Accelerating Sustainability through Human Development

Managing the complexity of supporting social enterprises toward the implementation of sustainable development

Carlos Cordova Maldonado

LUCSUS

Lund University Centre for
Sustainability Studies

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Supervisor: David Harnesk, LUCSUS, Lund University

Abstract:

Accelerator programs that support enterprises in their early stages are growing in numbers, acknowledged by many as an important organizational form for achieving economic growth. However, focusing solely on economic growth has proven to be detrimental for the environment and not enough to solve the challenges of our current social systems. As a response, accelerators and social enterprises that focus on creating social and environmental value have started to appear. This thesis applies a transdisciplinary research process; collaborating with a social enterprise accelerator called SoPact, located in Helsingborg, Sweden. The aim of the thesis is to test the applicability of Sen's Human Development as a sustainability paradigm within their existing goals and tools in order to support emerging social enterprises toward the achievement of sustainable development. The three main findings are as follow: (1) The operation of SoPact allows for an integration of Sen's sustainability paradigm achieved through an analysis of what objective capabilities are required to be prioritized. (2) The framework of SoPact can be transformed in order to transmit this integration effectively to emerging social enterprises. (3) The transformation allows social enterprises to effectively relate their operation to global goals such as the Sustainability Development Goals and to local ones such as Helsingborg City's goals. Nevertheless, there are certain pre-conditions to achieve these results, mostly related with the funding and goals of SoPact. This resulted in a generalizable conclusion that implies that in order for social enterprises and their accelerators to succeed, the goals of their collaborators and supporters must also be in line with social and environmental goals. The paper also concluded that through transdisciplinary research, it is possible to find the possibilities and limitations of integrating Sen's Human Development as sustainability paradigm in the context of a given accelerator.

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PQL	Program for Quality of Life
SDGs	Sustainable Development Goals
SoPact BMC	SoPact Business Model Canvas
SROI	Social Return on Investment
TOC	Theory of Change

1 Introduction

Looking at the world today, one cannot fail not to notice the big influence that private companies have in the environmental and social reality that we experience. The variables that determine the success of an enterprise can range from the people involved in its creation, the specific context where it is located, the problem that its product solves, the resources that it has available and many other factors depending each specific case (Cremades, 2016). Due to this wide range of variables and the complexities of starting a new business; *accelerators*, which are organizations that help emerging companies, have appeared in different countries – usually funded by governmental bodies that aim to improve the economy of their respective jurisdictions (Serwatka, 2018). Accelerators design workshops and create frameworks that seek to support these emerging enterprises; helping them integrate their operations to the economic system, generating revenue, and escalating their influence as fast as possible. However, these workshops and frameworks are not stand-alone tools since they generally work in conjunction with the idea or proposal that new enterprises seek to develop, resulting in a relationship that if successful, will influence and shape the social and economic context where is located through new economic activities.

Why do then these accelerators appear? Many governments have chosen to follow economic growth as unique indicator of development (some even framing it as sustainable development). This puts forward the desire of supporting accelerators in order to increment the generation of new enterprises that link with the economic growth of a certain region (Acs & Szerb, 2007). Furthermore, due to economic globalization, this reliance on economic growth for development has expanded its reach to cover most of our social dynamics; even when it presents direct contradictions with the sustainability of the environment and with conditions for "human flourishing" (Wright, 2018).

However, accelerators can also pursue more socially oriented goals; requiring enterprises to have additional motives than just profits in order to receive the accelerator´s support. Usually, these enterprises (which I will now refer to as *social enterprises*) are created and lead by a social entrepreneur whose main purpose is related with the creation of social and/or environmental value (Levinson, 2014). These social enterprises continue to operate with a market approach and are economically functional; but their goal is to contribute to the solution of social and/or environmental challenges (Stenn, 2017). This wider impact compared to conventional accelerators adds another layer of complexity to those already addressed by the comprehensive studies in microeconomics and business development. Nevertheless, acknowledging the sustainability challenges of today, business-

as-usual has been proven detrimental for the environment and an incomplete approach for improving society. Therefore, this opens a window for sustainability science to aid the accelerators of these social enterprises in bringing a more extensive operationalization of sustainable development.

