, health or food). Social entrepreneurs have to make sure the solution that they offer is affordable and worth for the beneficiaries. The mentor suggested them to understand what the priorities for these communities were to define the funding mechanism.

> *I imagine that if I have my one house, I will have A, B and C expenditures and suddenly something unanticipated happens. I don't know, a pipe gets broken, I have a big expense… the first thing I would cut will be solar energy. Do you understand me? But, maybe that's me… Maybe people prioritise that more, or maybe less.* **(C.C., mentor, Socialab)**

To do this, they had to engage with beneficiaries to be able to listen and understand the circumstances they face. Nevertheless, the engagement process is complex and involve several stages from the identification of the community to the implementation of the solution. The communities targeted were informal settlements, which consisted of groups of people that build their homes in lands owe by a private without authorisation. Therefore, they are hard to reach because they are not registered in municipalities or city councils. These settlements do not have access to basic supplies such as freshwater or electricity.

The first challenge was to identify and to contact community leaders. Community leaders act as gatekeepers between the entrepreneurs and the community. Depending on the type of leadership that these people exercise, the community leader would introduce the benefits of technology to the community, or, on the other hand, they would decide following their experience whether to continue or not with the project.

During the "prototype" stage of the social incubation programme, the entrepreneurs had a lecture on Co-Creation with communities given by a Social Mentor of the incubator. This person was an expert by experience who has been a community leader and currently is the director of a certification called Diplomado de Dirigentes Sociales (Social Leadership Diploma). The entrepreneurs contacted him after the workshop

asking him suggestions about their business idea but also about how to approach communities. Based on his experience in working with different communities and social projects along with the country, he offered gave feedback to the entrepreneurs.

The feedback given was not hopeful for the entrepreneurs, because he pointed, that the financial model that they suggested was unviable because it is difficult to make people pay regularly. He added that if some members of the community did not pay their quota, it would not only harm the project, but it would also cause internal problems within the community. Thus, instead of solving a social problem, entrepreneurs will be responsible for damaging the relationships within the community. The social mentor not only facilitated them the access to communities but also advised them on how to approach the community leaders and some issues that he could foresee in their financial model.

Despite his comments about the financial system, the CEO agreed that the technologies would benefit the local communities. Thus, the entrepreneur put them in touch with four communities that he knew personally to figure out the best way to continue with the project. With these contacts, the entrepreneurs could finally get closer to communities to test their business idea with potential beneficiaries or find alternative ways to continue with the project.

The use of design at this moment was limited or null. However, an approach such as HCD (see page 73) could have offered them a process to analyse and understand community needs and behaviours. In this way, the entrepreneurs could have more information about their beneficiaries and therefore, to propose a solution aligned to the circumstances that the communities faced.

Analysis of Moment 1 of La Polla Energética using the Social Entrepreneurship and Design Framework

Figure 80 shows the first moment of La Polla Energética in the SEDF. In terms of the social entrepreneurship process, the first moment is placed in the idea stage. When the program started, the entrepreneurs had developed a business idea that consisted of the installation of the STC in communities. The entrepreneurs considered the use of a collective financial system called *polla* to fund this initiative. At this stage of the process, the entrepreneurs did not use design.

Figure 80: La Polla Energética - Moment 1: Defining the idea

- ### *Moment 2: Workshops and interactions (April -May 2017)*

During April and May 2017, the entrepreneurs ran a series of workshops in the communities. The workshops, or as the incubator and the entrepreneurs called, "co-creation" activities, covered a mixture of topics that range from the introduction of the renewable energies and the financial model proposed for the implementation of them. The first workshops aimed to inform the community members about the technologies to introduce the benefits of the technologies, the costs, and further details of the project. Additionally, the entrepreneurs intended to gather the opinions of the members of the

community about their needs and whether the technology and the financial system proposed were right for them or not.

Figure 81: STC building workshop

For these workshops, the entrepreneurs tried to implement a "design" approach to gather insights from the community members.

> *We tried to use design tools. We brought [to the workshops] post-its, we made questions, and try to create. Like a brainstorming tool for the neighbours to generate ideas about what they could do with the solar energy, and it didn't work. They did not engage with the post-its, they just wanted to talk, and that was it.* **(C.C., CEO, La Polla Energética)**

They describe the design approach as workshops in which participants were asked to use sticky notes to answers some questions and create potential solutions. They found out that this approach did not work in their workshops because people just wanted to have a conversation rather than an interactive session. In these conversations, they could realise that the suggestions given by the mentors of Socialab were correct.

We realised that the polla model didn't work. It was not going to work as such. We ran workshops and went to talk with different communities, organisations and neighbourhood associations. Mostly in Renca, thanks to Mario [Social Mentor], also in Yungay. We ran around 4 to 5 workshops in which we introduced the concept of solar energy, and we said, ok, let's do this collectively. For everyone, the idea of polla sounded not that attractive because they had other priorities. **(C.C., CEO, La Polla Energética)**

The members of the communities had similar comments than the social mentor about the financial model proposed. Indeed, they argued that the financial model of *polla* could put the community's relationships under risk. For instance, if someone does not pay on time, it would make the system collapse and therefore, affect the relationships between the members. However, they valued the technology proposed and were willing to explore other alternatives for adopting it. They asked whether the STC was challenging to fabricate. They made available their internal capacities to the entrepreneurs, something not considered in the initial business model. This suggestion was a key point in the entrepreneurs' journey because it meant a radical change in the service proposed and the business model of the organisation. However, despite the constraints of changing the business model and motivated by their social mission, the entrepreneurs accepted the challenge and explored a new business model that considered the community's insights.

We thought that the alternative was to build low-cost solar collectors rather than to sell more expensive and new systems that did not make sense [for communities]. So, in this way, it will make it possible for neighbours to maintain the systems. This is a more educative approach within the neighbourhoods, so they can make them by themselves. That was the turn of "La Polla" [organisation]. **(C.C., CEO, La Polla Energética)**

This iteration meant a complete redefinition of the business model because the incomes perceived would come from capacities that the team did not have. In fact, the entrepreneurs knew that it was possible to build low-cost versions of the STC. However, they did not have the experience in training people either the experience in the fabrication of the STC. To get the experience necessary, the entrepreneurs received

training, from a partner cooperative, on the construction of STC and how to transfer this knowledge to the communities. After this training, the entrepreneurs approached the communities again to run a new series of workshops.

> *We built 4 collectors in one day, four small ones. We had 16-18 participants in the workshop, 4-5 people per collector. We prepared the materials in advance; we had prepared all the stuff so we could make everything in a day.* **(C.C., CEO, La Polla Energética)**

The entrepreneurs prepared a workshop in which participant built 4 collectors. The preparation included educational wall charts, blueprints and instructions about how to build the STC, tools, materials and parts for the construction of the STC.

The success of this workshop allowed them to rethink their idea not only in the way to deliver the training but also identifying new financial mechanisms to sustain the project.

> *And then the idea was to make bigger collectors, but this time we are going to charge to pay our labour costs. Because the first workshop was free, it was a test, and it was paid with the funding that we've got from Socialab. Later we should get some financing from the social organisation, the neighbourhood association or the cultural organisation that we're talking with.* **(C.C., CEO, La Polla Energética)**

The new idea was to train neighbours to fabricate STC by building larger units that could be installed in their community, cultural or sport centres. The learning experience would allow them to fabricate their own STC in their homes. The assistants would be charged for the training experience and materials used. By building larger units collaboratively, the entrepreneurs tackled two issues. The first problem that they solved was that by building the STC collaboratively, they could reduce the costs of the materials of the workshops, and therefore, the price of the sessions. The second issue was that the communities learned by building and installing an STC in their public places. In this way, the prototype also benefited the community, and the intervention generated a more significant social impact.

The entrepreneur pointed out that they tried to use design for divergent processes such as brainstorming and creativity. However, they found out that they required more experience to utilise design in a better way.

> *That is what I can tell about how we have tried to use in terms of brainstorming and creativity methods. But I do not have enough experience about how to do that and do it well.* **(C.C., CEO, La Polla Energética)**

Nevertheless, delving into the use of design was not a priority for them because they had more urgent matters to attend to.

> *Now, it is like a black box [the organisation as a project], we haven't got the time and the commitment... at the moment, our priority is to do the things and to push forward the project instead to learn to use design tools.* **(C.C., CEO, La Polla Energética)**

It is relevant to point out the *silent* use of design at this moment. Although the entrepreneurs argued that they did not utilise design in their processes due to the lack of skills or experiences, some shreds of evidences show that this organisation used design. For instance, at the symbolic level, they prepared graphic materials such as presentations, educational wall charts, blueprints and instructions about how to build the STC. At the product level, they had to work on the definition of materials needed for the workshops, the instructions and parts required for the construction of the STC. At the interaction level, they had to facilitate various workshops to gather key information about their initial business idea and to co-design (or co-create) a better solution for the implementation of their technology.

Similarly, they had to facilitate the training sessions in which participants had the opportunity to learn to build the STC by using their skills and resources. At the strategic level, they utilised the information collected through the workshops to redefine their business model.

Analysis of Moment 2 of La Polla Energética using the Social Entrepreneurship and Design Framework

Figure 82 shows the second moment of La Polla Energética in the SEDF. In terms of the social entrepreneurship process, the second moment is placed in the solution stage. The framework shows an iteration between testing, idea and solution. This behaviour was due to the feedback from a workshop that the entrepreneurs conducted to validate their initial idea. In that workshop, local members of the communities argued that the financial model proposed by the organisation could cause internal problems within the community so it will be unviable to be implemented. The members of the communities said that the model could put the internal relationships under risk in case some of the members did not pay the instalments agreed.

Nevertheless, the community members showed interest in the technology offered by the entrepreneurs. The locals offer their capacities and resources to collaboratively build the STC instead of paying for their installation. This insight made the entrepreneurs change their business idea to the training of locals in the collaborative fabrication of the STC. Design played an important, however silent, role in this transition.

Co-design was used in the workshops as a way to establish communications with the locals, to show the benefits of the technology proposed and the capacities of the team. These workshops also allowed the entrepreneurs to have rich conversations with the community members who expressed their concerns and interest in the idea proposed but also gave advice and information not previously considered by the entrepreneurs such as the internal capacities of the community.

At this moment, design influenced the strategy of the organisation because due to the workshops, they changed their business model. At the process level, they used design as a process that allowed them to communicate, explore and redefine their business idea with communities. At the specific level, the entrepreneurs designed graphic materials for the workshops. The workshop also involved the use of product design practices such as the design of schematics, and definition and preparation of parts and pieces of the low-cost STC. To conduct the workshops, the entrepreneurs used facilitation skills. However, the CEO claimed that they lacked these skills; therefore, they found it difficult to facilitate the workshops by themselves.
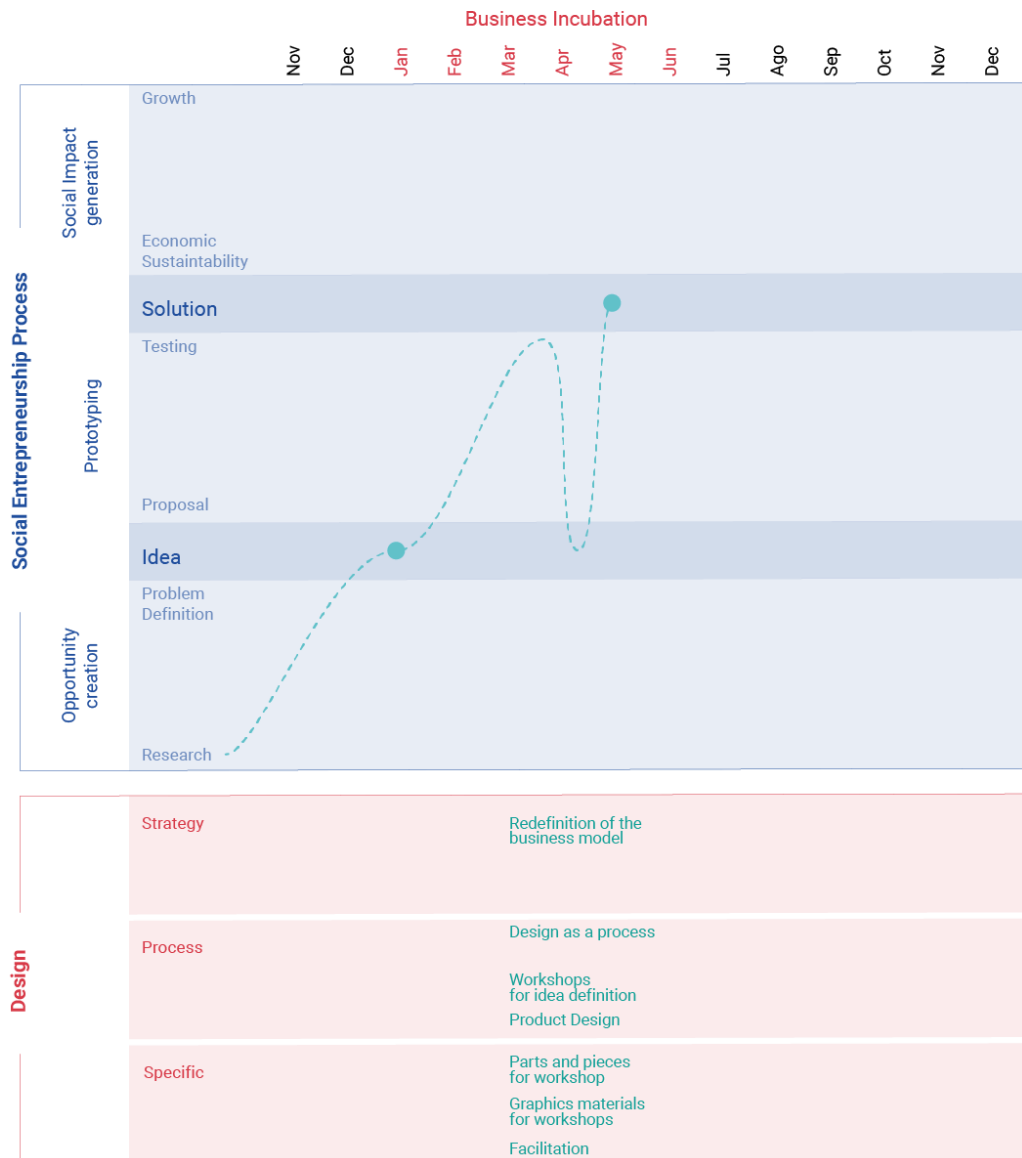
Figure 82: La Polla Energética - Moment 2: Workshops and interactions

• **Moment 3: Organizational Change, new members, new visions (November 2017 – to the end of the data collection)**

During the period of data collection, the team suffered changes. Unfortunately, one of the core members had to leave the project because of health reasons. On the other hand, the other core member realised that the internal capacities were not sufficient to cope with the challenges of the entrepreneurship. The team struggled engaging communities and facilitating the workshops. They realised that the social aspect of the organisation was something that needed to achieve the social impact they were expecting. The team,

then, decided to pass the control of the organisation to other members of the cooperative that they belonged and to incorporate into the team social worker.

> *I moved to another project, so I handed out this project to Creasol, that's the new name. Now Rocio and Vicho are working on that. Rocio is a social worker, so she's looking at communities and trying to network to run workshops with them.*

> *I'm happy to pass on the project a little bit to think about other stuff. It is hard because sometimes we didn't have the creative energy to continue because we didn't know what to do… as you say, that is resilience.* **(C.C., CEO, La Polla Energética)**

In this way, the organisation went through a transition of the team, adding new capacities but preserving the experience acquired. The new team refined the service of the organisation based on the insights collected from communities. Besides, they renamed the organisation from Polla Energética to Creasol. In their website, they describe their service as follow.

> *What is Creasol?*

> *Creasol is a low-cost self-construction project for the hot water supply through solar energy. It aims to facilitate the democratisation of the technology, as well as the autonomy in the construction, maintenance, use and the replication of the learning in the construction of these systems.*

> *The workshop works in a collective and/or communitarian way because the construction and installation require multiple collaborative hands.*

> *The process is facilitated and accompanied by the Cooperative Red Genera, whose have developed this project, from the commitment of promoting tools that allow the energy sovereignty, through the access and use of the technologies (Red Genera, 2017b).*

The definition of Creasol passed from the construction of STC to low-cost self-construction solar energy technologies. The main difference of this redefinition is that

it allows the organisation to work with other technologies related to solar energies such as solar panels. Nevertheless, they kept the training nature of the project. Also, they emphasise concepts such as democratisation and collaboration, which in turn became the core of the project. This concept was introduced in their tagline "Energía en Comunidad" (Energy in Community). This new approach was influenced by the new members whose views on the project focused on the social aspect of the project.

The organisation they launched a webpage on the website of the Cooperative Red Genera as a part of the communication strategy of this new organisation. The website introduced the first branding project, which involves a colour palette definition, the name Creasol and the tagline "Energía en Comunidad" unified in a logotype shown in Figure 83.

Figure 83: Creasol logo

The work done by the former team allowed Creasol to define a basic service based on the experience gained during the workshops. Thus, the Creasol's team could conduct new workshops to further investigate the needs of different communities which derived in new opportunities for the organisation.

During the last interview with Creasol, they were exploring different product and service alternatives to exploit. For instance, they realised that in some communities, a solar collector could be less relevant than an oven, so they were also considering offering workshops on the construction of solar ovens. In this way, the entrepreneurs could diversify their offer of workshops maintaining the new mission of democratising access to solar energy technologies.

They also found out that there were communities interested in investing in the technology rather than building them. For example, they approached a women's

community group in a settlement whose ran a hairdressing training program. They recognise that the technology offered could help them to save money spent on hot water for hair washing and laundry. In contrast to the needs identified in the initial groups approached, they were more interested in paying for the installation of the STC rather than to build them.

The main contribution of design during this stage was the branding design to support their new strategy. The development of the logo and website enabled the team to communicate the mission of the organisation and the service provided. Moreover, they continued using design at the interaction level to approach communities for the discovery of new services and markets opportunities. Therefore, design was used to explore opportunities and communicate the value of the organisation to stakeholders.

Analysis of Moment 3 of La Polla Energética using the Social Entrepreneurship and Design Framework

Figure 84 shows the third moment of La Polla Energética in the SEDF. In terms of the social entrepreneurship process, the third moment is placed in the stage of the solution. After conducting the workshops, which allowed the organisation to change their strategy, the entrepreneurs had a critical change in team formation. The initial members of the organisation left the company, and new members took over the initiatives. This new team incorporated some capacities missing in the original team, such as the ability to engage with communities. This new team explored the business idea with new communities and found out that communities have different needs and service requirements. While for the former team, the communities expressed their interest in the collaborative fabrication of the STC, the new team also found communities interested in the installation of the solution rather than the fabrication. The engagement with communities became an essential element for this organisation because it allowed them to develop and deliver a solution that satisfies the real needs of communities considering the different circumstances that affect them.

At this moment the organisation used design as a process of engagement through workshops and conversation with locals to understand their needs and requirement. In addition, they developed their brand identity, changing the name of the organisation and developing graphic and communicational materials such as a logo and a website.
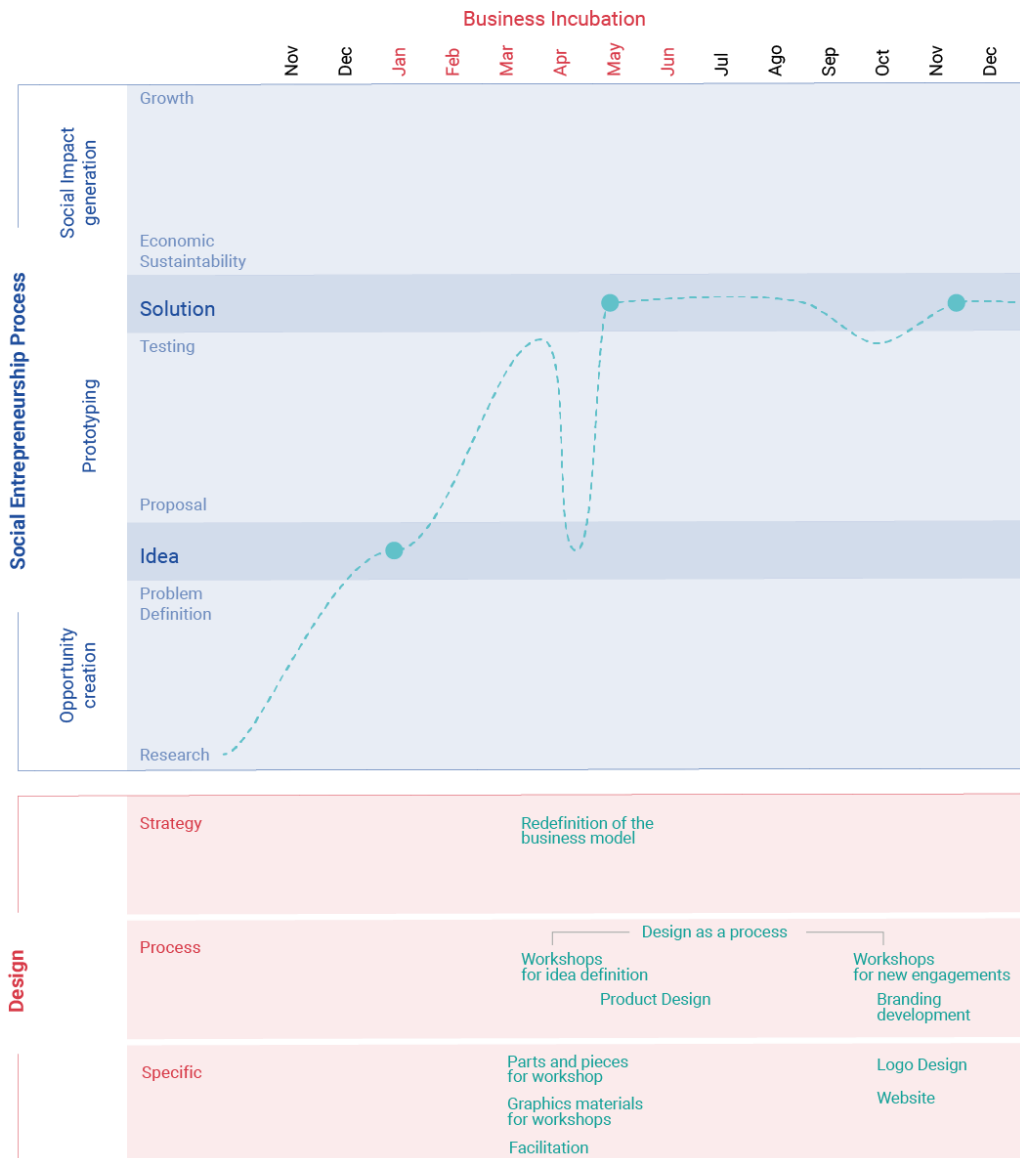
Figure 84: La Polla Energética - Moment 3: Organisational change, new members, new visions

iv)   The use of Design

The entrepreneurs utilised design primarily for the engagement with communities and the refinement of their business idea. They recognised that design was essential to facilitate workshops; nevertheless, they did not have this expertise. Design allowed them to redefine their business idea based on the insights collected in the workshops conducted by the entrepreneurs. In later stages, they also utilised design to develop their brand identity.