With these three paragraphs, I expect to have stated my position and to anchor two main points for the development of this thesis. First, accelerators as official organizations can support the creation of new social enterprises toward achieving certain goals (be them profit-oriented or not). Second, that these enterprises can have the possibility of operationalizing sustainability depending the approach to development they follow. For these reasons, I see accelerators as a leverage point to mainstream certain kinds of environmental sustainability and the prioritization of social goals within prevailing social structures and institutions. Furthermore, I see accelerators as an opportunity to start closing the gap between scientific knowledge and social practice. Since accelerators depart from certain goals and apply specific tools (e.g. workshops and frameworks) to transfer skills and knowledge necessary to develop new social enterprises; the inclusion of scientific understanding in these goals and tools can be an innovative approach in closing this gap.

What kind of scientific understanding can then inform accelerators that pursue sustainable development? This depends on the specific paradigm one adheres to, and there are obviously different proposals on how to include sustainable development in the functioning of our society. Boda & Faran (2018) followed the research process of immanent critique in order to explain the logic and drawbacks behind economic and political approaches toward sustainability. Because of these drawbacks, a more comprehensive *sustainability paradigm* - although not the last one in their study – was argued to be Amartya Sen´s *Human Development*. A main aspect of this paradigm is the expansion of objective capabilities (or freedom) in society, both as primary end and as a mean for development (Sen, 2001). This approach and its relevance will be described more in detail in the Chapter 2.

Finally, in order to find the adequate type of accelerator for this process, it is necessary to identify a relevant context where there are accelerators with an explicit connection to environmental and social goals. A country that is globally renowned for its work toward achieving sustainable development, and over the years having fostered many close collaborations between universities, the private sector and governments, is Sweden (Park, 2002). Furthermore, Sweden has aligned itself to the vision of Agenda 2030, a global pathway outlined by the United Nations (2015) divided in 17 Sustainable Development Goals (SDGs) and 169 targets. This has encouraged institutions and organizations that operate within the country to link their local goals and operations with this agenda. A concrete example is Helsingborg City (2016a), which has proposed to work on this through

the adoption of a Program for Quality of Life (PQL) that uses the 17 SDGs and relates them with the local context of the city and their own conceptualization of development. This program has a relevant approach toward the achievement of sustainability and at the same time, tries to enhance the quality of life of the city through the improvement of society. For these reasons, it is not surprising that an accelerator focused on social enterprises, SoPact, exists in this specific context where economic growth is not the only objective of development.

1.1 Aim and Research Questions

The aim of the thesis is to test the applicability of Sen's Human Development as sustainability paradigm in the context of accelerators for social enterprises in Helsingborg, Sweden. To achieve this aim, the thesis applies a transdisciplinary research approach and thereby links a scientific understanding with practical outcomes by integrating academic and non-academic knowledge (Polk, 2014). The non-academic actor involved is SoPact, an accelerator of emerging social enterprises that receives funding at national level by the Swedish government, and at regional level by Helsingborg City and Lund University.

The research was guided by the following overarching research question:

RQ: How can Sen's *Human Development* as *sustainability paradigm* be used to create a framework that when used by *accelerators*, improves the outcomes of the *social enterprises* that it supports, both in the social and environmental spheres?

Through the transdisciplinary research approach presented in Chapter 4, the following research questions were generated:

Sub-question 1: What are the goals that SoPact operates under and what are the tools that it uses to accelerate emerging social enterprises toward achieving these goals?

Sub-question 2: To what degree can SoPact's goals and tools be improved by integrating them into Sen's Human Development as sustainability paradigm to facilitate the process of accelerating social enterprises?

Sub-question 3: How would the goals and tools used by SoPact have to be transformed in order to effectively align its social enterprises with Sen's Human Development paradigm?

1.2 Sustainability Science

Sustainability science is characterized by the complexity of its "wicked problems" and the need for a transdisciplinary understanding of the challenges it seeks to address (Jerneck et al., 2011). This thesis uses this need of integrating external stakeholders in the development of the research process and removing the boundary between science and practice in the formulation of the final thesis' objective. The research process is conducted in collaboration with an organization that has a degree of influence in the social dynamics of a specific context, and that its operations are related with an ecological aspect. This combination is relevant as social and ecological systems are interconnected, deeming necessary to perform research that effectively integrates these two elements and aims to solve the sustainability challenges in both ends. Toward the end, the thesis also provides insights for conducting sustainability science research in ways that produce solution-oriented results that can be used by actors in their given context. For these reasons, I find high value in proposing a research that brings an innovative connection between a specific sustainability-paradigm and its application within the prevailing social structures and institutions that condition social practices.

1.3 Outline

The thesis will start by explaining the theoretical framework that is used to conceptualize the relationships and dynamics that are studied and discussed throughout the paper in Chapter 2. Then a brief introduction of SoPact and its relationship with the theoretical framework is found in Chapter 3. Chapter 4 describes the methodology of the research process and presents how the theoretical framework informs it. The chapter also covers the actors involved, the activities performed and the process through which sub-research questions were formulated and answered. After this, Chapter 5 contains the answers to each of the sub-questions and to the overarching research question. Chapter 6 discusses findings; elaborating on the implications of the results and future research directions. Finally, Chapter 7 as a conclusion will present an overall summary of this paper.

2 Theoretical Framework

This chapter first conceptualizes the relationship between accelerators and social enterprises, and then presents a general overview of Sen´s Human Development. Proceeding, this chapter elaborates a theoretical framework that connects these two sets of concepts and clarifies the assumptions that inform this paper. Finally, the chapter presents an explanation of how this theoretical framework relates to a specific sustainability paradigm.

2.1 Accelerators and social enterprises

At a general level, the main purpose of an accelerator is to merge its goals and tools with the emerging social enterprise in order to expand its potential to affect the social and economic functioning of the context where it is located. The framework of an accelerator can vary but usually consists of workshops, tools, mentors and other resources that aim to speed up the development of the enterprise (Cohen, 2013). The accelerator's operation represents a two-way relationship that on one hand, contributes or influences the enterprise's idea or operations to build a stronger case that fits the requirements of the context. On the other hand, the idea or operations of the enterprise must be comprehensive or robust enough to fit most of the components of the accelerator's operation.

More concretely, this means that the enterprise's idea, business model, solution to a problem, main purpose or any other component, or combination of these, must have enough substance to be taken seriously by the accelerator. This minimum limit is determined by the accelerator, the content of which is mainly defined by the funding sources of the accelerator itself and the stage of the enterprise at which they provide the support. With input from the enterprises, the accelerator tries to support the company to subsist by itself and help the enterprise expand and grow their operations. This accelerator-enterprise relationship still operates within a market approach, meaning that it must result in an economically sustainable enterprise. Nevertheless, when talking about a social enterprise, its main goal is to have positive results on the environmental and social spheres, often determined in relation to its funding sources. Figure 1 visualizes the conceptualization of this relationship with the corresponding mentioned variables.
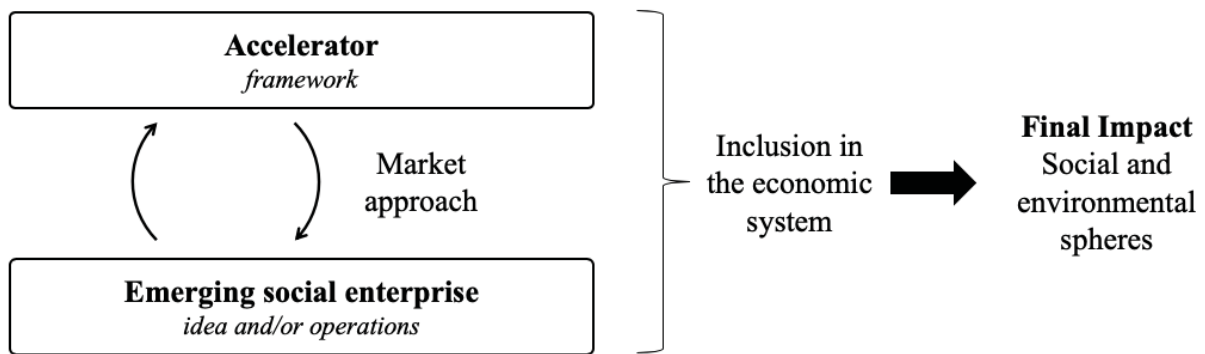
Figure 1. Relationship between accelerators and emerging social enterprises. The framework of the accelerator influences the idea and/or operations of the enterprise and at the same time, needs enough input for the framework to be effective. The relationship occurs within a market approach to produce a successful inclusion in the economic system. Nevertheless, the impact that is aimed to achieved is on the social and environmental spheres.