Figure 85: La Polla Energética - The use of design

• *Design as a process*

The main issue of this organisation described in the findings of this case was the engagement with communities. This process was conducted intuitively by the entrepreneurs following their need for engaging with communities to validate their idea. The process was supported by the social mentor of the incubator, who gave access to communities and advice on how to approach them. Nevertheless, the entrepreneurs claimed that the engagement process was their main challenge because they did not have the experience in doing it.

This process comprised different stages in which the company approached communities to *discover* the needs and resources that they had; to *define* the most suitable solution for them; to *develop* and prepare materials for workshops, and *deliver* the workshops in which locals learnt how to fabricate STCs. The process described follows the structure of the Design Council's Double Diamond to illustrate the different stages that they faced Figure 86: The design process of La Polla Energética.
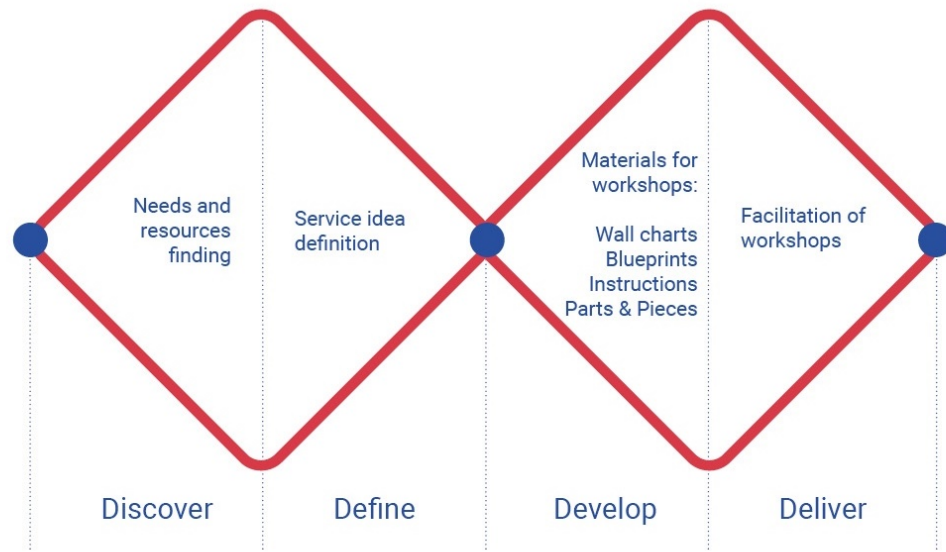
Figure 86: The design process of La Polla Energética

Design as a process of development involved the facilitation of workshops for the redefinition of their business idea and the exploration of engagements with other communities. Throughout the development process, the entrepreneurs used co-design, product design and branding development as a process. They used design for in the definition of part and pieces of the STC and the creation of graphic materials such as wallcharts and blueprints for the workshops. At the end of the data collection process, they designed brand elements such as a logo and a website to position their idea and team within communities.
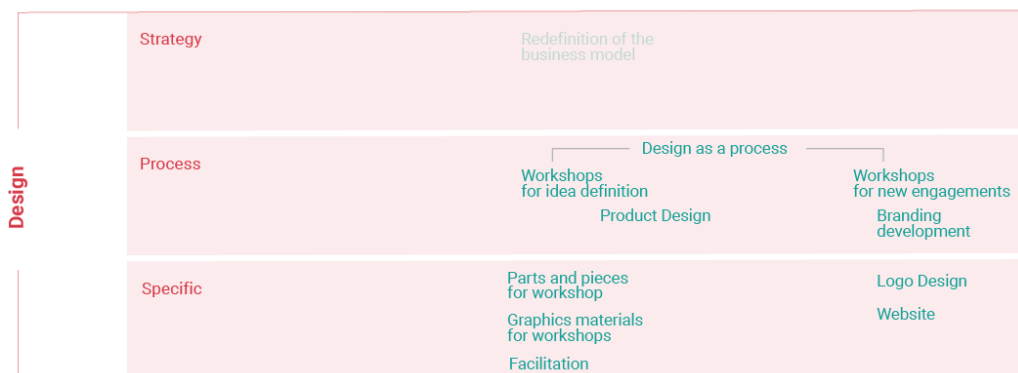
Figure 87: La Polla Energética - Design as a process

- ***Workshops — Graphic design, product design and facilitation***

La Polla Energética used different design approaches to deliver their workshops (Figure 88). To prepare the workshop, the entrepreneurs used product and graphic design *silently.* Additionally, they utilised facilitation techniques to gather opinions and develop solutions with the communities. They recognised that facilitation was related to a design skill that they did not manage well.

Product Design

The entrepreneurs used product design when they changed the idea from the installation of STC to the collaborative fabrication of them. To fabricate the STC, they had to design the frames that support the STC, define the materials to be used and create the blueprints and technical specifications of the STC to be built in the workshops. These practices included the considerations of internal capacities and materials necessaries to conduct the workshop.

Graphic Design

The entrepreneurs used graphic design to support the activities of the workshops. The entrepreneurs produced the visuals elements such as a PowerPoint presentation and educational wall charts that explained the benefits of the technology and their business idea. These materials supported the training sessions of the locals.

Facilitation

During the workshop, the entrepreneurs had to facilitate the session to identify the needs, capacities, and resources of communities, as well as their views on the technology and model, proposed. Although it was explicitly called as co-creation, co-design was used to engage people to collect their opinions, feedback, and create an alternative solution to the service proposed. The facilitation was something that the entrepreneurs were aware that required some design skills, such as leading the design process and solving emerging problems (see page 78). They argued that due to their lack of experience or because of not having a design background, these activities were particularly challenging for them. They utilised the same approach to engage with new communities to widen their understanding of the needs of communities and develop a product and service portfolio adjusted to the needs of different people.

Figure 88: La Polla Energética - Workshops

• **Design for communications**

The entrepreneurs recognised the value of design, to create graphic materials that support the communication process with different stakeholders. Thus, the entrepreneurs recognised that they use design to produce graphic materials such as flyers and educational cards for the workshop. They used graphic design in the rebranding of their organisation (Creasol) through the development of a logo and website. The symbolic character of design helped them to deliver the benefits of their solution to a broad audience and to reach more communities. The creation of these graphic elements allowed the organisation to create their brand identity, as shown in Figure 89.

Figure 89: La Polla Energética - Design for communications

• **Design as a strategy**

The strategy of this organisation changed due to the realisation of the actual needs of communities through the workshops conducted. They changed their value proposition

from the installation of STC to the collaborative fabrication of them. This change in the business idea followed a process similar to the co-design approach (see page 78). The workshops allowed the entrepreneurs to define with communities the fuzzy front end of the project (criteria and idea of the service), the conceptualisation, prototype and definition of the service provided. First, the entrepreneurs were inspired by their experience and opportunities for implementing STC in low-income communities. Second, they ideated a financial model to support this implementation and tested with communities in workshops. As a result, they iterated their idea following the insights of the communities. Finally, they implemented a new business strategy that responded to the actual needs of the people. For this purpose, they also had to redesign their organisational structure to add new capacities to the team that could work with this new business model.
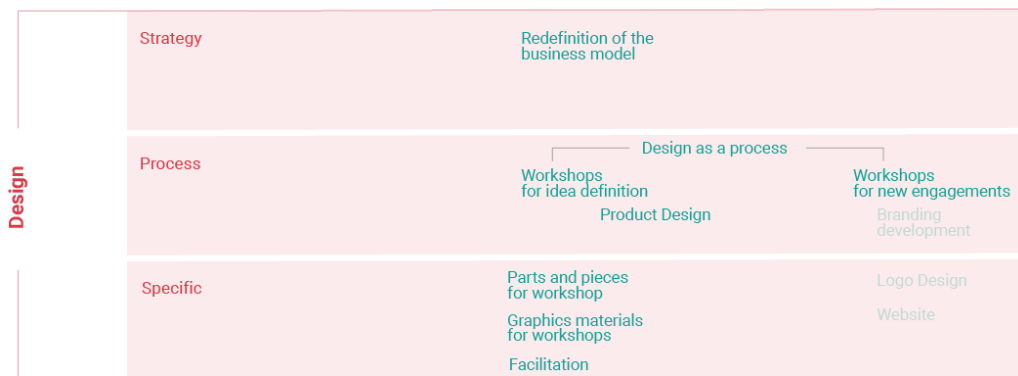
Figure 90: La Polla Energética - Design as a strategy

v)   The social entrepreneurship process of La Polla Energética and their use of design.

Figure 91 represents the social entrepreneurship process of La Polla Energética and the use of design (see page 228) in each of the moments analysed in case (see page 213)

The organisation started their social entrepreneurship process with a business idea that combined the experience of the team in the installation of STC with an opportunity for implementing this technology in low-income communities to reduce their energy costs. The initial stages of the process involved the validation of a financial model for the implementation of the STC. Through collaborative workshops, they found out that the communities showed interest in the technology but not in the financial model proposed.

As a result of the workshops, they redefined their business model to training programmes on the fabrication of STC. Design was fundamental to the iteration of its business model. Throughout the facilitation of the workshops, the entrepreneurs could test their ideas and co-design a service that satisfy the actual needs of the communities. The entrepreneurs recognised the value of design on this process. However, they argued that facilitating the workshops was challenging for them because they needed more experience related to design to facilitate them more efficiently. In addition to the facilitation skills utilised in the workshops, the entrepreneurs used product design to generate the models of the STC introduced in the workshops. The design of this low-cost STC involved the consideration of the resources and capacities available in the communities. Moreover, they developed graphic pieces to support the training process of the collectors.

The iteration of the business idea led the organisation to restructure their team. The initial team members left the La Polla Energética because of personal reasons but handed the organisation over to other members of the cooperative. Also, they incorporated a social worker that brought a social perspective to the organisation. Design was used in this strategic transition through the development of a brand that involved a new name, logo and website.
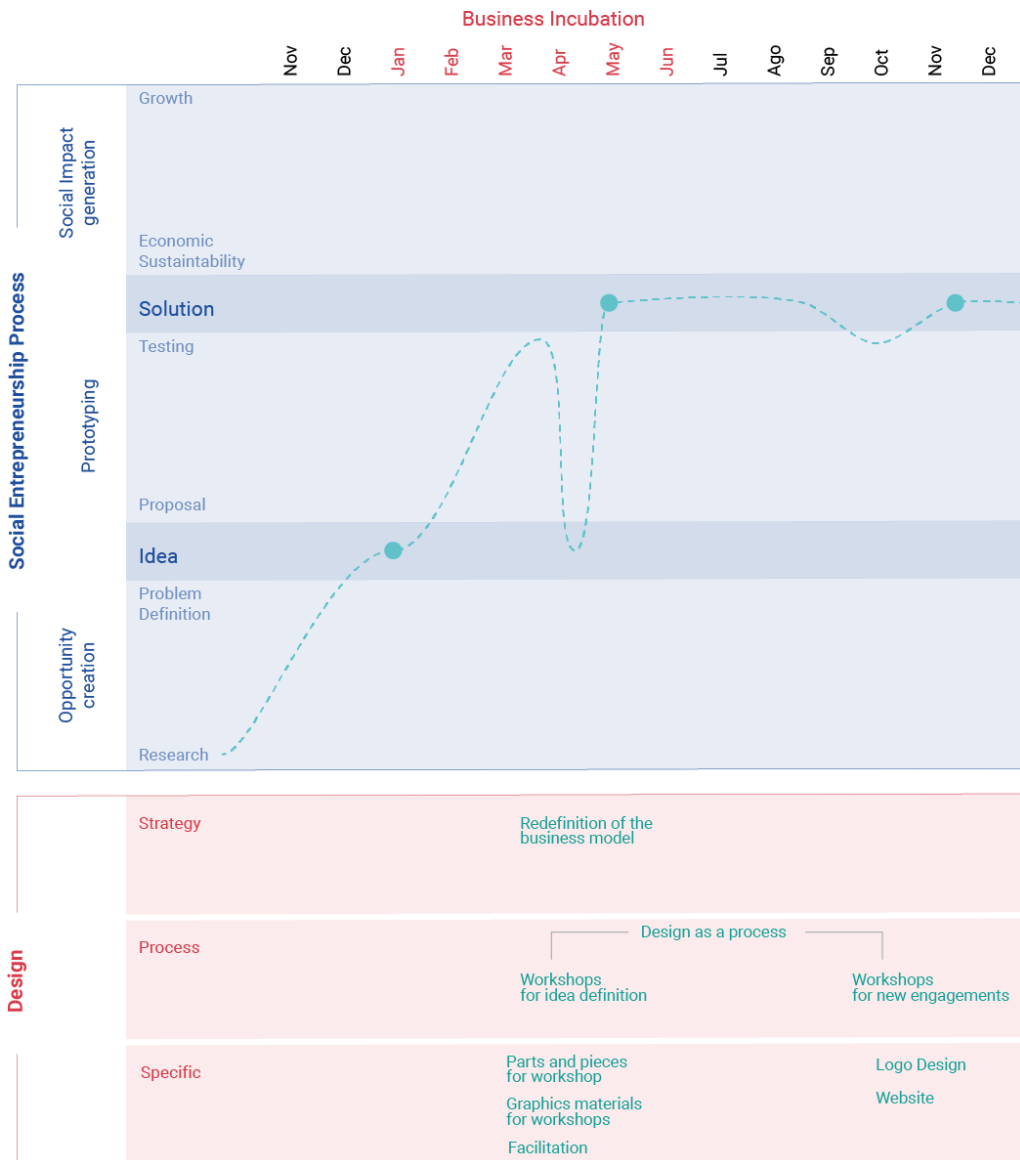
Figure 91: Social Entrepreneurship process and use of design of La Polla Energética

4.3.4　　　Municipio Verde

Municipio Verde aimed to engage citizens in topics related to environmental policies in municipalities. The organisation developed a platform in which people can check and evaluate the environmental initiatives and policies that municipalities are conducting. In this way, citizens could also compare the performance of different municipalities and collectively take part in the measurements taken. This entrepreneurship aimed to raise awareness among the citizens and to promote their participation in environmental issues.

Two lawyers, a journalist and a sociologist composed the team. They all worked for an NGO that aims to promote transparency, booster the accessibility to public information and foster civic participation. Municipio Verde was a spin-off of this NGO. The experience of working for the NGO has two implications. On one hand, working in the NGO gave team member relevant experience in working with environmental issues. On the one hand, this experience was limiting in terms of business organisation as the non-for-profit approach of the NGO differs from the requirements of entrepreneurship. In fact, the main focus of NGOs is to provide services that serves to environmental or humanitarian causes not seeking profits. Business organisations have to achieve organisational goals and commit to the agreements with funders and support organisations.

The team aimed to promote citizen participation in environmental initiatives and policies that municipalities undertake. For this purpose, the team offer a platform in which municipalities can show their environmental initiatives and citizens can get information, a space to express their opinion and to compare the performance between different municipalities of the country. In this way, the citizens can evaluate their municipalities based on the information provided in the platform.

The main clients of this platform are the municipalities. The platform offers the opportunity to build their reputation amongst their citizens regarding environmental issues. In this way, the platform provides a space for trust-building between municipalities and citizens.

The platform development was commissioned to an external organisation which has developed these type of platforms called Ciudadano Inteligente. This organisation is well known in Chile because it is a pioneer in promoting citizen awareness and participation in public policies. The team chose them due to that experience in developing a platform that aimed to connect people with the public sector. However, this was the first time for the developers to offer their services to an external organisation. The task consisted of the development of the platform, including its *graphics.*

The platform has three main sections: get informed, evaluate, and participate. Additionally, it has three complementary sections: about, contact, and be part of Municipio Verde. The three main sections are those in which the users (citizens) can interact with the platform. For instance, in the *get informed* section, the user can filter the information by the municipality of interest. In the *evaluate section,* the users can rate the initiatives or projects that different municipalities have implemented. In the *participate* section, the users can review and make observations of the projects or initiatives of the municipalities. The last section is relevant because the participation of the citizens is by law considered as *fundamental for the evaluation of the Environmental Impact Studies and Statements* (Servicio de Evaluación Ambiental, 2018).

Nevertheless, the lack of knowledge from both parties caused critical problems. The developers understood by *graphics*, all the graphics related to the front-end design of the platform, whereas for the social entrepreneur's *graphics* included infographics, illustrations, banners, promotional materials, for instance. The lack of a right design brief originated unexpected delays in launching the platform because the entrepreneurs were required to hire a designer to do the visual communications for the platform and the communications of the project.

i)   Context

Local governments face multiples challenges to achieve good governance. The nature of good governance depends not just on historical and cultural norms but also in the interactions between citizens and local governments (Protik et al., 2018). Moreover, good communication from public organisms enhances the reputation of cities, regions or countries (K. Sanders & Canel, 2015).

In 2016, the UC Public Policy Centre found out that almost 58% of Chileans trust little or nothing their municipalities (Carreño & Tomicic, 2016). This result reflects the lack of communication and participation between municipalities and citizens but also the lack of transparency about the decisions taken in terms of public policies. People do not understand or know the environmental initiatives that municipalities undertake regarding environmental policies.

ii)   Design understanding

Table 29: Municipio Verde's understanding of design

Design Understanding	
BEFORE	**AFTER**
It is the work with the aesthetics, with the beauty, day-to-day things, and the non-material things in a virtual environment. It is associated with aesthetic criteria that are not present by nature.	**It is a process that allows solving problems**

At the beginning of the data collection, the entrepreneur related design to aesthetic criteria not present in nature. She associated design to a human creation of beautiful tangible and digital things. In her words, she relates design to "the incorporation of aesthetic criteria to things that, because of their nature, they do not have them". Further, she pointed out that "design has value in the restructuration of taking something that the client wants and giving it back as a simpler, easier, or in a better-developed way". She also said that design would relate to the mission of the organisation by taking care of the image of the organisation as well as the material things that have to be delivered to a client".

The organisation did not have a designer working in the team. An architect, friend of the CEO, developed their graphic identity (logotype). The rest of the design-related materials are developed by a journalist that works for the NGO that organisation belongs. Nevertheless, they had design included in their budget which means that they were considering the use of design along with the project. However, it was very specific and related to the development of the platform and the dissemination of the

organisation. In other words, they wanted to use design specifically for the development of the platform and graphic templates for communicational materials.

After the presentation given by the researcher, the entrepreneur mentioned that design was more than she thought. She defined design as "a process that enables problem-solving". She added the role that a designer would have in their organisation would be "to unify their discourse of the service provided with the actual needs of the clients and users". She also pointed out that design would be "a useful tool for social entrepreneurs, specifically to improve the service provided".

The diagnoses conducted before and after the presentation allowed to identify an initial baseline of what design is for Municipio Verde. The main gaps between the discourse before and after were found mainly from the view of design as an aesthetic element to a problem-solving process. Moreover, the entrepreneur also shows differences in the role that a designer would play in their organisation. Initially, the role of the designer was related to the development of graphic pieces such as communicational material and the graphic elements of the platform. Therefore, after the presentation, the entrepreneur recognised that a designer in their organisation would play a more strategic role unifying the dialogue between what they offer with the actual needs of clients and users. This new definition of the responsibilities situates the designer in a place where he or she is responsible for a more strategic aspect of the organisation acting as a communicational bridge between Municipio Verde and clients and users.

iii) The Journey

The social incubation process of this venture comprised four key moments.

- **M1 – Understanding the needs -** After submitting their idea to the incubation programme, the entrepreneurs faced a stage of exploration of the different users' needs. This exploration included contacting municipalities and participating in public events to get closer to citizens.

- **M2 – Setting up the project, planning the operations** – After the first moment, the entrepreneurs set different indicators to measure their performance. At this moment, it was possible to see that they did not consider design as a part of the resources needed for their organisations.

- **M3 – Developing the platform -** The team worked with developers to build the platform. An inadequate briefing caused delays in the development time and the need to utilise extra resources in design.

- **M4 – Platform Launching –** The last moment is when they launched the platform. In this opportunity, they invited keyholders to the facilities provided by Socialab to show the benefits of the platform.

- *Moment 1: Understanding the social needs (before incubation – January 2017)*

This organisation structured a clear plan of the activities and goals that they wanted to achieve. In the beginning, the team members defined the importance of their proposal for the municipalities and citizens. They argued that the platform provided an interactive space in which municipalities and citizens could interact on the environmental impact of the projects conducted in their cities.

> *I would say that the problem that we are working on, in general terms, is the little relationship or the lack of relationship between municipalities and citizens about their municipal environmental policies management. (V.G., CEO, MunicipioVerde)*

However, the innovative aspect of this platform also made difficult the translation of its value to the different parties. In fact, as this way of interaction between municipalities and citizens did not exist previously, the entrepreneurs had to understand the actual

needs of the various users and develop a product that works according to those requirements. To do that, the entrepreneurs contacted municipalities to offer their platforms and with citizens to promote. They contacted citizens by taking part in fairs and different local events.

The prior experience of the entrepreneurs allowed them to identify this problem. As a part of their job in the NGO, they had to deliver training courses to municipalities in which they had the opportunity to test this idea and receive feedback from public officials.

> *In the NGO that I and L.L. (team member) work, we had to deliver some courses to municipalities. In one of these training courses that we did about environmental right, we gave a presentation of the project, and some municipalities approached us.*
>
> *[…] After the presentation, we asked for feedback, and they gave us many observations of what they considered as the most important issues to enhance, as well as what they wanted us to include in the platform. (V.G., CEO, MunicipioVerde)*

In these opportunities, they exposed their idea to one of their main stakeholders, the municipalities. The feedback collected allowed them to understand what was essential for them to and what type of information was necessary to include in the platform.

Furthermore, the entrepreneurs also conducted engagement initiatives with the general public to understand their perspectives. For instance, during the co-creation stage of the incubation, they conducted questionnaires and fieldwork to capture what people thought about this initiative.

> *During the co-creation stage, we ran some questionnaires about the platform. We set up a stand in the street; we ran professional environmental surgeries to collect what students think […] Overall, we found out the need for the platform to be well disseminated. (V.G., CEO, MunicipioVerde)*

The engagement activities conducted to understand the needs of different stakeholders required the entrepreneurs to adapt their message to different formats such as

presentations, questionnaires or face-to-face surgeries. In these opportunities, they developed multiple artefacts to communicate with their stakeholders such as presentations, questionnaires and printed materials used in their stand. These artefacts belong to the first-order of design described by Buchanan (2001), symbols. The interactions with stakeholders to understand their needs utilise graphic design in the development of these materials. Nevertheless, at this stage (or moment), the entrepreneurs did not have a designer in charge of the developed of the graphic materials.