2.2 Sen's Human Development

Amartya Sen - Nobel Laurate in economic sciences in 1998 - emphasizes that the market system that we have nowadays, and the goal of maximizing economic growth is not the ultimate objective in order to have a developed society. The "economic facilities" that the members of a society may have, are only means that allow them to achieve other objectives; and these facilities must be complemented by four types of freedoms named as: "political freedoms, social opportunities, transparency guarantees, and protective security" (Sen, 2001, p. 10). For this reason, the most adequate process to measure development in a given society is by the number of substantive freedoms or objective capabilities that its members can access.

In his conceptualization, the expansion of freedom is essential to the process of development for two reasons:

1. **As primary end:** Members of society continuously work toward the expansion of objective capabilities in their societal arrangements. Examples of universally valued capabilities almost in any context are the avoidance of child mortality and famine, access to healthcare and education, the extension of longevity. Nevertheless, the decision of which objective capabilities are to be included and how will they be ranked is a question of social choice. This social choice entails the members of society to actively contribute in a reasoned process of weighting values among each other that allow them to live lives that they have reason to value.

2. **As means for development:** With the removal of objective unfreedoms (such as the examples mentioned before) more members of society are able to actively participate in the

decisions of which objective capabilities are to be included and prioritized. In the view of Sen, as the process of development advances, members of society will have more control and agency over their own destiny and societal arrangements will provide a wider array of possible functionings that their members can achieve. Furthermore, the five types of substantive freedoms or objective capabilities mentioned before are inherently interconnected as they reinforce each other.

These two reasons entail a two-way reinforcing relationship where on one hand, it is necessary to have a context where objective capabilities are defined, discussed, ranked and operationalized by proactive members of society. In return, this functioning context will enhance the impact of these members and will progressively facilitate the inclusion of more participants to the process. The abstraction of this relationship will now be linked to the concrete example of accelerators and enterprises to explain the usefulness of Sen's approach for this work.

2.3 Sen's Human Development in society as supported through the accelerator-social enterprise relationship

In this sub-section, my purpose is to make explicit how Sen's Human Development can be integrated into the accelerator-social enterprise relationship to have it contribute toward achieving Sen's view of sustainability in society. I will draw upon the assumption that different social enterprises have already been integrated by the accelerator in their economic context with their corresponding solutions concerning social and environmental challenges. These solutions, if analyzed through Sen's Human Development, can be understood as the objective capabilities that will be made available to society to interact with. This suggests that society will be able to choose and interact with a range of different social enterprises that provide certain objective capabilities.

A condition for this conceptualization to result in sustainable development through Human Development lies on the responsibility that society must take when interacting with social enterprises. In Sen's approach, individuals must follow a process of analyzing what are the objective capabilities that they have reason to value. Under this assumption, I argue that when individuals interact with social enterprises through monetary means, their decision must not be made over the most economically appealing enterprises but over the ones that provide the objective capabilities that are in line with their vision of development. Furthermore, many other types of interactions between society and the social enterprises can occur depending on each specific case. For example, members of society can choose to support social enterprises through the donation of money or commodities, they can also choose to work for them, collaborate with them, do research with them

and other possibilities that cannot be foreseen at this moment. Alternatively, it could be sourced from common pool resources such as governmental funding, as has been the case of many healthcare services developed by accelerators (PR Newswire, 2018). However, through this process of social choice, the preferred social enterprises (or what could be called prioritized capabilities) will increase their impact in society as their number of interactions and support increments. I identify the result of this selection as the *primary end* reason in Sen's approach since the preferred social enterprises are created and become part of the socio-economic and environmental landscape of the region they belong to.