Figure 92: Graphic material used for engagement activities

Analysis of Moment 1 of Municipio Verde using the Social Entrepreneurship and Design Framework

Figure 93 shows the first moment of Municipio Verde in the SEDF. In terms of the social entrepreneurship process, the first moment is placed in the stage of research. At this moment, the organisation had already submitted an idea to the incubation program. Nevertheless, they re-conducted research activities to collect more insights from the public about the solution that they were suggesting. Thus, they conducted face-to-face surgeries in which they asked about the contents and information that the platform should have.

During this moment, Municipio Verder used design to engage with communities and collect information from citizens about their business idea. Therefore, they utilised design as an engagement process which allowed them to conduct their research. This engagement process involved participation in fairs and public events. During these events, they conducted field interviews and questionnaires and used graphic materials to engage with people such as the photography frame shown in Figure 92

Figure 93: Municipio Verde – Moment 1: Understanding the social needs

- **Moment 2: Setting up the project, planning the operations (February 2017)**

Besides the identification of the social need, the entrepreneurs also recognised that they had to develop an economically sustainable solution.

From the very first moment, we were very clear that we had to identify the social need and, on the other hand, a mechanism to make the solution sustainable. (V.G., CEO, MunicipioVerde)

Therefore, they defined a series of indicators to measure the success of their platform:

We have indicators to measure the success or failure of these activities. Clearly, the most important is the creation and design of a web-platform with Ciudadano Inteligente. Thus, we have qualitative indicators about how we would like the platform: easy to use, intuitive. After, we have indicators about the use of the platform, such as the number of users, number of municipalities within the platform. In an earlier phase, before the platform is online, we also have indicators to measure our relationships with municipalities and citizens, such as the number of meetings with municipalities, the number of meetings with communal committees, etc. (V.G., CEO, MunicipioVerde)

In analysing these indicators, there are clear connections to the design contributions for achieving their goals. For instance, they described as qualitative indicators specific aspects of the platform that relate to interaction design such as "easy to use" and "intuitive".

Another essential aspect in the development stage was the definition of the roles.

In terms of human resources, there is a team that is working, mostly myself, L too, but there is also a team of people that are helping us.

[...] L is in charge of the finances, I am in charge of the contents of the platform, and another lawyer is in charge of the relationships with municipalities. (V.G., CEO, MunicipioVerde)

The focus of the team member relied on the creation of contents and the relationships with municipalities. Although the primary goal of the platform was to communicate information related to environmental actions of municipalities, there was nobody in charge of the design of the platform, nor the design of graphics to enhance the communicational messages of the organisation.

Not having a person in charge of the platform development also implied that the team members had to learn technical issues to administrate the platform.

> *In reality, none of us is clear about how the website works, the server, and all of that. That is something in which we are very weak, it has been hard to understand, but we are studying it.* **(V.G., CEO, MunicipioVerde)**

One of the first challenges of this organisation was the adoption of new knowledge and skills. At this moment, they recognised the lack of technical skills to administrate the platform. Although they recognise these issues, they did not foresee other aspects associated with the development of the platform that appeared in the next moment of development: design.

Analysis of Moment 2 of Municipio Verde using the Social Entrepreneurship and Design Framework

Figure 94 shows the second moment of Municipio Verde in the SEDF. In terms of the social entrepreneurship process, the second moment is placed in the stage of *idea*. After the research conducted by the organisation, the entrepreneurs went through a process of idea definition. In this process, they considered the insights collected and also define different indicators of success to fulfil their objectives. These indicators involved aspects related with the user experience design of the platform such as "easy to use" and "intuitive". Therefore, At this moment, the organisation used design *silently* while defining their indicators of success. In fact, by considering elements of the user experience of the platform as their indicators of success, the entrepreneurs unconsciously regarded design as a strategic component of this organisation.

Figure 94: Municipio Verde - Moment 2: Setting up the project, planning the operations

- ### *Moment 3: Developing the platform (February – June 2017)*

The entrepreneurs outsourced the development of the platform to a company that is a specialist in the development of platforms that promote citizen awareness and participation in public policies called Ciudadano Inteligente. Nevertheless, the relationship with this organisation had multiple challenges.

> *We have had many problems with the website developers. It has been a difficult relationship. We had a problem because we understood that,*

according to what we talked, they were going to cover an important part of the design. However, in the end, we had to do all the design part and give it to them.

[…] When they introduced us to the team that was going to build the website, there was a designer and a web developer. But in the end, the designer covered only issues regarding the web design, and not issues such as… for instance, there was a part of the platform that we wanted to put an infographic, and they told us that that sort of thing they could not make them. (V.G., CEO, MunicipioVerde)

The main problem with the service provider was due to an ill-defined project brief. The service provider offered the *design* of the platform but did not define what *design* included. Therefore, the entrepreneurs understood by design all the graphics related to the website, including the infographics to be used in the contents. This misunderstanding caused multiple problems for the entrepreneurs whom at this moment found themselves in need to involve a designer in their project.

Figure 95: Example of Municipio Verde's infographics

At this moment, the entrepreneurs recognised that design played a significant role in their organisation. They argued that design enhanced their communications.

It has appeared a lot [design]because finally, this project is based on the communication of messages effectively, persuasively, attractively, and design is there. As I was telling you before, when we had spoken previously, we did not plan to have a designer as a part of the team but only considering to hire a designer for specific tasks. Because we had to do posters, banners, infographics, Facebook templates, email templates, templates to offer different services… So, definitely, we have worked a lot in design, but not with someone fixed. That was an initial mistake when we planned the project. (V.G., CEO, MunicipioVerde)

The entrepreneur recognised that at the beginning of the project, they did not consider to hire a designer. However, they recognised that it was a mistake because having a designer in the team would have helped them to work more efficiently.

[…] I think it would have been more effective if the same person [designer] had helped us with the project, and that person had generated all the material. We have worked with three designers so far. (V.G., CEO, MunicipioVerde)

Hiring multiple designers for specific projects was inefficient because they had different ways of working and styles. Also, they had to brief each designer about the communicational message that they wanted to deliver.

[…] the designer should be able to understand the meaning of what we want to communicate and the message. That is difficult when working with many different people.

[…] We had a designer that made a frame to take some photos, and stickers, and stuffs like that. Because we went to an event to promote the project and we liked a lot, but we also had problems with her in coordination terms. Then, we changed to another one, but that one was boring, but anyways…(V.G., CEO, MunicipioVerde)

Another challenge that they faced was the time available to execute the project. The timing was a scarce resource due to the different agendas and people involved in the project.

> *I think one of the most important challenges was the execution of the project in a brief period. It has been challenging to adapt ourselves to different circumstances during the time given. Well, we had to coordinate timings, agendas; obviously, there are many people involved in this, and that has been a challenge. Also, well, the financial aspect… during this period, we had applied, if I'm not wrong, to three other grants to support the project over time. Because, this type of project requires an important prior capital, for instance, to promote the website, that it has an X number of users, that people can relate it to certain values, etc. So, it seems that this first period of six months is not enough to achieve all these values. That is why we decided to apply to other funds, and that has also been a challenge to achieve project sustainability over time.* **(V.G., CEO, MunicipioVerde)**

The entrepreneurs had to apply to different funds to extend the resources, and therefore, to extend the time available to execute their project. A better relationship with the platform developer and the time spent in briefing designers on the communicational aims of the organisation would have reduced the developing timing and increasing their efficiency. Nevertheless, overcoming these issues as part of the learning process of the entrepreneurs. This insight is crucial to consider in incubation processes to inform new entrepreneurs on the importance of working efficiently with service providers.
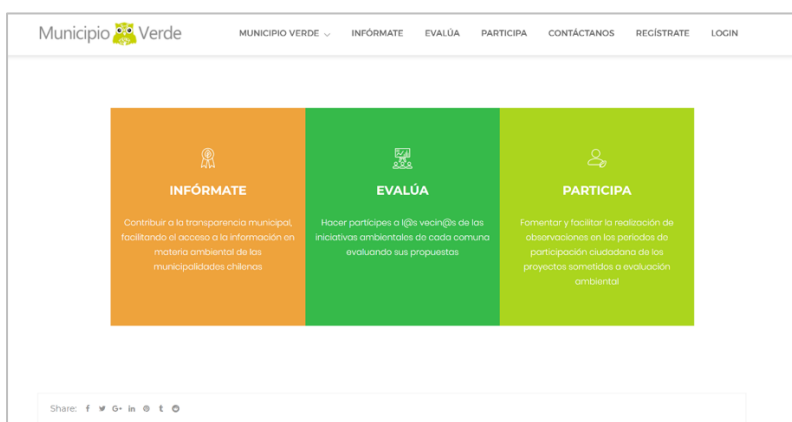
Figure 96: Screenshot of Municipio Verde platform

Analysis of Moment 3 of Municipio Verde using the Social Entrepreneurship and Design Framework

Figure 97 shows the second moment of Municipio Verde in the SEDF. In terms of the social entrepreneurship process, the second moment is placed between proposal and testing. At this moment of the process, the entrepreneurs outsourced the development of the platform to a developer organisation called Ciudadano Inteligente. In this stage, the entrepreneurs encountered multiple challenges regarding the development of the platform, particularly to design issues. The entrepreneurs with the platform developers disagree on their responsibilities due to an ill-defined project brief. The developers included design in their services which the entrepreneurs understood as the design of the graphics of the platform as well as the infographics for their communications. Nevertheless, the developers did not consider the infographics in their proposal. Thus, the entrepreneurs had to hire external designers to design their communicational materials. After this problem, the CEO argued that they should have hired a designer from the beginning of the project. This observation shows the importance of design for communications.

Figure 97: Municipio Verde – Moment 3: Developing the platform

- ### *Moment 4: Platform launch (June 2017)*

At the beginning of the incubation programme, the entrepreneurs did not consider to launch the platform publicly; however, they realised that this event was necessary to position the organisation among municipalities.

> *For instance, the website launching. We never thought that it was going to be a sort of milestone, that we had to invite municipalities with which we had made alliances, other stakeholders, users… and to realise that that was*

an important moment. We understood that just a month ago. Well, and now, we are planning it on the go because we never thought that it was going to be relevant. But now, by knowing the municipalities, we realised that at the end this sort of event can be a bit mediatic for them. So, this event was fundamental. It was hard for us to realise that from the beginning, because we didn't know well the field, the needs, etc. ***(V.G., CEO, MunicipioVerde)***

When planning their activities, they did not consider it necessary to assign resources to a launch event. However, they realised that this activity was politically necessary for their stakeholders. Launch events, among others, help municipalities to improve their visibility among peers and communities. Therefore, the entrepreneurs had to consider these types of events to position themselves among their stakeholders. Thus, they launched the platform in the incubator's facilities. During the launch event, they utilised graphic design in their invitations, presentation and banners.

Figure 98: Municipio Verde - Launch Event

After launching the platform, they utilised social media and newsletters as communication channels, in which they provided information about the different

environmental initiatives conducted by municipalities across the country as well as global news in terms of environmental campaigns.

Figure 99: Municipio Verde - Social Media posts and Newsletters

Analysis of Moment 4 of Municipio Verde using the Social Entrepreneurship and Design Framework

Figure 100 shows the fourth moment of Municipio Verde in the SEDF. In terms of the social entrepreneurship process, the fourth moment is placed in the stage of solution. After the development process, the entrepreneurs successfully launched their platform in an event in which the main stakeholders participated. After the development of the platform, the organisation focused on the communication of their service through the launch event, newsletters and social media channels. At this moment, Municipio Verde used design to support their communications through the creation of graphic materials for their launch event and social media.

Figure 100: Municipio Verde – Moment 4: Platform launch

iv) The use of Design

This organisation did not consider the importance of design in the first instance. However, they recognised that design played an important role in effectively communicating their messages. Due to the lack of design awareness, they did not have a budget for design at the beginning of the project, so they had to involve designers to do specific jobs during the time.

In this case, design was used in multiple ways. At the beginning of the process design was used as a process of engagement with citizens to collect insights about their business idea and to redefine the services that the platform offered. Moreover, they used design as a process of user experience and interface. Design was also used for their communications through the creation of graphic materials used in face-to-face surgeries, social media channels and launch event.
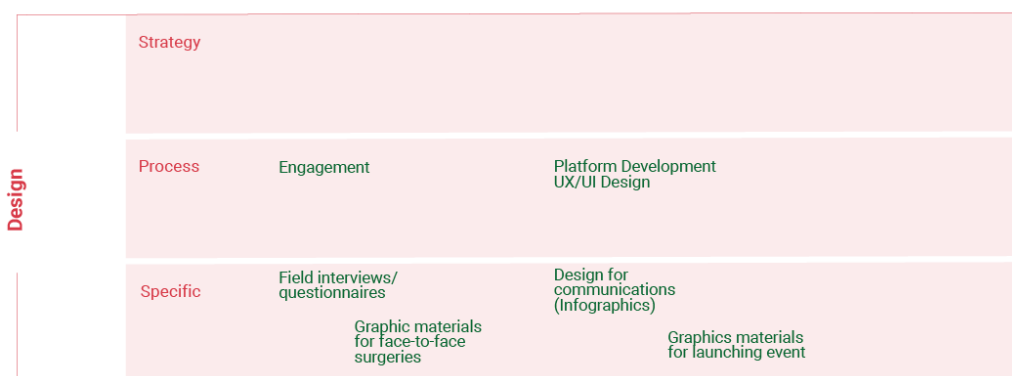
Figure 101: Municipio Verde - The use of design

• *Engaging through design. Finding needs and involving stakeholders.*

The divergent and exploratory nature of design supported the definition of stakeholders, and the exploration of user needs silently. At the beginning of the journey, the entrepreneurs undertook a series of actions to contact the users of the platform to understand their value expectations. The entrepreneurs conducted interviews with municipalities and participated in fairs to get in touch with citizens. In both instances, they had to prepare in advance their interactions, such as interviews, questionnaires, promotional material, for instance. Moreover, they conducted face-to-face surgeries in which they asked students about their thoughts on environmental policies. Design, not

recognised as such, played a silent role in the generation of engagement strategies and materials to support those interactions.

Figure 102: Municipio Verde –Engaging through design

- ### *Platform development*

The development of the platform was the main activity of this organisation throughout the incubation process. The development of the platform was done by an external organisation which had already developed digital products to engage citizens in political issues. The platform development involved the use of user experience and interface to guarantee the correct communication of the contents and functions of the site.

The platform also required the development of infographics and visualisations to communicate their messages. Nevertheless, the service provider did not include this in their development. For this reason, the entrepreneurs had to hire designers to undertake these graphic developments. Having a designer in the team was not considered in the first instance. Consequently, the entrepreneurs had to allocate new resources to design, affecting their overall financial structure and the overall development plan. This issue caused delays and problems between the entrepreneurs and the service provider. Figure 103 shows the design activities conducted during the development of the platform.
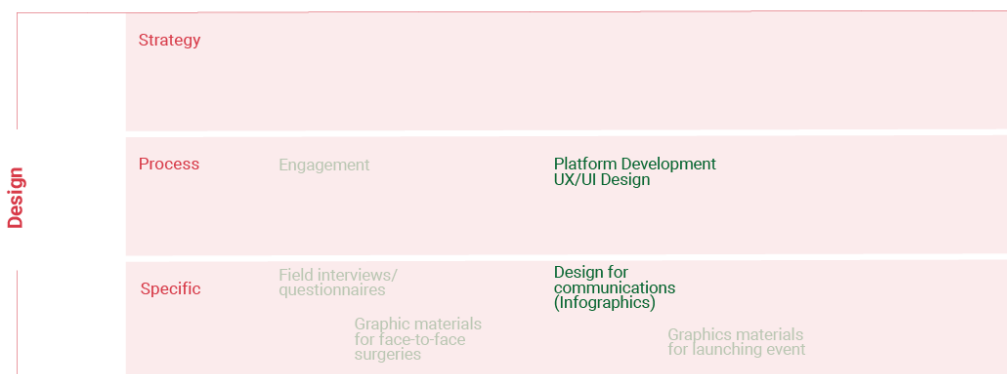
Figure 103: Municipio Verde - Platform development

• *The designer. The consequences of not having a designer in the team*

At the beginning of the programme, the entrepreneurs did not allocate explicit resources for design, including hiring a designer as a part of the team. However, they realised the importance of their role in the delivery of the organisation's value proposition. When the entrepreneurs started their project, they paid more attention to those aspects related to their expertise, for instance, content developing for raising awareness. However, the message that they wanted to deliver the required graphic development to make it more accessible and attractive to the broader community.

To overcome this issue, the organisation decided to outsource the design activities to freelancers. Nevertheless, it was inefficient for the entrepreneurs hiring designers in short periods throughout the project. The entrepreneurs had to repeatedly explain the project and highlight their requirements every time that they hired a new designer. Also, the project was most affected by designers' different graphic styles and ways of working, such as creativity and proactivity. They recognised that some designers showed more enthusiasm than others, providing new ideas to the organisation for communicating their messages. On the contrary, they also hired designers that required clear guidance from the entrepreneurs on what to produce graphically. Figure 104 shows the different activities conducted by the designers.
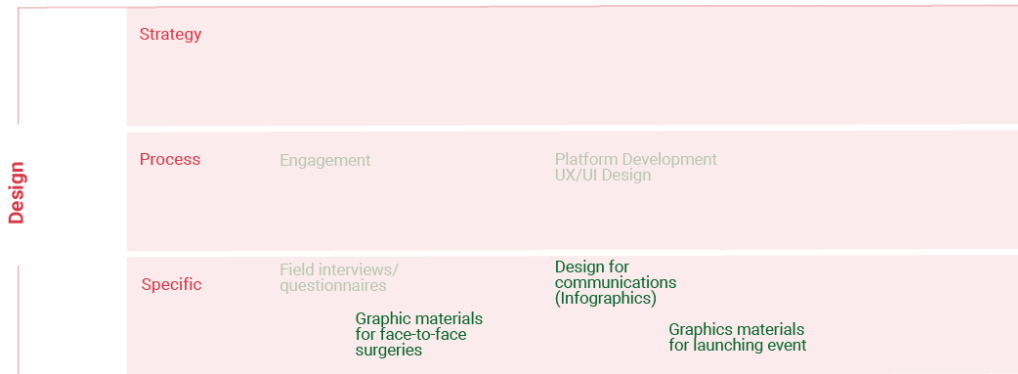
Figure 104: Municipio Verde - The role of the designer

- *Brand identity. Positioning their value proposition*

Design also contributed to the positioning of the project in the public sector and civil society. The innovative character of the platform made the entrepreneurs conduct several activities to position their value proposition in the market. Therefore, the entrepreneurs developed their brand by keeping a consistent message in their communications and graphics. Some of the brand elements designed included graphic materials for their launch event such as invitations, a PowerPoint presentation, and banners. Design contributed through the creation of a brand identity that allowed them to communicate their idea to stakeholders. Figure 105 shows the different activities conducted as a part of their brand development process and materials.
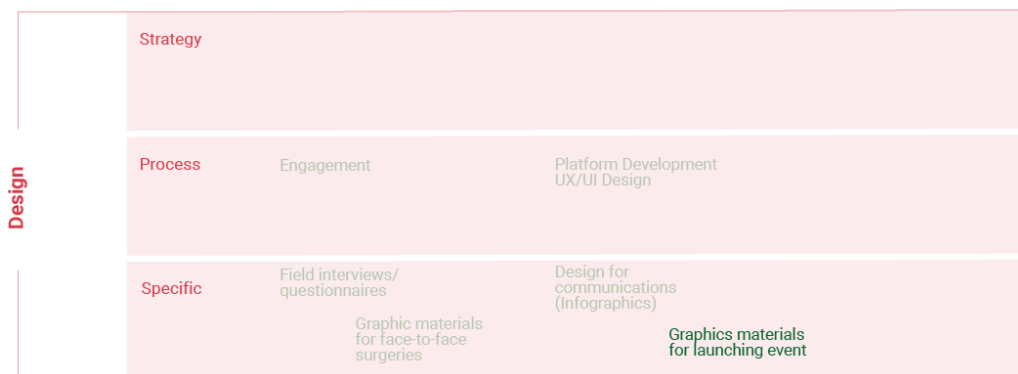
Figure 105: Municipio Verde - Brand identity

- ***Graphic communications supported the relationships between municipalities and citizens.***

One of the main functions of design for this organisation was the development of graphic materials that help them to communicate messages related to environmental issues. In this way, the entrepreneurs intended to raise awareness among the citizens of the importance of environmental issues and the diverse ways to participate in the development of local environmental policies. The graphic materials took the shape of infographics, and illustrations used in their web platform and Facebook page.

The entrepreneurs realised that design was crucial for delivering their communications in an *"effective manner, persuasively and attractively"* (see page 248), which is the core of the project. In other words, they realised that design played a fundamental role in their organisation.
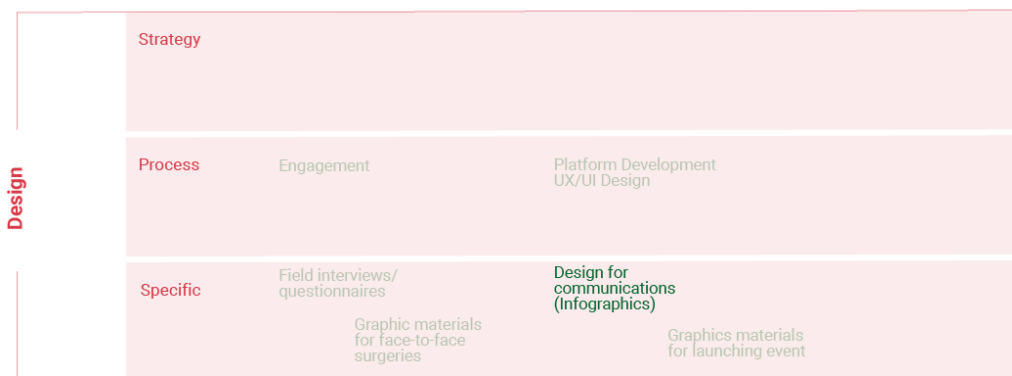
Figure 106: Municipio Verde - Graphic communications for relationships with stakeholders

v) The social entrepreneurship process of Municipio Verde and their use of design.

Figure 107 represents the social entrepreneurship process of Municipio Verde and the use of design (see page 255) in each of the moments analysed in 'The Journey' (see page 240).

This organisation began the incubation programme with the idea of a platform for citizen engagement in environmental policies projects ran by municipalities. The idea of the platform was clear; nevertheless, they had to define the topics covered with citizens. They utilised methods used in design research such as interviews and

questionnaires to collect opinions from people. Moreover, they participated in fairs to promote their idea for which they designed physical frames that people could hold while taking a photograph for Municipio Verde's social media. The research allowed them to iterate the contents that they wanted to deliver and to understand the opinions and level of engagement of citizens in terms of environmental policies.

The research stage enabled them to refine their business idea and the contents of the platform and consequently start the development of the platform with an external organisation. The role of this organisation involved the programming of the website and *the design* of it. The poor definition of the term *design* caused problems between both parties. By design, the developers referred to aspects related to user experience and interface design, but not aspects related with communications (i.e. infographics) nor branding, which the entrepreneurs were expecting as part of the service. The misunderstanding led them to hire external designers that could produce graphics communications and branding. The entrepreneur reflected on this in one of the interviews, when she realised that one of the big mistakes in planning their organisation was not considering a designer in the team. She recognised that design played a fundamental role in communicating their message and engage people.

After the platform development, they launched their solution in an event hosted by the social incubator. This event was an opportunity for the entrepreneurs to share their service with main stakeholders (municipalities), but at the same time, it was also a political event that their stakeholders use to increase their visibility among peers and communities. In this event, the entrepreneurs designed invitations, banners and other elements to decorate the venue as well as to reinforce their message.
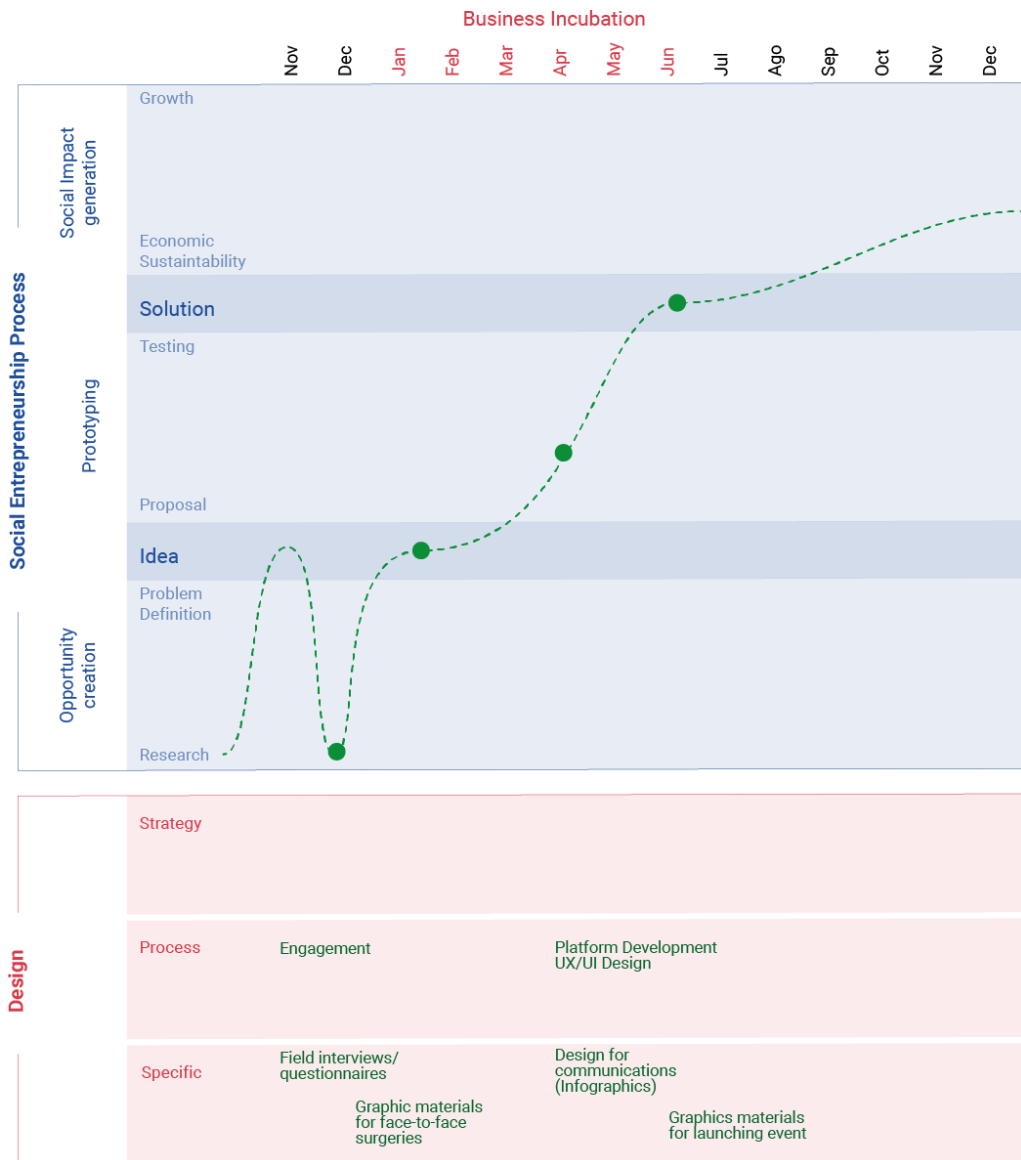
Figure 107: Social Entrepreneurship process and use of Design of Municipio Verde

4.4 Summary of Chapter 4

4.2 described the data collected and analysed during the pre-intervention stage of this study. First, it described the social entrepreneurship ecosystem in Chile. Secondly, it explained the business incubator in which this research was conducted. Third, it introduced the data collected through semi-structured interviews with personnel of the staff of the incubator in order to define the profile of the social entrepreneurs that participate in this organisation, how they used design and what the staff members think about the social entrepreneurship ecosystem in Chile.

The pre-intervention study offered initial findings that allowed the researcher to conduct the intervention and post-intervention stages. These findings include the lack of entrepreneurial knowledge of social entrepreneurs; the importance of external support for social entrepreneurs; the relevance of collaboration and networking and the different ways in which design has supported social entrepreneurs of this organisation. Finally, this chapter introduced the incubation program and its structure that the social entrepreneurs that participated in this study undertook.

4.3 described the experiences of four Chilean social entrepreneurs that participated in an incubation program provided by Socialab (Miaum, Haedus, La Polla Energética and Municipio Verde). A particular aspect of this group was that none of the participants were designers. The analysis consisted of (1) a synopsis of the case; (2) the context of the social issue that the entrepreneurs aimed to solve; (3) the organisation, aims and objectives; (4) the understanding of design; (5) the social entrepreneurship experience during the incubation process (the journey); (6) the use of design; and (7) the use of design framed in the social entrepreneurship process. design throughout this process. The four cases aimed to tackle educational and environmental issues. The solution offered included mobile applications, web-platform, workshops and toolkits.

Miaum was an organisation that developed mobile games to reinforce Math and Language subjects according to the Chilean Ministry of Education programme. This organisation aimed to support the learning process of children playfully and attractively way. This organisation faced multiple challenges about the development of the apps. The multidisciplinary team composed of programmers, an educator and a designer had

to work collaboratively to produce the games. The CEO, who also was a programmer of the games, focused on the development of a platform to improve the efficiency of the overall development process of the games. Consequently, the development of this new platform also showed potential to be commercialised to other industries. This organisation used design in multiple ways: as a development process, as a visual communication process, to prototype and test ideas, to communicate through graphics, as a process of UX/UI design, through illustrations and the branding development.

Haedus aimed to provide socio-emotional education to children from deprived communities. Initially, this organisation offered socioemotional educational workshops facilitated by entrepreneurs. However, they found that these workshops were difficult to commercialise. Consequently, they developed partnerships that allowed them to use their experiences in the development of different products and services. Thus, they developed a toolkit and an online platform in collaboration with partner organisations. The entrepreneurs provided their experience in the creation of socioemotional content while the partner organisations offered their development experiences. At the end of the data collection, the organisation had a varied product and service portfolio that included workshops, a toolkit and an online platform. This organisation used design in multiple ways: as a way of thinking, as a product and platform development process, as a branding development and as a way to materialise their knowledge.

La Polla Energética aimed to provide accessible, environmentally friendly sources of energy to low-income communities. The initial business model consisted of getting people of communities together to pay the installation of solar thermal collectors in their homes. Nevertheless, the financial model proposed was rejected by communities. Therefore, they co-created workshops in which the entrepreneurs trained locals in the collaborative fabrication of the solar thermal collectors. Due to this co-creation process, the organisation had to change their business model. As a result, the organisation changed its team and created a new organisation called Creasol. This case used design in several ways: as a development process, in the co-creation workshops, as a communicational tool and as a strategy.

Municipio Verde aimed to engage citizens in topics related to environmental policies in municipalities. The organisation offered a platform in which people can review and

evaluate the environmental initiatives and policies that municipalities are conducting. In this way, citizens can also compare the performance of different municipalities and collectively take part in the measurements taken. This entrepreneurship aims to raise awareness among the citizens and to promote their participation in environmental issues. The development of the platform was outsourced. The outsourcing process caused multiple problems due to the ill-defined design brief. Municipio Verde expected that the platform developer provided multiple design materials such as infographics and communicational support, but the developer delivered design related to the UX/UI of the platform. The lack of knowledge about design caused an underestimation of the value of design for this company and consequently, problems throughout the development process. At the end of the data collection, the CEO claimed that they should have hired a designer from the beginning of their process to avoid these issues. This organisation used design in various ways: to engage, to develop the platform, dealing with designers, as a branding development and for communications.

The next section describes the research findings. 5.2 provides the cross-case comparison between the four case stories identifying the key issues the social entrepreneurs face during the incubation process. 5.3 shows how design was used concerning these issues. Finally, 5.4 analyses the design practices used by entrepreneurs adopting the Four Orders of Design Model.

Chapter 5   Findings

5.1   Introduction to Chapter 5

The purpose of this chapter is to shed light on the research question of this study: *How non-designer social entrepreneurs use design during a business incubation programme?*. For this purpose, this section offers a cross-case comparison to identify common issues that the organisations faced during the incubation programme (R.Q. 1, page 25). Subsequently, design drivers are provided which represent the use of design by social entrepreneurs regarding themes identified in the cross-case comparison (R.Q. 2, page 25). Finally, the design principles and practices are organised by Buchanan's four orders of design model (Buchanan, 2001) to classify the design practices used by social entrepreneurs (R.Q.3, page 25).

Therefore, this chapter provides the cross-case comparison between the four case stories identifying the key issues the social entrepreneurs face during the incubation process. Later, it shows how design was used in relation to these issues. Finally, it analyses the design practices used by entrepreneurs adopting the Four Orders of Design Model.
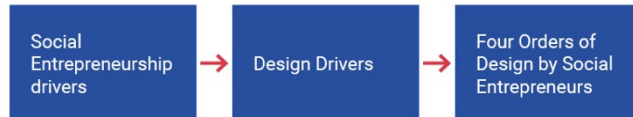
Figure 108: Structure of Chapter 5

5.2 Cross-case Comparison

This chapter aims to answer the first research question of this study- *What are the main issues that social entrepreneurs encounter in their processes?*. For this purpose, the insights of 4.2 and the case stories described in 4.3 were analysed. In addition, the SEDF was used to illustrate the four journeys of social entrepreneurs (Figure 109).
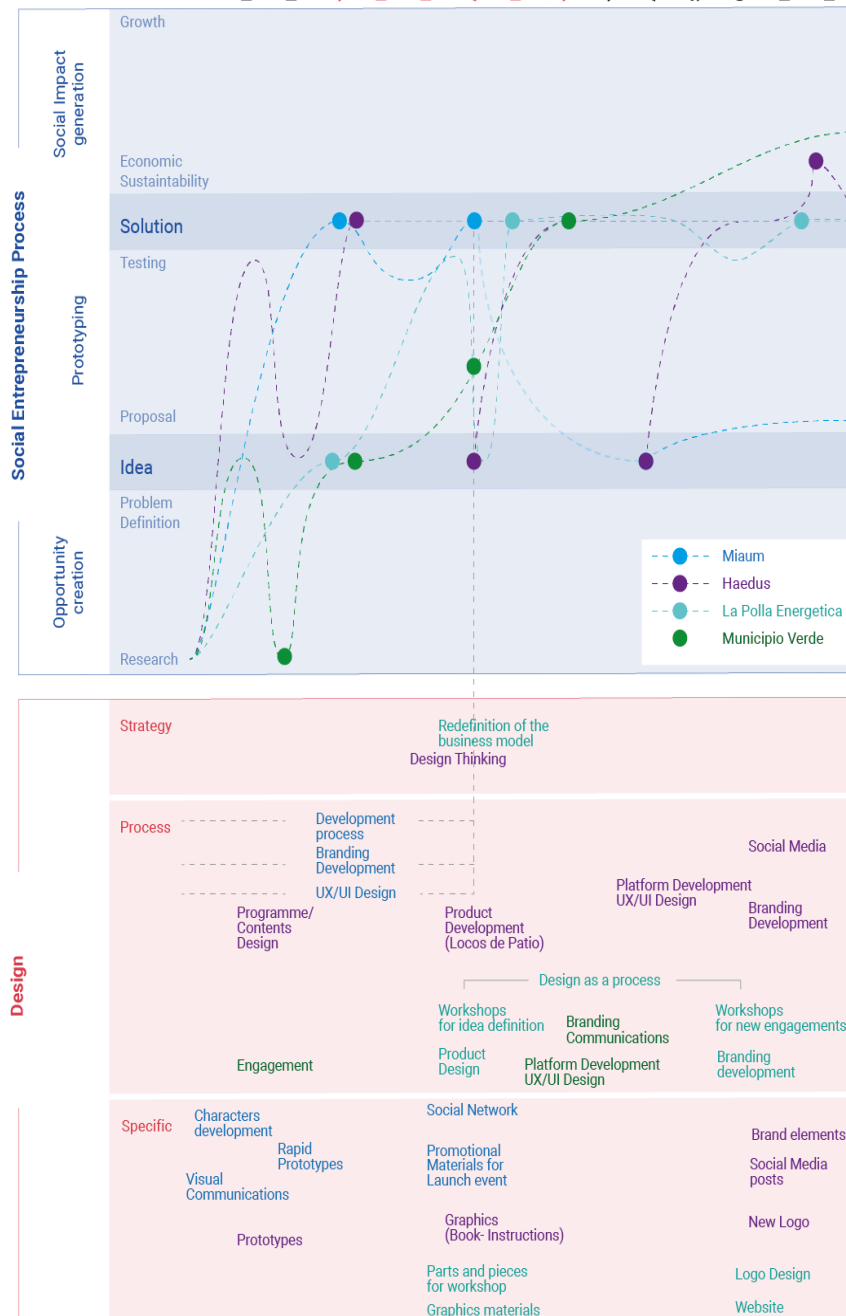
Figure 109: Cross-case comparison

The SEDF shows that most of the entrepreneurship conducted research, problem definition and ideation activities before the incubation process. This observation is trivial because the applicants to the incubation programmes had to fill a form that requires the definition of the problem and the idea to solve the problem through their business idea (see page 152).

Nevertheless, Municipio Verde conducted further research to better understand the social need, refine their idea and define the contents and sections of their platform (Moment 1, page 240). Miaum and Haedus conducted research activities after developing their first prototypes to redefine their business ideas (Haedus - Moment 1, page 186 ; La Polla Energética - Moment 2, page 218). Therefore, the SEDF shows iterations in the courses of actions of these two organisations in which the trajectories of their journeys follow the sequence: testing - idea - solution. These iterations, charecterised by the courses of actions in the SEDF, are fundamental because they show the importance of reseach and testing activities for the ideation and development of products and services. Moreover, these iterations show that social entrepreneurs are permanently changing their strategies or, due to the length of the incubation programme, reacting to the changes of the circumstances that they encounter.

To conduct research and testing activities is important to have access to communities and build trust with them. Municipio Verde conducted face-to-face surgeries to collect insights from citizens (see page 241) and La Polla Energética conducted workshops to build trust with communities (see page 214). Once the organisations collected all the data necessary to define the social problem and ideas, they conducted development activities. Development activities were conducted internally in the teams (Miaum, La Polla Energética), or in partnership (Haedus) or via outsourcing to an external organisation (Municipio Verde). The entrepreneurs developed their products in partnership (see pages 190, 193) or via outsourcing (see page 246) to incorporate capacities to the team, such as product design and programming. After the development of their solutions, the entrepreneurs focused on the promotion of their products and services and positioning their brands.

Collaboration is part of the essence of social initiatives such as social innovation (Manzini, 2015, p. 11). In these cases, collaborative creation or co-creation appeared

internally in the team (Miaum) and externally with partners (Haedus, Municipio Verde) and beneficiaries (La Polla Energética). The process of co-creation sought to bring different experiences and skills to the development process.

The model offered a useful framework to identify design practices utilised by social entrepreneurs during the incubation programme. Nevertheless, it is essential to consider that the model was created based on the triangulation of the literature of design and social entrepreneurship, and the Socialab incubation process. Therefore, the framework provides a good articulation of design and social entrepreneurship practices, specifically for the social entrepreneurship ecosystem of Socialab. The SEDF is useful to capture, reflect and analyse the practices of social entrepreneurs which might be of interest for funding bodies, support organisations and the entrepreneurs themselves. However, since the model is centred on the entrepreneurs' processes, it does not provide a wider picture of the evolution of the social problem.

The narrow perspective on the evolution of social issues is a sign that the framework would not be useful to capture the social impact of the intervention of the entrepreneurs. As mentioned before, social problems are complex to understand and define; therefore, the model only provides a snapshot of ongoing efforts on addressing social issues limited to the intervention of the entrepreneurs. Moreover, the model relies on the level of detail of moments to capture contextual information of the cases. The framework does not provide a structure to capture situated factors of the communities that entrepreneurs work with or for.

In essence, six themes were found in these cases research, community engagement, development, co-creation, positioning and strategies (Figure 110). The following is a description of these six themes.

Figure 110: Structure of Chapter 11

5.2.1 Research

Research was an important theme found in these cases. This theme appeared mainly in the early stages of the social entrepreneurship processes. Prior the incubation program, the entrepreneurs had to complete an application form in which they had to describe the solution proposed and social impact estimated, business opportunity, business model and the team (see page 151). Therefore, to complete this form, the entrepreneurs had to investigate the social need with communities before starting the process.

Nevertheless, these social problems had to be redefined at the beginning of the incubation process. The first stage of the program, Problem Definition (see page 152), evidences this practice. The social entrepreneurs had to validate their ideas with communities conducting research activities. These activities allowed them to collect insights from their main stakeholders before developing the solutions. Some of the insights collected regard to the price of the services (Haedus, page 187), the business model proposed (La Polla Energética, page 218) or feedback about the information that a platform should include (Municipio Verde, page 241).

5.2.2 Community Engagement

Community engagement activities are necessary for social entrepreneurs they enable access to communities. Through community engagement communities and organisations benefit from each other. Organisations build their legitimacy and co-develop solutions to social problems with communities and communities gain access to the resources and capacities of the organisations (Bowen et al., 2010, p. 297). By gaining access to these communities, the entrepreneurs not only collect information about the social needs and resources available in the place but also, they build trust with people.

In this study, the four organisations created products and services ideas to met social issues offering their expertise and skills for the service of people in need. Therefore, the entrepreneurs conducted community engagement activities to establish relationships with communities. The engagement with communities enabled them to conduct research and development activities as well as to build trust with locals. Moreover, they

also could understand local capacities and resources available to undertake their business initiatives.

For instance, La Polla Energética delivered workshops (see page 218) in which they had to demonstrate the capacities of the team, the idea proposed to improve access to hot water, the technology available (solar thermal collectors) and an implementation strategy. In these workshops, which also were considered as conversations with communities, the entrepreneurs also had access to the opinions of local members who suggested new forms of implementation their business idea considering local capacities and resources available in the communities. Similarly, Municipio Verde conducted face-to-face surgeries (see page 240) in public events in which they introduced their business ideas and collected insights about the contents that the platform should address.

5.2.3 Development

After the evaluation of an entrepreneurial opportunity (see page 39) with communities, the development process comprises the transformation of selected ideas into products and services that generate social impact. The process involves the combination of resources (human and financial, page 42) for the creation of a business model that satisfy the social needs of people (see Social Entrepreneurship Process, page 55).

In this study, these processes were conducted internally within the teams or with the support of partner organisation and communities. Internally, teams work collaboratively across the different areas of the organisations or combining the knowledge of team members. For instance, the development process of Miaum's games (see page 161) involved the collaboration between an educator that defined the contents and dynamics of the apps; a designer that created the illustrations of the characters as well as the user interface of the game; and a group of programmers that turned the work of the educator and the designer into a the programming code of the games.

Communities and partners organisations also participated in the development process providing information, resources and experience that entrepreneurs lack (see pages 42 and 61). Externals supported social entrepreneurs because their contribution to the process also benefits them. For instance, the development of Haedus' toolkit and online platform (see page 190 and page 193) involved the participation of partner organisations which provided technical skills for the physical development of the toolkit and digital development of the platform.

5.2.4 Co-Creation

Manzini (2015, p. 11) defines social innovation as the creation of novel solutions that meet social needs while creating new relationships and collaborations. In this definition of this *social relative* term (see page 50), collaboration appears in the core of social innovation. In fact, to create social impact, the involvement of different stakeholders is necessary.

In this study, entrepreneurs faced stages of co-creation in which beneficiaries contributed to the definition of business ideas and the development of product or

services by making available their experiences and resources. Co-creation is a broad term that refers to any act of applied collective creativity (E. B.-N. Sanders & Stappers, 2008, p. 6). The difference between co-creation and participation in the development process is that co-creation activities also influence stages before the development process.

In this research study, the social entrepreneurs conducted co-creation activities as follows. Miaum co-created the contents of the games with external educators during the research stage (see page 162). Haedus developed a toolkit and an online platform in collaboration with partner organisations (see page 190 and page 193). La Polla Energética redefined their business idea in co-creation workshops conducted in communities (see page 218). Municipio Verde, created a platform that allowed citizens and municipalities to collaboratively participate in the creation of environmental policies.

5.2.5 Positioning

The novelty of the services that social entrepreneurs offer requires positioning campaigns that include the social issue, their organisation and the solution that they offer. Social entrepreneurs address issues that neither private nor public sectors deal with (Martin & Osberg, 2015, p. 88; Nicholls, 2006). For this reason, most of their products and services are novel in markets that have not yet been explored. To reach attention from their stakeholders (investors, beneficiaries and general audience) they have to raise awareness on the social need that they work on and to show the benefits of their solutions.

In these cases, social entrepreneurs conducted different initiatives to position the social need, their organisations and solutions. Miaum and Municipio Verde introduced their services to key stakeholders in launch events (see pages 167 and 251). Haedus, after the development of their programs, toolkit and platform focused their activities on communications and sales (see page 196). La Polla Energética approached communities through workshops to communicate their ideas, educate locals on the benefits of renewable energy as well as to show their technical expertise and capacities in the installation of solar thermal collectors (see page 218).

5.2.6 Strategies

The analysis the iterative journeys (5.2) of these four social entrepreneurs suggests that they are permanently changing their strategies or, due to the length of the incubation programme, reacting to the changes of the circumstances that they encounter. In these cases, it was possible to unveil numerous reasons that affected their journeys such as new developments, partnerships and community insights.

The main focus of Miaum was the development of games and related software. The strategy of this organisation was to improve the development process and platform to make the overall development process more efficient, and consequently, create more games and reach new markets. The entrepreneur recognised that the organisation operated following a design process. The development of the games, and core business of the organisation, incorporated elements of the double diamond introduced by the researcher. Nevertheless, the strategy followed lacked sales activities. In fact, the CEO did not emphasise the actions taken to commercialise the games. He focused their efforts into the optimisation and automatisation of their development process.

During the incubation process, Haedus developed multiple educational programmes, a toolkit and a web platform that allowed them to offer their services in various ways. The decision of diversifying their products and services was based on the interaction with schools' principals. They showed interest in the solutions offered but did not have enough the resources to afford the extended programmes. Therefore, they redesigned their programmes, making them shorter and cheaper. Besides, they explored new ways to deliver their value proposition through collaboration with other organisations that developed educational products. This strategy allowed them to add skills and resources from their partners to their development process. The CEO recognised that design was fundamental for their organisation.

The strategy of La Polla Energética changed during the incubation process from the installation of STC to the training on the collaborative fabrication of them. This change was due to the conversations with experts and engagement activities with communities. Experts suggested to the entrepreneurs to change their financial model or at least test it with communities. This insight made them contact neighbourhoods using the networks provided by the business incubator. The entrepreneurs conducted workshops with

communities to evaluate and validate their idea. However, the feedback received from the locals made them change their business strategy, as suggested by the experts.

Municipio Verde defined their strategy at the beginning of the incubation process. They defined indicators for their platform as well as for their engagement with citizens and municipalities. For their platform, they had indicators regarding the usability and the number of users. For their engagement activities, they defined the frequencies that they meet municipalities and citizens.

5.3   Design drivers

This chapter aims to answer the second research question of this study - *How is design used by social entrepreneurs during the social entrepreneurship process?*. For this purpose, the chapter provides an analysis of themes described in 5.2, page 267 from a design perspective. This analysis aims to unveil how design was used by social entrepreneurs during their incubation processes. In addition, it was found that the entire social entrepreneurship process presents similar characteristics to the design process. The analysis of the use of design for the six themes found in the data analysis and the description of the design as a social entrepreneurship process is described as follows.
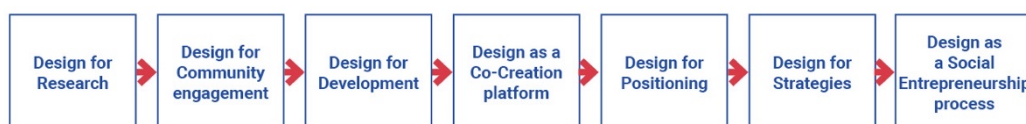
Figure 111: Structure of Chapter 12

5.3.1 Design for Research

Design was used as a driver to collect information about beneficiaries or users. These activities appeared in the initial stages of the social entrepreneurship process, such as researching people's needs and defining the social problems that they intended to meet. Additionally, design research also occurred when developing products and services to obtain feedback from users and beneficiaries about the solutions proposed.

Miaum conducted research activities to define the social issue that they wanted to solve as well as to collect insights about the usability of the games (see page 161). In the beginning, they conducted desk research in which they found out that children in Chile had difficulties in learning Mathematics and Language. Also, they utilised rapid prototypes to test the dynamics of the game on paper, before programming the applications.

Haedus conducted research activities to refine their programmes (see page 186). The entrepreneurs prototyped and tested the workshops that they were offering to validate

their approaches. Nevertheless, despite the positive response received by participants, the entrepreneurs could not sell their services due to the high price of them. These prototypes allowed them to dimension the services offered and further develop other, more affordable alternatives for their clients. Design contributed to the prototyping of the sessions tested.

La Polla Energética conducted research activities to collect insights from community members about the benefits of solar energy and the business idea proposed (see page 218). In this stage, they ran workshops and facilitated these sessions to generate conversations in which the community members could share their experiences, information and opinions. Design was present in the creation of graphic materials for these sessions as well as in the interactions with communities.

Municipio Verde conducted research activities to collect insights from citizens and municipalities about environmental initiatives and policies (see page 240). They used design research methods such as interviews and questionnaires to collect opinions about their business ideas from citizens. They run face-to-face surgeries in fairs, for which they also used graphic materials (photography frame, Figure 92) to invite people to participate in their surveys.

Therefore, design was used for research in different ways. From the perspective of graphics, design was used for the development of graphic materials that supported workshops, or photo frames and, educational materials. In terms of interactions, design was used in the interaction through interviews and facilitation educational programmes and workshops. Also, design represents the collection of insights that informed social entrepreneurs about the social needs and the products and services offered.

5.3.2 Design for Community Engagement

Engaging people is a critical task for social entrepreneurs. Community engagement activities enabled them to gain access to communities, users, investors and general audience. This aspect was relevant because those groups provided information, support and the resources necessary for the operations of the companies. Moreover, by engaging, they could build trust in communities, which was necessary for the adoption

of the products or services purposed. Design supported engagement activities in various ways.

Miaum conducted engagement actions with educators which provide access to parents and schools where the games could be offered (see page 171). The organisation designed games that responded to the needs of educators in classrooms. They pointed out that teachers needed something that reinforces at home the assimilations of the contents taught in schools. Therefore, the team invite teachers to participate on the solutions at the beginning of the design process, when the content creation area asked two externals educators to supervise and validate the contents that the games were going to cover. In this way, Miaum could guarantee that the games would support the acquisition of knowledge taught in schools.

Haedus engaged actively with wider communities through social media (see page 196). They permanently published different events that they were conducting or taking part as well as seasonal messages for their followers. Therefore, they utilised design to create graphics that enhanced their messages. Moreover, this organisation engaged with school' principals through formal channels such as meetings and emails. The organisation used design for this type of engagement through the positioning of their brand and the importance of socio-emotional education among school's principals.

La Polla Energética conducted engagement activities in the form of workshops and conversations with communities (see page 218). These activities were crucial for the organisation because it allowed them to show the benefits of their technologies, the solution proposed as well as to collect insights from communities. Moreover, using this way of engagement allowed them to build trust with the beneficiaries. Building trust was fundamental for them because the solution that they were offering was expensive for these communities, so they had to engage with communities to show their capacities and commitment with the solution proposed. They used design in the facilitation of the workshops and conversations, as well as in the creation of educational wall charts that communicated the benefit of solar energy.

Municipio Verde utilised engagement activities to attract people to their platform (see pages 240, 251). The engagement occurred in various stages of the process. In the

beginning, they engaged with students and communities by participating in fairs and conducting public surgeries in which they surveyed people about the contents that the platform should have and its functions (see page 240). In these opportunities, they designed visual materials such as a photo frame and a stand to attract people in these events. Moreover, after the platform was launched, they used social media to reinforce their communication messages but also to engage with the general audience on the environmental issues that affected them (see page 251).

Therefore, design was used for the engagement process in different ways. From a graphic perspective, design was used for the development of brand elements such as logotype, letterheads and emails, wall charts, and printed graphics used in public events. Moreover, design was used for the facilitation of educational programmes, workshops and face-to-face surgeries. Also, design was part of the system of brand elements and communicational messages that define their brand identity as well as the initiatives conducted to build trust with communities.

5.3.3 Design for Development

Product and service developments are essential stages of the social entrepreneurship process because they relate to the transformation of ideas and proposals into products and services aimed to solve the social need identified. The development process involves, for instance, information collected, skills and resources available and opportunities.

Miaum recognised that they used design as a general development process (see page 160). They realised this *silent* use of design when the researcher introduced different design processes such as the double diamond, and principles such as design thinking. The CEO mentioned that the nature of their development processes involves discovery, definition, development and delivering of games (see page 160). In this process, they utilised practices such as prototyping, visual communication, illustrations, user experience and interface design, for instance.

Haedus conducted different development process (programmes, toolkit, platform) internally (see page 186) and in partnership (see pages 190, 193). The internal development involved (as they called) the *design of the contents and dynamics* of the

programmes they offer (see page 185). They also developed a toolkit (see page 190). and a platform (see page 193) in which they had access to designers of their partner organisations. In these experiences, they valued the creative approach of designers when developing products. According to the CEO, design was a creative process that enabled the use of the skills and experiences of both organisations collaboratively. The external designers contributed with their technical expertise to the project from product design (toolkit, materials), graphic design (illustrations, book design, instructions), and user experience and interface design.

La Polla Energética conducted their development process in collaboration with the communities (see page 218). In fact, the training programme designed was the result of a process in which they explored with communities different alternatives for the installation of solar thermal collectors. Later, they defined an adequate model (training sessions), and developed and delivered the training session on the fabrication of the collectors. Design was used in the facilitation of the conversations with the locals, in the design of the STC to be fabricated and the graphic materials used during the workshops.

The service provider primarily conducted the development of the Municipio Verde's platform (see page 246). The platform that aimed to engage citizens with environmental initiatives conducted by municipalities had a great level of novelty for both citizens and municipalities. Therefore, the entrepreneurs set different qualitative indicators that related to the usability of the platform (easy to use and intuitive) to guarantee a positive experience for the users (see page 244). The service provider used design practices such as user experience and interface design. Nevertheless, the entrepreneurs also had to hire external designers for the design of infographics and graphic support for their communications (see page 257).

Therefore, design was used for the development process in different ways. From a graphic perspective, design was used for the development of visual communications, illustrations, infographics, educational materials and user interfaces. Second, design was used in the for the design of toolkits, solar thermal collectors and prototypes. Third, design was used for the development of user experiences in platforms and games, facilitation of educational programmes and workshops. Fourth, design was used in the

collection of the products and services created in these processes. Also, design comprises the overall system of elements that form their products and services.

5.3.4 Design as a Co-creation platform

Another characteristic of the social entrepreneurship processes was the collaborative creation of solutions that satisfy social needs. The co-creation appeared internally in the team and externally with partners and beneficiaries. The process of co-creation sought to bring different experiences and skills to the development process.

Miaum was composed of three pillars: content creation, design and programming (see Figure 43, page 156). The three areas worked collaboratively in the creation of the games utilising a process identified by the CEO as a design process (see page 160). In this process, each area conducted numerous activities according to there area of expertise and later shared with the rest of the team. For instance, the content creation area defined the contents and dynamics, that the designer transformed into digital illustrations and interfaces, which finally the programmers turned both contents and graphics into code (see Figure 45, page 163). This process possessed multiple elements of design such as prototyping, iteration, graphic visualisations and communications, which inspired the CEO to build a platform based on this way of working.

Haedus used design thinking to co-create their programmes using the different experiences of the team such as education, psychology and marketing (see page 182). The programmes were prototyped and tested with the users in short versions of them, which in turn allowed them to redefine their services. Moreover, they co-created a toolkit and a platform in processes led by designers (see page 190). These processes brought together partner organisations with their departments to the creation of toolkits and web platforms. In these processes, Haedus contributed with their experience in socioemotional education and the partner organisations with their experience in markets, and development (graphics, physical and digital)

La Polla Energética conducted workshops, to inform people about their technologies and to collect insights about their idea proposition (see page 218). However, these workshops formed the bases of a platform in which communities co-designed their solutions in collaboration with the entrepreneurs. The communities contributed with

their skills, information and resources, and the entrepreneurs with their technical knowledge for the development of collaborative fabrication workshops of STC. Therefore, the workshops allowed the entrepreneurs not only to figure out the fuzzy front end of the project (criteria and idea of the service) as well as the conceptualisation, prototype and definition of the service provided. Design was used in the creation of educational materials and facilitation of co-design sessions, in which both parties actively contributed to the development of the final solution.

Municipio Verde developed a platform for the engagement and co-creation environmental initiatives and policies conducted by municipalities. In this platform, citizens had access to evaluate what municipalities were doing in terms of environmental initiatives and to participate in the decision-making processes actively. In this case, design was used for the development of the infographics and the interactions between citizens and municipalities with the environmental initiatives in question.

Co-creation platforms appeared internally in digital developments (development of Miaum's games and Haedus programmes), in collaborations (Haedus' partnerships and La Polla Energética's co-design process) and in products in which people co-create their solutions (Miaum's resulting platform and Municipio Verde's platform). Design as a co-creation platform occurred through educational materials, infographics and user interfaces; through facilitation and development processes in which people collaborated for the creation of products.

5.3.5 Design for Positioning: Branding, Communications and Promotion

Social entrepreneurs have to gain attention from their stakeholders (investors, beneficiaries and general audience), raising awareness on the social need that they meet and showing the benefits of their solutions. To achieve this purpose, social organisations have to develop their brand image and develop communication strategies to promote their products and services. The channels used to reach people are social media, participation in events and word of mouth.

The social issue that Miaum intended to position was the low indexes of language and mathematics learnings in children between 4-6 years old. They offered attractive mobile games that encourage children to study these subject and therefore improve these indexes. The team defined three target groups: parents, teachers and school's principals. They used Facebook to reach parents and teachers; meanwhile, school's principals were approached through formal means such as emails or events (see page 178). The organisation used the graphic assets created for the games to support their communications through their social media, website and in events. However, as it was mentioned on this case story (see page 173), this organisation spent most of their efforts and time developing solution than exploring ways to communicate and promote their games.

Haedus aimed to develop socioemotional skills in children from low-income areas (see page 182). They developed educational programmes, a toolkit and a web platform. The leading target group for these products and services were schools and foundations. The CEO recognised that after that stage, they had to address their efforts towards sales (see page 196). To achieve sales goals, the organisation developed an active communication campaign that supported their sales strategies. They redesigned their website and worked on their corporate identity. For instance, they improved brand elements present in proposals, letterheads, presentations, as well as redesigned their logo. In parallel, the CEO utilised social networks, such as Facebook and Instagram, to share information about the different initiatives that they were undertaking as well as to celebrate teachers' days or Christmas and New Year (see Figure 68, page 198). This organisation used design in a symbolic level generating graphic materials to strengthen their brand image and therefore positioning the importance of socio-emotional education and their products and services.

La Polla Energética aimed to make the benefits of the use of renewable energy more accessible to low-income communities. They initially offered the installation, and later the collaborative fabrication of solar thermal collectors. For this organisation, communicational activities were important because they had to educate people about what the use of solar energies, their benefits costs and return of investment. They used design to communicate these messages to different stakeholders. They created graphic materials such as flyers and educational wallcharts to use in their workshops (see page

231). Moreover, they redesigned their website to promote the new service co-designed with communities. However, this organisation did not conduct communicational strategies to reach more communities. They relied on their networks to reach neighbourhoods. Therefore, most of the communications were based on word of mouth or through meetings with community leaders.

The goal of Municipio Verde was to raise citizens' awareness of environmental initiatives conducted by municipalities. They offered a web platform in which citizens could interact with municipalities about environmental initiatives and. Since the environmental issues were not relevant to the communities that they were working with, they had to start a communication campaign to position these topics among citizens. Therefore, they participated in fairs and organised a launch event to promote their platform (see page 240). Moreover, they had an active social media campaign in which they talked about environmental initiatives around the globe and locally. They utilised design to enhance their messages through attractive graphics and infographics. Also, they created printed materials that were used in fairs and during the launch event such as banners and a printed photo frame.

Design supported the companies positioning in terms of branding, and consequently, communications. Due to the novelty of their solutions and the area of application, they had to make a double effort in positioning not only their products and services but also raising awareness in the social issues concerned. Design was in graphics that allow entrepreneurs to raise awareness of the social issue that they are tackling and their products and services. Therefore, design was present in the creation of infographics, wall charts, social media images, and printed materials in events. Moreover, the collection of all these graphic imageries allowed them to build their brands connecting the social issues that they worked with and the products and service they offered. Moreover, design was used through the participation in events, business meetings and by hosting launch events. All these design contributions allowed these entrepreneurs to develop their brand identities.

5.3.6 Design for Strategies

Design supported the strategic decisions of the social entrepreneurs in various, and frequently *silent,* ways. Three of the cases did not mention design as a driver for their strategies. Nevertheless, there were found elements of design that contributed to these processes.

The CEO of Haedus was the only case that suggested that design contributed to their strategies. He claimed that design thinking enabled them to undertake a plan or objective (see page 184). Therefore, design thinking allowed them to undertake different strategies for the development of their programs and partnerships with external organisations.

La Polla Energética was influenced by design when defining their strategies. Nevertheless, this process was not considered as a design; therefore, design supported this process *silently.* When visiting the communities, the entrepreneurs ran workshops that followed the principles of co-design (see page 223). In these workshops, they inquired their financial model with the locals with which they could redefine the criteria of the project and idea (fuzzy front end). Later they conducted further workshops in which they gathered the insights from the previous interaction and developed a concept idea that was the training sessions. They ran prototype workshops using the resources received through the incubation programme. Thus they could define the service proposed and redefine their business strategy by the co-design of their services with the communities.

In the case of Municipio Verde, design was not explicitly present in the decision-making process of the definition of strategies. Nevertheless, as mentioned in previous findings, it helped the organisation to achieve its indicators regarding the usability of the platform and number of users (see page 244). Design supported the organisation to achieve its goals through the development of the platform (see page 279) and the graphics used to engage municipalities and citizens (see page 282).

Design supported these organisations' strategies in multiple ways. Design for strategies appeared as a process in the case of Miaum, like design thinking in Haedus and Co-Design in La Polla Energética. In this way, design helped the entrepreneurs to test their

strategies, explore different opportunities, prototype them and iterate them when necessary. Also, design supported organisations in the achievement of their strategies. Design contributed to Municipio Verde to reach their goals such as engagement, the usability of digital products and improvement of development processes.

5.3.7 Design as a Social Entrepreneurship Process

When the researcher introduced design to the social entrepreneurs, two of them argued that they were already using design as a process (Miaum, page 160), or as a way of thinking (Haedus, page 184). The other two organisations recognised the value of design for specific situations such as creating attractive graphics for communications. Nevertheless, by analysing the incubation process, it was possible to see elements of the design process as an overarching framework of the social entrepreneurship process.

The different initiatives that the entrepreneurs conducted required a similar mindset to the design approach. Entrepreneurs required a divergent process of exploration that converged in a decision taken. This processes constantly appeared in the social entrepreneurship process. For instance, in the case of Miaum, they used prototyping to explore the dynamics of the games that subsequently, informed the designer about the type of interfaces and characters that he had to produce. La Polla Energética explored multiple financial alternatives for their services, which were narrowed down by the interaction with communities. In the latter example, they also added resources no considered and refined their idea about the needs of the communities for the development of a better service. This iterative characteristic is also related to design.

Therefore, to illustrate this observation, the Social Entrepreneurship Model introduced by Kickul and Lyons (see page 57) was reshaped as the Double Diamond process of design (see page 72). This reshaping shows a series of divergent and convergent stages, followed by these entrepreneurs. Both stages of the social entrepreneurship process, idea creation and mission achievement are the results of a divergent and convergent process. In each of these stages, there are 'smaller diamonds' to graphically demonstrate the interaction among them but also the divergent and convergent logic for defining each element.
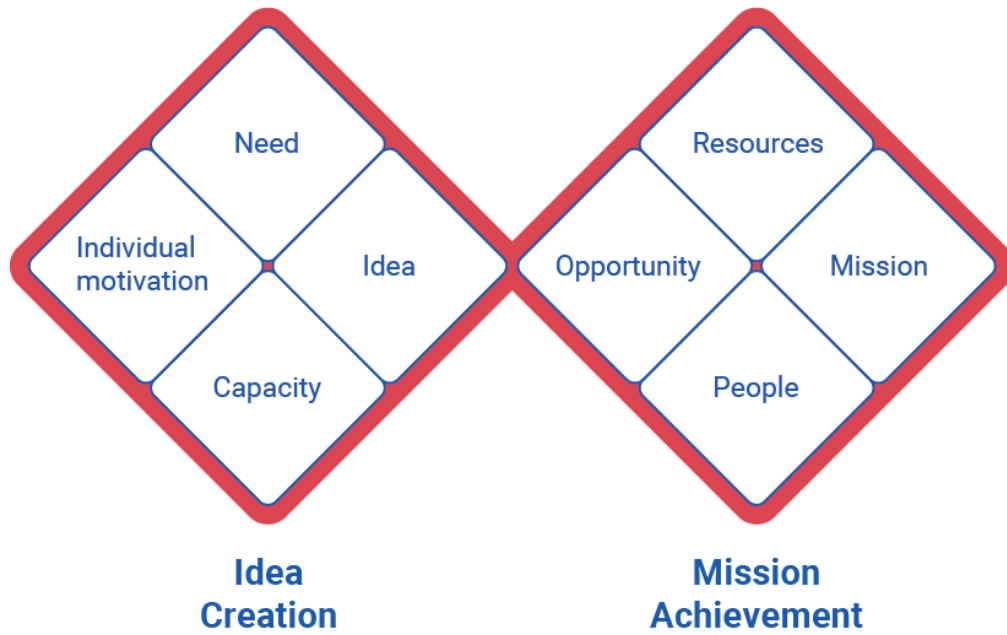
Figure 112: Double Diamond Version of the Social Entrepreneurship Process (based on Design Council (2007) and Kickul and Lyons (2012))

The advantage of this representation is that it suggests that the definition of each element of the social entrepreneurship process requires a sub-process of divergence and convergence that allows social entrepreneurs to explore and define the adequate courses of action for their organisations [2].

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[2] More details of this model in Pérez, Hands & McKeever (2017) Locating the potential contributions of design in social entrepreneurial initiatives, Conference Proceedings 4D Designing Development Developing Design, 299-311 (Appendix A.7)

5.4 Four orders of design by social entrepreneurs

This chapter aims to answer the third research question of this study - *What design practices are used by social entrepreneurs to undertake their issues?*. For this purpose, the four orders of design model (Buchanan, 1992, 2001) analysed in detail in the literature review (see page 69) was used because this model was created to understand how design is used by designers and non-designers (Buchanan, 1992, p. 10). The model is composed of four interconnected areas: symbols, things, actions and thoughts. This section will also allow to evaluate the use of Western models in the understanding of design practices by social entrepreneurs.

First, Table 30 shows the design practices used by the social entrepreneurs studied in this research and organise them by design driver and the four orders defined by Buchanan. In this way, it is possible to analyse in detail the design practices used across the design drivers described in 5.3. Figure 113 shows the outline of This chapter.

Figure 113: Structure of Chapter 13

	Symbols	Things	Actions	Thoughts
Research	**Graphic materials used in workshops (H, LPE), face-to-face surgeries (MV)**		**Interviewing (MV), Facilitation of workshops (LPE) and educational programmes (H) Face-to-face surgeries (MV)**	**Social need and product or service offered (H, LPE, MV)**
Engagement	**Brand elements: logo (all), letterheads (H), websites (all) Graphic support: wall charts (LPE), and printed graphics used in public events (all)**		**Facilitation of workshops (LPE) and educational programmes (H) Face-to-face surgeries (MV)**	**Branding (all) Trust Building (LPE, MV)**
Development	**Visual communications (M) Illustrations (M) Infographics (MV) Educational materials (M, H, LPE) User interfaces (M, H, MV)**	**Toolkits (H) Solar Thermal Collectors (LPE) Prototypes (M, H, LPE)**	**User experience (M, H, MV) Facilitation of workshops (LPE) and educational programmes (H)**	**Product (H, LPE) and services (M) systems.**
Co-Creation	**Infographics (MV) Educational materials (MV) User interfaces (MV)**		**The internal digital development process (M) Collaborative development: with partners (H) and communities (LPE) Resulting development: collaborative platforms (M, MV)**	**Collaborations (H, LPE, MV)**
Positioning	**Graphics to raise awareness: infographics (MV), wall charts (LPE), social media images (M, H, MV), and printed materials in events (all) Brand elements: logo (all), letterheads (H), websites (all)**		**Launch events (M, MV) Meetings (all)**	**Branding (all)**
Strategies	**User interface (MV)**	**Prototypes (M, H, LPE)**	**User Experience: usability (M, MV) Facilitation of workshops (LPE, H)**	**Double Diamond (M) Design thinking (H) Co-Design (LPE)**

M: Miaum; H: Haedus; LPE: La Polla Energética: MV: Municipio Verde

Table 30: Comparative table of Four Orders of Design and the six main issues of the social entrepreneurship process

5.4.1 First-Order: Symbols

The first-order refers to graphics and communications used by social entrepreneurs (see pages 176, 178, 179, 203, 231, 232, 259). These two-dimensional representations appeared both physical and digital. These elements were used to provide information about the organisation and their products and services, to raise awareness of the social issues they tackle and to educate beneficiaries about specific topics.

Brand elements such as logos, letterheads, emails and websites' graphics were outsourced to designers and used to communicate the values and identity of the organisations (i.e. Haedus, page 203). These elements supported the positioning of organisations in markets. Moreover, it allowed them to build trust among beneficiaries and clients.

Multiple graphic elements took part in the products and services offered. Interface design and illustrations (characters) increased the attractiveness of the digital services provided, such as mobile games and web-platforms (see pages 179, 203, 259). On the other hand, printed instructions, materials of the toolkits and educational programmes, and technical specifications of the solar thermal collector enhanced the products and services supplied.

Similarly, graphics in wall charts (see page 231), social media (see pages 203, 259) and presentations (see pages 178, 203, 231) were used to communicate the benefits and functionalities of the products and services offered. The latter means, in addition to infographics and visual supports used in public engagement initiatives, were also used to raise awareness of the social issues that they encountered. Most of these practices were recognised as a design practice and were conducted by designers.

This analysis aims to illustrate the effects of different elements *located* in the first-order. Paraphrasing Buchanan (2001, p. 9), these elements, as *formal causes,* are composed of different *final causes*. In other words, a wall-chart (formal cause) communicates the brand identity of the organisation, informs about the social issue the organisation is working on and demonstrates the benefits of the solution proposed by the entrepreneurs (final causes).

5.4.2 Second-Order: Things

These cases also used the order of the physical and material things in the creation of prototypes and products.

Prototypes were used to test their ideas with users or beneficiaries as well as communicational devices with the organisations. Rapid paper prototypes were utilised during the development of digital products to evaluate interactions and to communicate among different areas of the organisation (i.e. Miaum, page 177). Physical prototypes were used to evaluate the functionality of solar thermal collectors during workshops (see page 231). These prototypes allowed entrepreneurs to test their ideas fastly and economically effective, which enabled them to reduce their development time, not incurring in extra development cost. Also, the prototypes served as a communication and educational tool. La Polla Energética built prototypes of the solar thermal collectors in collaboration with communities. These activities allowed entrepreneurs to educate communities about renewable energies, particularly about solar energy. Moreover, they used the prototypes to teach them about the operation and functioning of these technologies.

On the other hand, the second-order was present in the creation of the products that these companies offered. For instance, Haedus developed a physical toolkit in partnership with Efecto Eductivo in a process led by the product designer of the partner organisation (see page 190). Rapid prototypes and thermal solar collectors are examples of the materialisation of expertise and resources into tangible *things* that improve the lives of people in need.

In this order, rapid prototypes were created by the social entrepreneurs as a part of their product development process, while the toolkit development was led by an external designer.

5.4.3 Third-order: Actions

The third-order is the place were interactions between human beings through products or services happen. In the case of these social entrepreneurs, the order of *action* was fundamental for building trust and develop solutions in collaboration with or by communities.

Building trust is critical for social entrepreneurship. These entrepreneurs designed multiple interactions that allowed them to get closer to communities. The design of these interactions occurred unconsciously or silently, in other words, not considered as a design activity. Through the process of inquiring in research activities, they could acquire a better understanding of the actual needs of communities and the resources available (see pages 231, 255). By engaging activities such as participation in fairs or running launch events, they could introduce their products and services to their stakeholders. They also conducted workshops, in which they could have conversations with locals. The participants of the three workshops gave them their views on the solutions offered as well as crucial information about their needs and resources (see page 218). The facilitation of these workshops is an excellent example of trust-building activities. Because in them, both entrepreneurs and communities could learn from each other and collaboratively build, in this case, solar thermal collectors. Thus, local communities had the opportunities to interact and get to know the entrepreneurs as well as to express their opinions on the solutions proposed.

A different example is the design of user experiences for web platforms and mobile games developed. In these digital products, the interactions of the game or platforms had to attract people to use them. For this purpose, the entrepreneurs defined indicators of usability (see page 244) and also developed these programmes taking into account the feedback collected from users during research stages (see page 255).

Furthermore, design also contributed to the collaboration between people. Design as a process was used internally and externally the development of solutions. Internally, design supported Miaum (see page 176) and Haedus with the development of the products and services among the teams (see page 205). Externally, design was used as a process of collaboration with partners or communities. In the latter, La Polla Energética silently utilised *a co-design* approach for the development of their training

workshops (see page 223). In these sessions, community members and entrepreneurs collaborated in the design of these workshops making available their capacities, information and resources to fabricate the solar thermal collectors. From a different angle, design also triggered external collaborations. For instance, the platform developed by Municipio Verde (see page 256) allowed citizens and municipalities to work together on environmental initiatives or policies.

Face-to-face activities such as facilitation, participation in fairs, or collaboration in development processes were conducted by the social entrepreneurs. At this level, social entrepreneurs use their experience to design the outcomes expected, for instance, the expertise of Haedus in the content creation, or the experience of La Polla Energética installing STC. On the other hand, interactions that do not require face-to-face interactions were conducted by designers. These type of interactions require a technical skill that these entrepreneurs did not have, such as the development of user and interface design.

5.4.4   Fourth-order: Thoughts

The last order of *thoughts* involves to the integration of symbols, things and actions. All the different pieces of design produced the insights or experiences that the entrepreneurs required for the correct functioning of their organisation. Frequently, the order of thoughts occurred *silently* as the sum of the different design initiatives conducted by the organisations. Therefore, the outcomes of these orders of design relate to the design drivers of 5.3.

Design for Research at the fourth-order are the initiatives undertaken for the collection of research insights. These insights allowed entrepreneurs to understand the social needs and resources available, as well as to prototype and test the solutions created to undertake a social need. These initiatives involved, for instance, wall charts, presentations, and facilitation activities conducted by La Polla Energética to generate dialogues with communities about renewable and solar energy (see page 218).

Design for Engagement at the fourth-order are the activities generated to build trust among stakeholders. These initiatives involved, for instance[3], wall charts, presentations, and facilitation activities conducted to demonstrate the experience and commitment of the team members of La Polla Energética with the communities (see page 218). Another example is the participation in public events such as fairs where Municipio Verde conducted face-to-face surgeries (see page 240).

Design for Development at the fourth-order are the activities conducted and materials used to design and deliver products or services that meet social needs. These initiatives involved, for instance, the generation of prototypes, illustrations and interactions of mobile games developed by Miaum (see page 161). Another example is the collection of graphics, objects and dynamics designed for the toolkit co-developed by Haedus and Efecto Educativo (see page 190).

Design as a Co-Creation platform involved the graphics, objects and interactions. This approach allowed entrepreneurs to generate collaboration with communities or partners as well as external collaborations — for instance, Co-Design workshops about the collaborative fabrication of STC (see page 218).

Design for Positioning at this order involves the graphics, things and activities in which conducted to position the organisation and the social issue that they are dealing within the market. These initiatives involve the development and positioning of the brand identity of the organisation as well as activities for raising awareness on the social issue. For instance, when Haedus recognised that they had already enough products to sell, they redeveloped their logo, and designed emails and letterheads to get in touch with school principals (see page 196). Another example is the launch events conducted by Miaum and Municipio Verde (see pages 167, 251). In these events, they utilised their brand identity and communicational strategy to introduce their products and campaign the social issue that they worked. In addition, these events also served as a political

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[3] The same example shown in the fourth-order of design for research was used to show the overlap between the different design initiatives conducted by the entrepreneurs.

platform for the attendees whose utilise these opportunities to demonstrate their interest in supporting social initiatives

Design for Strategies is an overarching level of thought which involve the reflection on the circumstances faced, the resources available, the initiative conducted and the engagement with stakeholders to define the directions of the organisation. Two organisation recognised the use of design at this level (Miaum and Haedus). Miaum pointed out that they have used design in their development process (see page 160), which is the core of their organisation. This process was systematised and transformed into an organisational platform that allowed the team to work collaboratively in the development of the games. Haedus utilised the concept of Design Thinking. The CEO recognised that design "gives them a way to undertake a plan or objective" (see page 184). La Polla Energética utilised silently Co-Design in the definition of their strategies (see page 223). As a result of the insights collected in the workshops conducted in communities, they realised that the service offered was not appropriate for their beneficiaries and changed their course of action to training workshops.

5.4.5 Using the four orders of design to understand Chilean social entrepreneurs' design practices

The use of the four orders of design offers a structured way to evaluate design in terms of graphics, things, interactions and thoughts. Nevertheless, it does not provide a straightforward way of capturing the particularities that affect the use of design in a Chilean context. Although the first three order offer a useful structure to identify definite elements of design (two and three dimensions and interactions), the fourth-order is the most challenging order to evaluate. According to Buchanan, the fourth-order is the design of "complex systems or environment for living, playing, and learning"(Buchanan, 1992, p. 9). He argues this order relates to the exploration of ways for integrating human beings into wider ecological and cultural environments by shaping or adapting them when possible. This claim follows a human-centred approach in which the designer, or who designs, is responsible for generating the environmental or cultural changes in communities.

Nevertheless, in the context of the study, communities are responsible for shaping their environment or culture according to their needs, resources and circumstances they encounter. In this fashion, the role of the entrepreneur (as who designs) is to generate solutions that satisfy the actual needs of people. In doing so, social entrepreneurs use a bottom-up approach in which people are not merely beneficiaries of the solutions offered but also partners in the development of them.

The inequalities in Chile have pushed people to develop their own solutions to the problems that they encounter. In this way, it is possible to see that communities in need work collaboratively to overcome their problems. This is common to see in informal settlements in which communities organise themselves to collectively demand solutions that affect all of them, for instance, access to electricity, water, sanitary sewer, roads or housing. These initiatives relate to the cohesiveness of communities to deal with adversities. When entrepreneurs arrive in communities, they need to consider the key situated elements. For instance, they need to understand the social dynamics of communities, the resources and capabilities available, the actual needs they have and the prioritisation of them. To do this, they need to establish a relationship of partnership with the residents in which they collaboratively create the solutions to the problems encountered, taking into consideration the aforementioned elements.

The outcomes of these collaborations result in products or services that follow the definition of frugal innovation. Frugal innovation is those creations that "meet desired objectives with a good-enough, economical means" (Soni & T. Krishnan, 2014, p. 31). In fact, communities that were actively involved in the development of solutions incorporated crucial factors to decision making processes. For instance, in the case of La Polla Energética, the community members influenced the redefinition of the original business idea to a more affordable solution that would allow the implementation of the technology proposed. This shift is largely due to the inclusion of the capabilities, resources and priorities of communities. Communities lacking resources distribute their resources and capabilities according to their pressing needs. In this case, the implementation of thermal solar collectors showed a benefit that they could not afford economically. Therefore they made available their capabilities and local resources to get training in the construction, installation and maintenance of the collectors rather than paying for the installation of them.

This case serves to exemplify that the model of Buchanan's four orders of design does not allow to describe in detail all the design activities conducted by the social entrepreneurs. Part of the design activities conducted by social entrepreneurs involves the incorporation of the environment and culture of the groups that they work with rather than designing these environments and systems. What is lacking in this model is the consideration of the contribution of communities in the design process. This is an example of the lack of cultural context in this model.

The four orders of design offer a structured and straightforward framework to understand design. Nevertheless, the simplification of this framework leaves behind cultural particularities that affect design processes, specifically when these processes are situated in non-western contexts. In this framework it is not possible to map how design practices are part of a larger system of practices that converge in the development of solutions that satisfy specific social needs.

5.5 Summary of Chapter 5

Chapter 5 discussed the findings of this research through the analysis of the data collected and presented in Chapter 4 Data Analysis. The findings of these sections were structured to answer the research questions of this investigation. Therefore, it provides a cross-case comparison to answer the research question number one - *What are the main issues that social entrepreneurs encounter in their processes?*. Six themes describe the main issues that social entrepreneurs encountered in their processes: research, community engagement, development, co-creation, positioning and strategies.

This chapter showed the design drivers of social entrepreneurs, which aimed to answer the research question number two - *How is design used by social entrepreneurs during the social entrepreneurship process?*. The use of design is described following the issues that social entrepreneurs encountered in their processes: design for research, design for community engagement, design for development, design as a co-creation platform, design for positioning and branding, and design for strategies.

To analyse the use of design by social entrepreneurs it was adopted the Buchanan's four order of design model. This chapter aimed to answer the research question number three - *What design practices are used by social entrepreneurs to undertake their issues?*. The structure of the analysis adopted Buchanan's four order of design model. Therefore, the design practices used by the entrepreneurs are described as symbols, things, actions and thoughts. This analysis shows that design practices that require technical expertise such as graphic, product, interaction and experience design, as well as illustrations, were mostly conducted by designers. On the other hand, facilitation activities, processes of engagement and strategies were conducted by social entrepreneurs (non-designers) silently. Nevertheless, this model lack on reflecting how the particularities of the context affect the design processes in these organisations. In fact, the context plays an important role in defining the initiatives undertaken and the reasons for conducting them. The context also offers situated practices and resources that are not considered in the four orders of design. For instance, in the case of La Polla Energetica, they incorporated local capacities in the redefinition of a new business model that satisfied the actual needs of the community they were serving.

The next chapter presents the conclusions of this thesis. First, it provides the answers to the research questions of this study. Second, it introduces the contribution to knowledge, research methodology and practice. Third, it presents the limitations of this study. Fourth, it suggests future research directions; and finally, it gives a final summary of this thesis.

Chapter 6   Conclusions

6.1   Introduction to Chapter 6

This chapter provides the general conclusions of this thesis. First, it provides the answers to the research questions of this study. Second, it shows the contribution to knowledge, methodology and practice of this study. Third, it provides the limitations of the research. Fourth, it outlines recommendations for future research. Finally it provides the final summary of this thesis.

Figure 114: Structure of Chapter 6

6.2   Answering the Research Questions

This chapter provides the answers to the three research questions of this study.

6.2.1 Research Question 1: What are the main issues that social entrepreneurs encounter in their processes?

The sub-chapter 5.2 provided a cross-case comparison of the case stories to identify the pressing issues that social entrepreneurs encounter in their processes. The cases were analysed using the SEDF introduced in 3.5, Data Analysis. Six themes were found in this analysis that represents the main issues that social entrepreneurs encountered in their processes: research, community engagement, development, co-creation, positioning and strategies. Table 31 shows the main issues that Social Entrepreneurs encounter in their processes

Table 31: Main issues that Social Entrepreneurs encounter in their processes

Issue	Description
Research	**Social entrepreneurs have to conduct research activities to define the social needs of communities.**
Community Engagement	**Social entrepreneurs conduct community engagement activities to gain access to communities and to build trust**
Development	**The development process is the transformation of an idea into a solution. Social entrepreneurs used different models of development (internal, outsourcing, or external with partners or communities)**
Co-Creation	**The collaborative creation allows entrepreneurs to bring capacities and resources to the organisation and work collaboratively inside the organisation. These cases used co-creation for the development of their solution with externals. Moreover, Municipio Verde offered a solution in which municipalities and citizens participate in the creation of environmental policies. In this case, the entrepreneurship turned into a co-creation platform.**
Positioning	**Social entrepreneurs have to position the social issues in which they work as well as their organisations and solutions in the market.**
Strategies	**Due to the variability of the early stages of social entrepreneurship, social entrepreneurs are constantly changing their strategies**

6.2.2 Research Question 2: How is design used by social entrepreneurs during the social entrepreneurship process?

The sub-chapter 5.3 provided the main design drivers found in themes described in 5.2. These drivers represented how social entrepreneurs used design in their processes to meet the themes described. Therefore, the design drivers are design for research, design for community engagement, design for development, design as a co-creation platform, design for positioning and branding, and design for strategies. In this way, it was answered the second research question about how social entrepreneurs used design to overcome the issues that they encountered in their processes. Table 32 shows the use of design through the social entrepreneurship process.

Table 32: The use of design through the social entrepreneurship process.

Use of design	Description
Design for Research	**Design was used for research in different ways. From a graphic perspective, design was used for the development of graphic materials that supported workshops, or photo frames and, educational materials. In terms of interactions, design was used in the interaction through interviews and facilitation educational programmes and workshops. Also, design represents the collection of insights that informed social entrepreneurs about the social needs and the products and services offered.**
Design for Community Engagement	**Design was used for the engagement process in different ways. From a graphic perspective, design was used for the development of brand elements such as logotype, letterheads and emails, wall charts, and printed graphics used in public events. Moreover, design was used for the facilitation of educational programmes, workshops and face-to-face surgeries. Also, design was part of the system of brand elements and communicational messages that define their brand identity as well as the initiatives conducted to build trust with communities.**
Design for Development	**Design was used for the development process in different ways. From a graphic perspective, design was used for the development of visual communications, illustrations, infographics, educational materials and user interfaces. Second, design was used in the for the design of toolkits, solar thermal collectors and prototypes. Third, design was used for the development of user experiences in platforms and games, facilitation of educational programmes and workshops. Fourth, design was used in the collection of the products and services created in these processes. Also, design comprises the overall system of elements that form their products and services.**
Design as a Co-Creation Platform	**Design as a co-creation platform occurred through educational materials, infographics and user interfaces; through facilitations and development processes in which people collaborated for the creation of products.**
Design for Positioning and Branding	**Design supported the companies positioning in terms of branding, and consequently, communications. Design was in graphics that allow entrepreneurs to raise awareness of the social issue that they are tackling and their products and services. Therefore, design was present in the creation of infographics, wall charts, social media images, and printed materials in events. Moreover, the collection of all these graphic imageries allowed them to build their brands connecting the social issues that they worked with and the products and service they offered. Moreover, design was used through the participation in events, business meetings and by hosting launch events. All these design contributions allowed these entrepreneurs to develop their brand identities.**
Design for Strategies	**Design for strategies appeared as a process in the case of Miaum, like design thinking in Haedus and Co-Design in La Polla Energética. In this way, design helped the entrepreneurs to test their strategies, explore different opportunities, prototype them and iterate them when necessary. Also, design supported organisations in the achievement of their strategies. Design contributed to Municipio Verde to reach their goals such as engagement, the usability of digital products and improvement of development processes.**

6.2.3 What design practices are used by social entrepreneurs to address their issues?

The sub-chapter 5.4 provided an analysis of the design practices used in the drivers described above. The structure of the analysis adopted Buchanan's four order of design model. Therefore, the design practices used by the entrepreneurs are described as symbols, things, actions and thoughts. In this way, it was shown the design practices that social entrepreneurs use in their processes to undertake their issues. Table 33 shows the four orders of design by social entrepreneurs.

Table 33: Four oders of design by social entrepreneurs.

Order	Description
First-order: Symbols	**The first-order refers to graphics and communications used by social entrepreneurs. These two-dimensional representations appeared both physical and digital. These elements were used to provide information about the organisation and their products and services, to raise awareness of the social issues they tackle and to educate beneficiaries about specific topics.**
Second-order: Things	**The second-order refers to tangible artefacts. Social entrepreneurs developed prototypes to test their ideas and products to solve the social issues identified. Tangible products such as toolkits or STC were also designed by social entrepreneurs.**
Third-order: Actions	**The third-order is the place were interactions between human beings through products or services happen. In the case of these social entrepreneurs, the order of *action* was fundamental for building trust and develop solutions in collaboration with or by communities.**
Fourth-order: Thoughts	**The last order of *thoughts* corresponds to the integration of symbols, things and actions. The totality of the different pieces of design produced the insights or experiences that the entrepreneurs required for the correct functioning of their organisation. Frequently, the order of thoughts occurred *silently* as the sum of the different design initiatives conducted by the organisations.**

Nevertheless, this categorisation does not allow to capture the particularities of the Chilean context that affect the use of design by social entrepreneurs. This analysis does not involve the adoption and use of situated practices and resources from communities as insights and drivers of the design process.

6.3 Contributions to Knowledge, Research Methodology and Practice

The author of this research study identified a gap in knowledge concerning the question of *how social entrepreneurs use design in the social entrepreneurship process.* There is a gap in the way that design research is conducted in terms of the contribution of design to social-related initiatives. Most of the studies analyse the impact of the utilisation of design for social innovation, namely focusing on the impact of a designer (or a team of designers) in organisations that undertake social initiatives. However, there are not evidence of interdisciplinary studies that analyse the use of design by non-designers social entrepreneurs considering a social entrepreneurship process of their initiatives.

The main contribution of this thesis is the development of a reflective and analytical framework that allows navigating the social entrepreneurship process from the specific to the strategic in a visual manner. The framework deconstructs the narratives of the experiences of social entrepreneurs into units of analysis called *moments.* These moments represent the pressing issues that social entrepreneurs encounter during their social entrepreneurship processes. In addition, this model allows the analysis of courses of actions taken by entrepreneurs. The courses of action are sequences of moments that reflect the decision-making processes throughout the social entrepreneurship process. By the deconstruction of the narratives in moments and courses of actions was possible to unveil the circumstances and reasons for using design.

The contribution of this framework is multidisciplinary because it can be used and adapted for the study of entrepreneurship and social entrepreneurship, design and, in practice, by business incubators.

6.3.1 Contribution to Entrepreneurship and Social Entrepreneurship Studies

This research offers two main contributions to the social entrepreneurship theory. First, it offers an analytical approach to understand social entrepreneurship from practice, and also it reflects on the importance of a designerly behaviour for early stages social entrepreneurs.

Early-stages social entrepreneurs encounter multiple challenges that they have to address in a dynamic and reactive way. These challenges relate to the different circumstances that they encounter in their processes which are situated their ecosystems. The analysis of these processes requires more than a descriptive definition of stages and actors as the Social Entrepreneurship frameworks and ecosystems revisited in the literature demonstrate. The reactiveness of social entrepreneurs is crucial in early-stages entrepreneurship. Therefore, it is not suggested to seek the understanding of social entrepreneurial practices by focusing merely on psychological or non-psychological factors, the exploitation of opportunities or the pro-social motivations. In practice, social entrepreneurs navigate complex and dynamic scenarios in which they have to perform effectively with the resources that they have available. The model of analysis proposed in this research allows this understanding. By the analysis of social entrepreneurship practices into moments, it is possible to evaluate the different elements that influence the decisions taken by entrepreneurs during their processes. This focus on the moments, rather than processes, permits to comprehend the circumstances that social entrepreneurs encounter and the ways that they respond to them.

In this analysis, it was shown that designerly approaches contribute to social entrepreneurship practices. Design, along with to other disciplines, allows entrepreneurs to deal with the issues that they encounter in their processes. Due to the lack of resources in the initial stages, it is unlikely that the use of design approaches are lead by designers. Therefore, design for social entrepreneurship is not only the activities that designers do for social entrepreneurs but a mindset related to the capabilities of social entrepreneurs to react to different circumstances. Divergent and convergent thinking, as well as iterative approaches, are well covered in design studies. These

approaches can contribute to social entrepreneurial theory to describe the type of behaviour that social entrepreneurs have to acquire based on the findings of this study.

In social entrepreneurship, as it is in design, the focus of both practices is the construction of creative bridges that connect solutions with ideas (Cross, 1997). The lack of resources of social entrepreneurs requires creativity to cope with the challenges that they encounter. These creative bridges relate with the assemblage of resources, capabilities and opportunities from the social entrepreneurship ecosystem to provide solutions to social problems and sustain their organisations.

Design also provides an experimental attribute that allows entrepreneurs to create and test ideas actively. The experimental attribute of design which relates to the use of visual languages and prototyping enable entrepreneurs to react to the different circumstances they face timely. Also, collaborative and human-centred approaches of design allow social entrepreneurs to create value propositions that match the actual expectations of every stakeholder.

6.3.2 Contribution to Design Theory

The main contribution of this research to the design theory is to reflect what design does for social entrepreneurship, rather than analysing design for organisations or for social innovation independently. The analysis of the practices of non-designers social entrepreneurs allows the understanding of the contribution of design for social entrepreneurship. As most of the research studies about design for social innovation focus on the impact of designers in social innovation initiatives, this research offers a novel approach in which those who use design are non-designers. The focus on non-designers aims to provide a reflective analysis of the actual uses of design by social entrepreneurs.

The Social Entrepreneurship and Design Framework used in this study analysed the use of design in given circumstances (moments) of the process. In each moment, design was analysed in three levels: specific, process, and strategy. (1) The specific level includes the use of design for a given purpose (for instance a logo, letterhead or prototypes). These activities are conducted by designers and social entrepreneurs and are commonly considered as design practices. (2) The process level refers to a sequence

or group of design initiatives for a determined purpose (for instance development processes, branding or community engagement). At the process level, the activities are conducted mostly by social entrepreneurs. (3) The strategic level comprises the activities which impact affects the business strategy of the organisation.

Six design drivers (described in detail in page 275) in social entrepreneurship were identified: design for research, design for community engagement, design for development, design as a co-creation platform, design for positioning and branding, and design for strategies. It is important to notice that these themes were not described as such in practices but rather represent the observations of the researcher.

Social entrepreneurs are in the centre or the social entrepreneurship ecosystem, therefore, they have to deal with the expectations of multiple stakeholders. In other words, social entrepreneurs have to understand and work with different agendas. They conduct initiatives in their organisations in a semi-structured fashion following the advice and requirements of mentors, beneficiaries or investors. For instance, social entrepreneurs have to demonstrate the fulfilment of their plans to the business incubator. Also, they have to demonstrate the generation of social impact to funders and to the general public. In the meantime, they have to establish relationships and collaborations with communities. In practice, social entrepreneurs react towards different circumstances and requirements they face.

Therefore, the use of design also follows this logic. In other words, design is used when it is needed consciously or unconsciously by social entrepreneurs. Outcomes of design also serve for multiple purposes; for instance, an illustration used in the development of a game can be used as a part of the corporate identity of an organisation. In this example, the illustration as a specific use of design is used for development and positioning purposes. Design does not perform as a stand-alone practice. Design appears silently in most of the moments that the entrepreneurs encounter. Nevertheless, social entrepreneurs used design almost naturally and intuitively to overcome the multiple circumstances they encountered. The role of the researcher of this project was to interpret the design practices among the overall practices that entrepreneurs perform in their processes.

Thus, the iterative character of design along with its convergent and divergent approaches allow entrepreneurs to respond to their challenges actively. These are important characteristics because entrepreneurs are usually reactive to the situations they encounter. During the early-stages, entrepreneurs face challenges such as building their presence in the ecosystem, acquiring entrepreneurial knowledge, distributing their limited resources efficiently and developing products and services that meet social needs.

Since the objectives of social entrepreneurs are dual (organisational and social), the value of design for social entrepreneurship is in the intersection of organisational and social purposes. In other words, design support dual goals such as branding the organisation and its products and services as well as the social problem that they aim to tackle. Both areas are relevant as the organisation not only need to position their goods but also to campaign the social issues they stand for.

The data shows that non-designer social entrepreneurs use design in their organisations not necessarily conducted by a designer. The use of design occurs in a systematic way in which the application of design responds to multiple purposes.

Clearly, the contributions of design for social entrepreneurship are multiple. Nevertheless, it is worth to notice that design models used in this research could not capture the situated particularities of the context. The models and approaches utilised in this thesis do not capture the cultural aspects of the Chilean context. These aspects influence the ways that collaborative design processes take place. Situated issues, practices and resources affect the performances of social entrepreneurs in multiple ways, therefore the use of design. Human-Centred Design, Design Thinking, and the Four Orders of Design lack understanding and adoption of situated factors that determine the practices of who design (not necessarily a designer) with the local groups for whom or with whom they design. For instance, communities such as informal settlements usually are self-organised and possess a clear understanding of their issues, resources, capabilities and needs. They make use of the available resources and capabilities efficiently in a self-organised manner to cope with the challenges they face. Before working with communities, social entrepreneurs have to find channels to gain access and to build trust with them. Later, they have to understand their situated

practices, resources, capabilities and need to offer a good that satisfies them. Once the entrepreneurs have a say, they have to adopt the practices of the local communities to develop an idea to cope with an identified issue. In this stage, social entrepreneurs are embedded in a bricolage of practices informed by their organisational capacities as well as the situated conditions of the local communities.

Design models are based on relevant and recurrent practices of designers from the Global North. When thinking about design in the Global South, it is important to consider that there will be practices that are omitted. Even more, modelling design processes in the Global South by non-designers (as the social entrepreneurs of this research) require new considerations that include cultural factors and situated practices from this new context. In this research, the process of design should consider how collaborative practices and the use of resources are utilised by social entrepreneurs at the moment of designing, from communications to social impact. This consideration is due that in Chile, local communities are accustomed to taking advantage of the limited resources that they have in place. This frugal behaviour is typical in communities where resources are scarce. Therefore, in this context, design for social entrepreneurship should also consider how the *type of frugality* of the place is as a variable for design. The type of frugality might involve the understanding of the dynamics of the communities, the embeddedness of design practices in local practices and vice versa, the measured use of resources and internal capabilities, for instance. All these perspectives are not covered by design models such as the Four Orders of Design which was originally developed in a context where design has the power to influence at these four levels.

6.3.3 Methodological Contribution

The methodological contribution of this model relies on the structuration narratives in regard to theory available in the context of the study. The Social Entrepreneurship and Design Framework offers a non-linear and temporal way to empirically analyse social entrepreneurship processes. This framework can be used to analyse the decision-making process of entrepreneurs and social entrepreneurs, considering the different circumstances and variables that affect their decisions. This method of analysis is particularly relevant for scholars that study effectuation theory (Sarasvathy, 2001, 2004) in which entrepreneurs perform as a process of bricolage (Baker & Nelson, 2005) of resources and methods to achieve their goals (Zahra et al., 2009). Those studies argue that the process of creating and organising opportunities for markets in entrepreneurship is more complex than is established organisations (Nielsen & Christensen, 2014).

Therefore, this framework enables the analysis of the narratives of the different circumstances and resources that entrepreneurs utilise during their decision-making processes. Thus, it is possible to determine the motives for assembling resources and opportunities to create a social value proposition (Austin et al., 2006) that generate positive social impact.

Narrative research refers to a research strategy in which stories are used to describe human experiences (Tracy, 2013, p. 29), involving the analysis of those narratives in temporal sequences. Narrative analysis focuses on the attention that people give to certain narratives which describe particular circumstances lived by the narrators (Polkinghorne, 1995, p. 11). The narrative writing style is informal, with verbatim quotations, illustrations and metaphors (Zeller, 1995, p. 78) that reveal the narrator's viewpoint (Gray, 2014, p. 168) in frames also known as plots (Polkinghorne, 1995, p. 7).

This framework uses the moments as the *plots* of the narrative research which describe the circumstances encountered by the entrepreneurs in their processes. The contribution relies upon the organisation of these *plots* or *moments.* This framework allows researchers to organise the narratives in a theoretical structure in which the moments are placed according to the stage of a process (in this case the social entrepreneurship process) and the time when the moment happens (timeline). In this way, the framework

illustrates the trajectory between a given framework but maintaining the natural sequences in which the events happen (courses of actions). In addition, the framework offers another dimension of analysis in which practices, such as design, can be studied.

6.3.4 Contribution to practice

This study contributes to the practice in two ways. First, it suggests key issues that social entrepreneurs encounter while starting their businesses and various ways in which design support these issues in order to achieve their organisational goals. These insights can be used to define the type of support that social entrepreneurs need throughout their incubation programmes. Second, the Social Entrepreneurship and Design Framework can be used by business incubators as an analytical and reflective tool support the evaluation of social entrepreneurs during the incubation process. The framework offers a visual way to evaluate the performance of the entrepreneurs.

6.4   Limitations of the Research Study

This research faced multiple limitations that affected the methodology used and the results of this investigation.

6.4.1 Change on the dates of the incubation programme

The researcher was invited to participate in the incubation programme from November 2016 to January 2017 in a business incubator in Chile. However, the funding agency of the program changed the starting day and the extension of the program. The program started in January and finished in June 2017. The researcher was informed of this change when he arrived at the business incubator in October 2016. Due to financial limitations and personal obligations, the researcher could not participate in the entire program, having to return to the United Kingdom in February 2017.

The change in the dates of the incubation program affected the research methodology used. Initially, the researcher planned to use an action research approach that would allow him to extend the intervention stage to the entire incubation process (See Apendix A.6). In this way, the researcher planned to analyse how a design training conducted by him would affect the awareness and use of design management by the participants.

Consequently, the research topic changed from the contributions of design management to social entrepreneurship to the use of design by social entrepreneurs. This change was due to the results of the diagnosis conducted by the researcher during the intervention stage. To evaluate the level of absorption of design management by social entrepreneurs, the researcher needed to conduct training sessions with the entrepreneurs. The researcher tried to conduct these training using a social media platform. However, the participants did not engage with this initiative.

Therefore, the research strategy shifted from action research to narrative analysis. In action research, the researcher played an active role in intervening the social entrepreneurship processes of the participants. In turn, in narrative analysis, the researcher played a passive role in capturing the stories provided by social entrepreneurs.

6.4.2 Limited sample

This research was based on the experiences of four Chilean Social Entrepreneurs coursing an incubation program in a Chilean Business incubator. The results of this study cannot be generalisable as the context of the study was limited to contextual variables such as the incubation program, resources and networks offered by the business incubator, the experience and cultural background of the entrepreneurs. Therefore to further validate the results of this study and the Social Entrepreneurship and Design Framework, a bigger sample of social entrepreneurs would be necessary.

6.4.3 Limited access to participants

The post-intervention stage (see page 120) was conducted through online semi-structured interviews. The main problem of this method was to keep the participants engaged with the investigation. Arranging the online interviews was difficult due to the different agendas between participants and the researcher and time difference between Chile and the United Kingdom. Due to this limitation, one entrepreneur did not participate in all interviews. The CEO of Municipio Verde did not participate of the last interview; therefore, unobtrusive methods (see page 131) such as the analysis of the organisation's social media and its website was used to collect the data of the last moment of that case story (see page 251). In short, five semi-structured interviews were arranged during 2017, five with La Polla Energética, four with Haedus and Miaum, and three with Municipio Verde.

In addition, to maintain communication with entrepreneurs, the researcher created a closed group on Facebook, aiming to provide materials about design and collect insights into the entrepreneurs' experiences. However, the entrepreneurs did not participate actively in this initiative.

6.4.4   Limited timeframe

The timeframe of the research study was limited to the incubation programme. This is a rather short period to evaluate the behaviours of social entrepreneurs in the early stages. During the data collection process, the entrepreneurs were still exploring and refining their first developments. Therefore, the data did not showed established process or routines. Due to this limitation it is not possible to generalise the results of this study. It is not possible to conclude whether the use of design by social entrepreneurs identified in this study were adopted and established practices, or were conducted to handle specific circumstances of the early stages.

6.4.5 Conducting the research in Chile

One of the main limitations of this project for the researcher was to conduct the research in his home country from a UK University. In fact, the researcher had to play two roles as an insider and as an outsider. As an insider, the researcher had to embed himself in the Chilean social incubator as a mentor of the programme. The function of the incubation is to support social entrepeneurs to create goods that generate social impact. This objective is different than understanding the social entrepreneurship process and the ways they use design. This objective was relevant for his second role as an outsider. As an outsider, the researcher had to do research. Understanding the phenomenon he was experiencing from an academic perspective. The dialogue between both roles was challenege because it is difficult to clearly determine the role that prevailed when reflecting on his actions. For instance, as a mentor the researcher was involved in coversations with the business incubator that were beyond of the research project. During these conversarions, the researcher was expecting that his involvement would benefit the collection of relevant data for the project. Nevertheless, in practice, the reason for his involvement was merely as a way to contribute to the incubator's goals, which was not related to this investigation. On the other hand, his role as an outsider could biased the ways that design was studied. In order to understand how social entrepreneurs used design from an academic perspective, the researcher adopted models and frameworks developed in the Global North. The adoption of westerns models could

have skewed the understanding of the actual ways that design occurred in this context. In other words, the use of models and frameworks from one context does not consider the particularities of another one, making it impossible to capture the actual practices that affect the use of design.

The multiple roles that the researcher had to play as an insider and as an outsider during this research

6.5 Future Research Directions

The future research directions suggested are based on the results and limitations of this research study:

6.5.1 Design adoption through incubation programmes

This research study demonstrates numerous ways in which four Chilean Social Entrepreneurship used design in their practices. Design supports different initiatives that social entrepreneurs undertake as an embedded practice within their processes. Therefore, business incubators can support the absorption of these practices by social entrepreneurs.

Social entrepreneurs often do not have enough resources (Austin et al., 2006) which means that there is an immediate need to take as much advantage as possible of any resource they have (Lettice & Parekh, 2010). As a consequence, it is important to notice that the adoption of design could be hardly done by hiring experienced designers or consultancies, but increasing the awareness of design by non-designers social entrepreneurs. Early adoption of design could contribute to reducing costs and times of future the implementations of design projects, commonly considered expensive (Brazier, 2004).

A research study of the adoption of design by social entrepreneurs in business incubation programmes could shed light to research questions such as: *Which enablers or tools increase the awareness of design by social entrepreneurs? How can design principles support the purposes of business incubation programmes?* A sample of the study is different business incubators that support social entrepreneurs. The study will include the comparative analysis of the business incubation practices among the organisations and the ways that design contributes to those practices to reduce the failure in early stages social entrepreneurs.

6.5.2 Study of design drivers identified in detail

This research study was ambitious in scoping the design principles and practices as drivers for social entrepreneurs to achieve their organisational goals. However, the analysis of the drivers lacks depth. In-depth further studies on the implications of design for research, development, community engagement, positioning and strategies, and the use of design as a co-creation platform in social entrepreneurship contexts are suggested. These studies will seek to answer questions such as *How [design driver] is used by social entrepreneurs? What practices of [design driver] support social entrepreneurship?* A sample of the study is different social entrepreneurs participating in business incubation programmes. Thus, business incubation programmes will serve as a general context in which social entrepreneurs will have access to similar resources, network and knowledge provided by the business incubator.

6.5.3 The influence of design in the decision-making process of social entrepreneurs

Social entrepreneurs in the early stages have limited resources and experience. Therefore, they have to combine the resources and methods in the most effective way possible to achieve their organisational goals. In turn, the decision-making process in social entrepreneurship is critical. This research has shown how design is used in social entrepreneurship processes but it does not investigate specifically in the decision-making processes of social entrepreneurs.

Considering the sequence of moments as the courses of actions that social entrepreneurs undertake in order to achieve their goals, further research would be the study of how design affects the decision-making process of social entrepreneurs. Researchers are recommended to use the SEDF proposed in this research to identify courses of actions in social entrepreneurship and reflect on how design has affected these processes.

6.6 Final Summary

This PhD thesis studied how four Chilean Social Entrepreneurships whose CEOs were not designers utilised design throughout an incubation programme. This thesis is composed of four sections: a literature review of social issues, entrepreneurship, social entrepreneurship and design; (2) the research methodology used to collect and analyse the data; (3) the analysis of the data which contains the context of the study and four case stories of the four Chilean social entrepreneurship participant of this study; (4) conclusions of the data analysis that describe the pressing issues that these social entrepreneurs encountered and the use of design to meet these issues; and (6) the conclusions of thesis which contains the contribution to knowledge, methodology and practice and the limitations of the research.

In essence, the literature review provided key concepts regarding social issues, entrepreneurship, social entrepreneurship and design. Regarding social issues, it demonstrated the complexity of working in social context due to the multiple variables that affect social structures. In terms of entrepreneurship and social entrepreneurship, the literature described issues such as the characteristics and differences between social and traditional entrepreneurs, the personal motivations of social entrepreneurs, the social entrepreneurship process. Moreover, in term of design, the literature provided multiple definitions of design as well as examples of design in organisational and social innovation contexts.

The research methodology section described the approaches undertook to conduct this research and the methodology selected. This research study adopted narrative research as a strategy of inquiry, in which stories are used to describe *human experiences* (Tracy, 2013, p. 29). Semi-structured interviews with staff members of a business organisation called Socialab and four social entrepreneurs were used to collect the data that formulate the narratives of this study.

The data collected from the members of the staff showed the context of the study, the characteristic of social entrepreneurs that participate in the business incubator and the description of the incubation programme in which the four cases of this investigation participated. Next, case stories were provided, which described the experiences of four

social entrepreneurs that worked on environmental issues and educations. The analysis of the case stories used the Social Entrepreneurship and Design Framework (SEDF), which analyses specifically the pressing issues that social entrepreneurs encountered in their processes named as *moments.*

The findings of this research study suggest that the entrepreneurs face six main issues: research, community engagement, development, co-creation, positioning and strategies. Consequently, design practices have been found in initiatives aiming to meet these issues. The use of design by social entrepreneurs for these issues occurs at different levels. Social entrepreneurs use design for *specific* purposes, such as the development of a logo, graphic materials for a workshop or rapid prototypes. These design initiatives are normally conducted by designers as most of them require some technical expertise such as graphic design. Social entrepreneurs also use design as *processes* which are multiples initiatives to achieve an organisational goal. For instance, social entrepreneurs participate in events to engage with communities. For this purpose, they develop communicational messages and utilise graphic materials in a process that allow them to get closer to their beneficiaries to collect insight and build trust. Finally, social entrepreneurs use design at the strategic level to redefine their business strategies. For instance, using co-design in a workshop conducted with community members, one entrepreneurship radically changed their business model.

Although this thesis aims to demonstrate the uses of design by social entrepreneurs, it is important to consider that those social entrepreneurs normally react to the different circumstances that they encounter. In these reactions, they combine the resources and capacities available to respond to these circumstances. Therefore, the findings of this investigation are not generalisable to other contexts where resources, experiences, and communities are different. Nevertheless, the SEDF provides a structure to analyse the experiences of social entrepreneurs in a given period of time and reflect on the use of design from a strategic, process, or specific perspective. This model and the results of this thesis might be of interest of design and entrepreneurship scholars as well as for business incubators and social entrepreneurs.

This thesis about design by social entrepreneurs offers evidence about what design does for social entrepreneurship in practice. This thesis elicits that the value of design for

social entrepreneurship relies on design attributes that allow social entrepreneurs to react to the multiple circumstances they encounter in their processes to generate social impact and value for their organisations. Furthermore, design practices in social entrepreneurship are situated and located according to the conditions and resources of the social entrepreneurship ecosystem, therefore the adoption of design practices also should involve the adoption of local practices of their contexts. Therefore, design for social entrepreneurship should be considered as a part of a transdisciplinary and situated practice to generate not only social value but also to sustain social entrepreneurship initiatives.

Chapter 7   References

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Chapter 8　Appendices

8.1   A.1 Worksheet - Miaum (Spanish)

Company type	MIAUM
Members	**4 al principio**
Members' background	profesora pre escolar, estudiante sicologia, diseñador grafico, 3 informaticos
Qué es diseño?	un dibujo o ilustracion que se explica por si solo
Servicio	x
Disciplina	x
Proceso	
Creatividad	x
Arte	x
Cuál es el valor que el diseño entrega?	contenido, programación y diseño, pero sin diseño no funciona. Es indispensable
Mayores ventas	x
Mayor retención de clientes	x
Mayor captación de clientes	x
Ciclos de productos más rápidos	x
Mayor entendimiento de las necesidades de los usuarios	x
Ayuda a restructurar problemas complejos	x
Ayuda a transformar requerimientos de clientes en soluciones tangibles	x
Qué importancia le da al diseño en su organización? (de 1 a 5)	5
Existe relación entre el diseño con su misión y visión empresarial?	si, en que la mision es entregar material didatico que tiene que ser bien diseñado
Tienen diseñadores en su equipo de trabajo	1
Quién cumple el rol del diseñador?	diseña e ilustra, botones, interfaz de usuario
Tienen un presupuesto asociado a diseño?	si
Cómo se compone ese presupuesto	
Contrataciones	x
Sub-contrataciones	
Materiales y/o herramientas	
Capacitaciones	
Otros	
Ha ocupado o pretende ocupar diseño en su organización	si
En qué ha o pretende utilizar el diseño	usado
Diseño de Interacción	x
Experiencia de usuario	x
Investigación de clientes	x
Definición de stakeholders	
Definición de recursos	
Desarrollo de marca	x
Diseño de producto	x
Diseño de servicio	
Estrategias	x
Prototipar	x
comunicación	x
design thinking	

8.2 A.2 Worksheet - Diagnosis La Polla Energética (Spanish)

Company type	Haedus
Members	**3**
Members' background	Sicología infanto juvenil (Magister sicología clinica), Ing. Química (educadora, de ingles), ingeniero comercial magister en marketing
Qué es diseño?	Antes del emprendimiento era diseño grafico o diseño de vestuario, luego de empezar a emprender encontró diseño industrial y su relación con la creatividad, además amplió la perspectiva con design thinking. Diseño es design thinking
Servicio	
Disciplina	
Proceso	x
Creatividad	x
Arte	x
Cuál es el valor que el diseño entrega?	Valor tiene mucho con la estética y la estructura. Te da una estructura de proceso, el diseño como proceso establece un orden a la forma de llevar a cabo un plan u objetivo
Mayores ventas	
Mayor retención de clientes	
Mayor captación de clientes	
Ciclos de productos más rápidos	x
Mayor entendimiento de las necesidades de los usuarios	
Ayuda a restructurar problemas complejos	x
Ayuda a transformar requerimientos de clientes en soluciones tangibles	x
Qué importancia le da al diseño en su organización? (de 1 a 5)	4
Existe relación entre el diseño con su misión y visión empresarial?	si, mucha relación porque lo que promueven en los niños es desarrollar una mentalidad creativa que les permita resolver desafios mediante procesos de diseño
Tienen diseñadores en su equipo de trabajo	no
Quién cumple el rol del diseñador?	en cinco años más tendría a un diseñador gráfico
Tienen un presupuesto asociado a diseño?	no pecuniariamente si, porque parte de los recursos humanos se dedican a diseñar productos
Cómo se compone ese presupuesto	
Contrataciones	personal de planta
Sub-contrataciones	
Materiales y/o herramientas	
Capacitaciones	
Otros	
Ha ocupado o pretende ocupar diseño en su organización	han ocupado design thinking, mucha lluvia de ideas, prototipo. Les ha servido el DT, han replanteado el proyecto desde incubadora de ideas al proyecto actual, gracias a la investigación y co-creación. DT como mejora continua, ideamos, probamos ejecutamos y luego sacamos info que nos permite mejorar el pdcto serv.
En qué ha o pretende utilizar el diseño	pasado
Diseño de Interacción	x
Experiencia de usuario	x
Investigación de clientes	x
Definición de stakeholders	
Definición de recursos	
Desarrollo de marca	x
Diseño de producto	x
Diseño de servicio	x
Estrategias	
Prototipar	x
comunicación	
design thinking	x

8.3 A.3 Worksheet – Diagnosis La Polla Energética (Spanish)

Company type	La Polla Energética
Qué es diseño?	Acto creativo más de diseño grafico o objeto, además el design thinking proceso de creacion... Como proceso de conceptualizacion de algo hasta algo construido (Diseño industrial) super util para saber como se utiliza un objeto
Servicio	
Disciplina	
Proceso	
Creatividad	
Arte	
Cuál es el valor que el diseño entrega?	
Mayores ventas	
Mayor retención de clientes	
Mayor captación de clientes	
Ciclos de productos más rápidos	
Mayor entendimiento de las necesidades de los usuarios	x
Ayuda a restructurar problemas complejos	x
Ayuda a transformar requerimientos de clientes en soluciones tangibles	x
Qué importancia le da al diseño en su organización? (de 1 a 5)	4
Existe relación entre el diseño con su misión y visión empresarial?	no
Tienen diseñadores en su equipo de trabajo	no
Quién cumple el rol del diseñador?	en la cooperativa hay un grupo de diseñadores
Tienen un presupuesto asociado a diseño?	no, pero lo deberían agregar
Cómo se compone ese presupuesto	
Contrataciones	
Sub-contrataciones	
Materiales y/o herramientas	
Capacitaciones	
Otros	servicio externo (entendimiento necesidades de usuarios, web y coporativo)
Ha ocupado o pretende ocupar diseño en su organización	no han ocupado
En qué ha o pretende utilizar el diseño	
Diseño de Interacción	
Experiencia de usuario	x
Investigación de clientes	x
Definición de stakeholders	
Definición de recursos	
Desarrollo de marca	
Diseño de producto	
Diseño de servicio	
Estrategias	
Prototipar	x
Design Thinking	x
Comunicación	
Problema	La barrera económica y un beneficio ecológico del problema energético. La mayoría de los chilenos no tienen acceso a esa tecnología. El ahorro sería 50-70% del gas al año. No es eléctrica porque los paneles fotovoltáicos son más caros
Solución	
Modelo de negocios	
Equipo	
	4 proyectos andando con 4 comunidades. Han hablado con varias comunidades y con una es la cual más se avanza
	Se plantean replantear el objetivo de las 4 comunidades por menos y un MVP mejor hecho
	Cami plantea revisar otros modelos más baratos por ejemplo iluminar plazas, la idea es evaluar la capacidad de organización de las comunidades
	Pilares MVP: Comprobar capacidad de pago, compromiso de pago e interés
	Dudas, si es que como jóvenes van a ser capaces de hacer la instalación bien Han hablado sólo con vecinos
	Los vecinos creen que sería bueno integrar a las municipalidades por el co-fiananciamiento
	Analizan además el modelo de leasing. Cami les pregunta si de las empresas que están utilizando este modelo (Simplicity) han tenido problemas de pago
	Indicadores o metas claras: 200K para familias de 4 personas
	Tienen una alianza con la persona que ha instalado estas tecnologías por más de 7 años
	Imagen corporativa y red sociales por definir
	Socios y colaboradores: la persona que lleva 7 años es parte de otra corporativa con la que trabajan desde principios del 2016. Pertenecen a la corporativa Trazor
	Metas: identificar 10 grupos de 20 familias y que 4 de ellas firmen un convenio
	La estructura de costo va a cambiar. Sueldos aumentan. El estudio sociológico probablemente cambie. Página web en evaluación. Los canales comunicacionales se deben evaluar. Definir stakeholders y canales comunicacionales según stakeholders
	La muni de la pintana es la muni más sustentable de Chile (microhuetros, faros, vertederos)
	Analizar cómo y cuanto le interesa a las municipalidades este proyecto
	Cami plantea hablar con alguna municipalidad con planes con migrantes (ej. Recoleta), los que no tienen acceso a gas y algunos ni siquiera a agua
	Analizar plan de formalización de cités
	Ampliar el concepto de polla vecinal, a municipios, colegios, etc.

8.4 A.4 Worksheet – Diagnosis Municipio Verde (Spanish)

Company type	Municipio Verde
Members	
Members' background	
Qué es diseño?	trabajo en los estético, lo bello, cosas corporales, cotidianas y no y lo inmaterial en lo virtual, asociación de criterioes esteticos que por su naturaleza no lo tienen
Servicio	
Disciplina	
Proceso	
Creatividad	x
Arte	
Cuál es el valor que el diseño entrega?	
Mayores ventas	
Mayor retención de clientes	
Mayor captación de clientes	x
Ciclos de productos más rápidos	
Mayor entendimiento de las necesidades de los usuarios	
Ayuda a restructurar problemas complejos	
Ayuda a transformar requerimientos de clientes en soluciones tangibles	x
Qué importancia le da al diseño en su organización? (de 1 a 5)	4
Existe relación entre el diseño con su misión y visión empresarial?	si
Tienen diseñadores en su equipo de trabajo	no
Quién cumple el rol del diseñador?	externo
Tienen un presupuesto asociado a diseño?	si
Cómo se compone ese presupuesto	
Contrataciones	
Sub-contrataciones	x
Materiales y/o herramientas	
Capacitaciones	
Otros	
Ha ocupado o pretende ocupar diseño en su organización	si
En qué ha o pretende utilizar el diseño	
Diseño de Interacción	
Experiencia de usuario	x
Investigación de clientes	x
Definición de stakeholders	
Definición de recursos	
Desarrollo de marca	x
Diseño de producto	
Diseño de servicio	x
Estrategias	
Prototipar	x
comunicación	x
design thinking	
Problema	Deficiente relacion entre municipios y ciudadanos respecto a temas ambientales
	88% no confía en los municipios
	Actividad más grande es el desarrollo de la plataforma
	prototipo comienza con 11 municipalidades (las más grandes de stgo) a su vez mantener el contacto con otras que se podrían sumar a futuro
	En terreno la muni de Huechuraba y la pintana han presentado la idea y comentado la adjudicación de fondos y el desarrollo de prototipo
	Feedback de municipalidades considerado
	planificación en 4 meses la plataforma debería estar lista
	por ahora están diseñando las pantallas de la página
	trabajo con ciudadano inteligente
	2 meses de captación de usuarios
	a los 4 meses se subiría la plataforma con los datos ya cargados
	se han juntado con una empresa (CAS) desarrolla sitios webs para municipales
	en el período de co creación se jutaron con personas en las calles
	los insigths más conocimiento de la plataforma y fácil de usar
	hay un logo
	hay una periodista en el equipo
	tienen que desarrollar plan comunicacional
	ONG FIMA (abogados que asesora comunidades)
	recursos claves
	por reforzar el conocimiento técnico
	en temas de rrhh están trabajando
	existe división de roles

8.5 A.5 Answers of Online Questionnaire (Spanish)

Organización	Con tus propias palabras ¿Qué es el diseño?	¿Con cual de las siguientes opciones definirías diseño?	¿Cuál es el valor que tiene el diseño?	Comentarios (si quieres poner algo más con respecto al diseño en general, hazlo acá)
Haedus		Disciplina (ejemplo, diseño de servicios, gráfico, indutrial, etc), Proceso, Creatividad	Mayores ventas, Mayor captación de clientes, Ciclos de productos más rápidos, Mayor entendimiento de las necesidades de los usuarios, Ayuda a restructurar problemas complejos, Ayuda a transformar requerimientos de clientes en soluciones tangibles	
Municipio Verde	Proceso que permite solucionar problemas	Proceso	Mayores ventas, Mayor retención de clientes, Mayor captación de clientes, Ciclos de productos más rápidos, Mayor entendimiento de las necesidades de los usuarios, Ayuda a restructurar problemas complejos, Ayuda a transformar requerimientos de clientes en soluciones tangibles	
MIAUM	Una forma de trabajar que nos ayuda a tomar mejores y más informadas desiciones respecto a alguna problemática	Disciplina (ejemplo, diseño de servicios, gráfico, indutrial, etc), Arte, Industria, Proceso, Creatividad, Experiencia (por HCI)	Mayores ventas, Mayor retención de clientes, Mayor captación de clientes, Ciclos de productos más rápidos, Mayor entendimiento de las necesidades de los usuarios, Ayuda a restructurar problemas complejos, Ayuda a transformar requerimientos de clientes en soluciones tangibles	
La Polla Energética	Herramientas y metodologías que permiten generar algo nuevo.	Disciplina (ejemplo, diseño de servicios, gráfico, indutrial, etc), Proceso, Creatividad	Mayores ventas, Mayor retención de clientes, Mayor captación de clientes, Ciclos de productos más rápidos, Mayor entendimiento de las necesidades de los usuarios, Ayuda a transformar requerimientos de clientes en soluciones tangibles	Siento que mi opinión del diseño cambió para mejor, ahora lo encuentro mucho más útil.

Me quedó gravado que la gran mayoría de las metodologías tienen una etapa de divergencia seguida de una etapa de convergencia, lo cuál tiene mucho sentido. Me |

Organización	Qué importancia le das al diseño en su organización? (de 1 a 5)	Existe relación entre el diseño con su misión y visión empresarial?	¿Qué rol cumpliría un diseñador para tu organización? (completa)	¿En qué utilizarías el diseño dentro de tu organización?
Haedus	4	Sí	Crear nuevos productos y una estética atractiva de nuestra imagen corporativa	Experiencia de usuario, Investigación de clientes, Desarrollo de marca, Diseño de producto, Diseño de servicio, Prototipar, Design Thinking, Resolver problemas, Innovar
Municipio Verde	4	Sí	Cumpliría un rol de unificar el discurso detrás del servicio como también de adecuar el servicio a las necesidades reales del cliente y usuario.	Experiencia de usuario, Investigación de clientes, Definición de recursos, Desarrollo de marca, Diseño de servicio, Estrategias, Prototipar, Comunicación, Design Thinking, Resolver problemas, Innovar
MIAUM	5	Sí	Es el encargado de todo lo que tenga que ver con lo que el usuario final va a ver	Diseño de Interacción, Experiencia de usuario, Desarrollo de marca, Diseño de producto, Diseño de servicio, Estrategias, Prototipar, Comunicación, Design Thinking, Resolver problemas, Innovar
La Polla Energética	3	No	En una primera instancia aportaría con los diseño gráficos, pero luego de probar el valor de su trabajo me gustaría que se encargara de todos los procesos creativos de la cooperativa.	Experiencia de usuario, Investigación de clientes, Definición de stakeholders, Definición de recursos, Desarrollo de marca, Diseño de servicio, Estrategias, Prototipar, Design Thinking, Innovar

Organización	¿A qué actividades de diseño le asignarías recursos de tu presupuesto?	Comentarios (si quieres poner algo más con respecto a la gestión del diseño, hazlo acá)	¿Estarías dispuesto a implementar la gestión del diseño dentro de tu emprendimiento social?	¿Por qué?	Este es tu espacio... dime que te pareció la experiencia, que aprendiste, que más te gustaría aprender, que te llevas ;)
Haedus	Diseño de producto y diseño grafico		Sí	Porque haría más eficiente el proceso de toma de desiciones y de creación	Me llevo una forma simple de resolver problemas de forma colaborativa y creativa
Municipio Verde	Experiencia de usuario/cliente, Comunicación, resolución de problemas		Sí	Me parece una herramienta útil para los emprendimientos sociales, especialmente para mejorar el servicio entregado.	Me llevo que el diseño es mucho más de lo que pensé
MIAUM	Diseño de la aplicación, folletería, interfaz humano computador, interfaz de usuario, usabilidad, jugabilidad, comunicación		Sí	Sí, porque ya lo implementamos para construir todos nuestros desarrollos, pero me gustaría poder tener una metodología ordenada para poder tener una guía o referencia, ahora lo hacemos pero quizás es un poco más artesanal	Me gusto, porque entendí porque el diseño es un proceso, y como yo finalmente si ocupaba el diseño de la misma manera pero no me daba cuenta
La Polla Energética	design thinking, diseño de servicio, comunicar e investigación de clientes.	Agregué los comentarios en la parte de "Comentarios (si quieres poner algo más con respecto al diseño en general, hazlo acá)" ubicada en la hoja anterior.	Sí	Por que es fundamental para que nuestro servicio realmente solucione el problema del beneficiario y no solucione lo que nosotros pensamos que sería mejor.	Lo respondí en la primer página =)

8.6 A.6 Intervention Plan (Spanish)

Plan de Intervención: Gestión del Diseño para emprendedores Sociales

Introducción

El presente documento consiste en una propuesta metodológica de intervención en donde se busca desarrollar un proceso de adopción de la gestión del diseño de manera sistémica por parte de emprendedores sociales. Esto se enmarca dentro del proyecto de investigación sobre la adopción de la gestión del diseño por emprendedores sociales, proyecto de investigación de doctorado de la Universidad de Lancaster, Reino Unido. La intervención se llevaría a cabo con la generación de emprendedores seleccionados en la convocatoria OpenGate de Socialab.

Durante los últimos años han surgido múltiples preguntas acerca de cómo replantear el curso de la economía global poniendo en el centro la creación de valor en las demandas y necesidades sociales reales. De esta manera, innovaciones sociales surgen como generadores de ideas que se transforman en productos, servicios y modelos que buscan satisfacer las demandas sociales no cubiertas.

Con el afán de aumentar las innovaciones sociales que satisfagan estas necesidades, organizaciones como Socialab ofrecen apoyo a emprendedores sociales en etapas tempranas con el fin de transformar ideas en proyectos de alto impacto. Este apoyo se otorga bajo un proceso de preincubación que consta básicamente de 5 etapas:

1. Diagnóstico
2. Definición
3. Diseño
4. Co-creación
5. Puesta en Marcha

En cada una de estas etapas se analizan tres ámbitos claves como: Propuesta de Valor, Equipo y Modelos de Negocios.

Con este modelo es posible analizar el estado actual de cada proyecto y a su vez su evolución histórica. La asesoría se lleva a cabo mediante el seguimiento por parte de un coordinador de proyecto que, de acuerdo a las necesidades del emprendedor, define tareas a resolver además de evaluar el avance del proyecto.

Por otra parte, el diseño surge como una disciplina, proceso o forma de pensar que promueve la creación de productos y servicios que generen cambios sociales considerando principios de sustentabilidad.. De esta forma, herramientas provenientes de esta área tales como el enfoque centrado en el usuario, visualización, prototipado y pensamiento estratégico (Mulgan, 2014), además de disciplinas tales como el diseño de servicio y el diseño estratégico ayudan a generar sustentables soluciones que a su vez buscan generar un impacto social positivo. Sin embargo, no existe evidencia sobre un método de adopción de estos conocimientos por parte de emprendedores sociales, por lo cual los beneficios encontrados se limitarían sólo a la aplicación por parte de diseñadores que posean un manejo de estas herramientas.

La metodología a usar en esta intervención es del tipo 'investigación por acción' que básicamente se centra en la intervención y en la investigación de manera simultánea desde un punto de vista participativo (Gray, 2009).

Como resultados esperados de esta intervención se espera entregar un proceso metodológico que permita promover, analizar y evaluar las diferentes etapas de la adopción de la gestión del diseño por parte de emprendedores sociales.

En este documento se entregará el objetivo de la intervención, la metodología de trabajo y los plazos de desarrollo.

Objetivo

El objetivo de esta intervención es poder acercar los beneficios del diseño para la innovación social a emprendedores sociales de Socialab. Lo que se busca es probar una forma sistémica que permita la adopción de estas herramientas, con el fin que el emprendedor sea capaz de gestionar su aplicación dependiendo de las necesidades surjan desde sus proyectos.

Objetivos Específicos

- Explorar, entender y definir las prácticas, procesos y desafíos durante las diferentes etapas de emprendimiento social.
- Analizar el entendimiento y uso actual del diseño por parte de emprendedores sociales.
- Desarrollar un modelo de adopción de la gestión del diseño por parte de emprendedores sociales.

Metodología

La metodología a utilizar en esta intervención es del tipo 'investigación por acción' la que utiliza en una familia de herramientas metodológicas de investigación que buscan generar resultados tanto en la práctica como en la investigación como tal. Para ello se deben tomar en cuenta ciertas consideraciones tales como: el sujeto a investigar, el cual se encuentra en ejercicio práctico, debe sufrir alteraciones (por ej. En la adquisición de conocimientos); es una actividad participativa, por lo cual el investigador trabajará en colaboración con los distintos participantes del proyecto; el proyecto contempla ciclos de acción que incluyen la planificación, acción, observación y la reflexión en un estudio sistemático y documentado.

De acuerdo con este último punto el proceso de investigación por acción se compone 4 etapas:

1. Análisis de la problemática y planificación estratégica
2. Implementación del plan estratégico
3. Observación y evaluación
4. Reflexión y evaluación del proceso completo, lo cual deriva en la identificación de nuevas problemáticas que conllevan a un nuevo proceso de investigación.

En base a lo anterior y considerando el proceso metodológico usado en las etapas de pre-incubación de Socialab la se plantea lo siguiente:

Etapa 1.- Diagnóstico

Se realizará una auditoría en diseño a cada equipo emprendedor para analizar el uso del diseño en sus iniciativas.

La auditoría en diseño consiste en la evaluación del uso (o no uso) del diseño como soporte a:

- La visión y los valores de la empresa
- Los objetivos del modelo de negocio de la empresa
- Las aspiraciones organizacionales para escenarios futuros

El alcance de esta auditoría es interno a la organización (como utilizan diseño como parte de las capacidades internas) y externo (cómo se vinculan con proveedores de servicios de diseño).

Etapa 2.- Identificación de problemáticas y planes de acción

Con los resultados de la auditoría se plantearán planes de acción grupales o individuales según se requiera. Estos planes describirán los contenidos a entregar, actividades e hitos esperados.

Etapa 3.- Implementación y evaluación

Durante esta etapa se implementarán los planes de acción definidos previamente. Durante la implementación se generarán evaluaciones constantes sobre la planificación propuesta y la respuesta de los emprendedores hacia las actividades por desarrollar.

Etapa 4.- Evaluación final y entrega de resultados

En esta última etapa se utilizará la misma herramienta de auditoría de la Etapa 1 para evaluar el progreso de los emprendedores sociales tras la intervención desarrollada. Los resultados obtenidos se verán reflejados en un reporte final que muestre el proceso utilizado, los avances por proyecto y conclusiones generales acerca de la implementación.

En este documento se entregará además una propuesta de adopción de la gestión del diseño por parte de emprendedores sociales.

Carta Gantt

La ejecución de actividades se llevará a cabo en un período de 3 meses según lo que indica la Carta Gantt adjunta

[	Mes 1		Mes 2		Mes 3	
	Q1	Q2	Q1	Q2	Q1	Q2
Diagnóstico	🟩					
Identificación de problemáticas y planes de acción		🟩				
Implementación y Evaluación		🟩	🟩	🟩		
Evaluación Final					🟩	
Entrega de Resultados						🟩

Referencias

8.7 A.7 Relevant Publications

• Pérez, Hands, McKeever & Whitham (2019) Design within Social Entrepreneurship. A Framework to reveal the use of design in interdisciplinary spaces, The Design Journal, 22:sup1, 229-241

• Pérez, Hands & McKeever (2017) Locating the potential contributions of design in social entrepreneurial initiatives, Conference Proceedings 4D Designing Development Developing Design, 299-311

• Pérez, Hands & McKeever (2017) Design for Society: Analysis of the adoption of Design practices by Early-Stage Social Entrepreneurs, The Design Journal, 20:sup1, S3020-S3034

• Pérez, Hands, McKeever (2016) A critical examination of the potential of Design Management Practices for Social Entrepreneurs. Conference Proceedings 20th DMI: Academic Design Management Conference, Inflection Point: Design Research Meets Design Practice, 723-743