Finally, I will clarify how Sen's approach of the *means for development* operates within this theoretical framework. If basic objective capabilities (e.g. avoidance of child mortality and famine, access to healthcare and education, the extension of longevity, etc.) are prioritized by the interactions of the accelerators and the social enterprises, then *means for* development-argument would suggest that more people will at least have the possibility to be engaged in social enterprises that further expand these objective capabilities. The increased accessibility of the population to basic needs or commodities will not only enhance their possible interactions with social enterprises but also would provide the objective capability of becoming a social entrepreneur themselves if they were to desire. Figure 2 represents the complete conceptualization of Sen's Human Development in society as the outcome of the accelerator-social enterprise relationship.
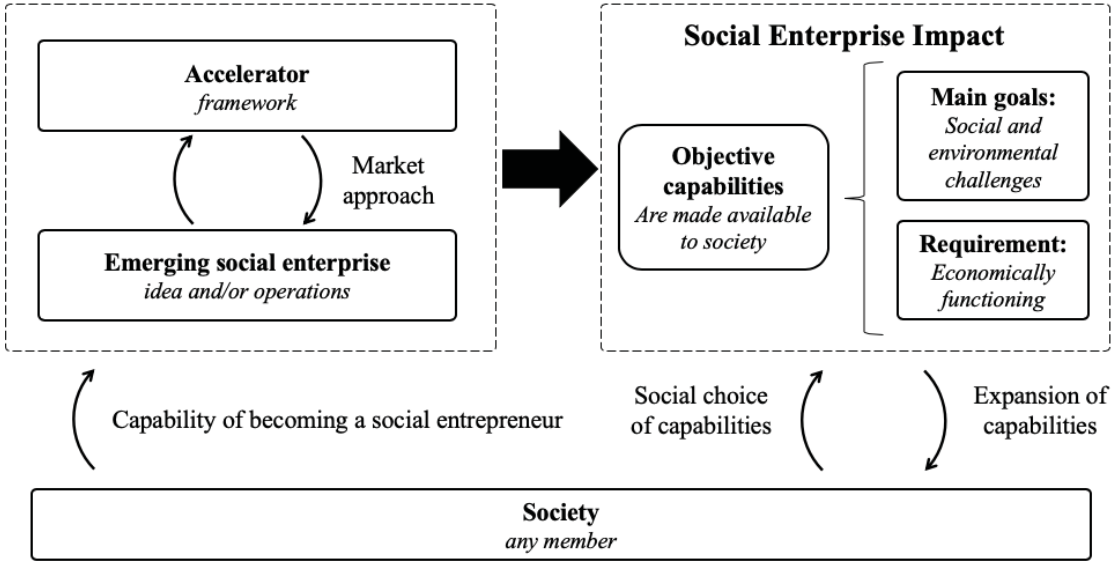
Figure 2. Accelerator-social enterprise outcome and their relationship to society under a Human Development approach. The interaction between the accelerator and the social enterprise will result in the introduction of the social enterprise in the economic functioning of its context where it will aim to solve social and/or environmental challenges. The solution of these challenges can be seen as capabilities that are now made available to society. Society will then be able to choose from a range of social enterprises in accordance to the capabilities that they value and will also have the capability to produce more social entrepreneurs.

2.4 Sen's Human Development as Sustainability Paradigm

An ideal process of Human Development would entail the progress of society while effectively also sustaining the environmental resources society accesses. In Sen´s approach, environmental sustainability must be present in any development process as all members of society (including future generations) must have access to the same or more natural resources (Sen, 2004). Therefore, the destruction of nature and the unsustainable management of ecosystems represents a direct deprivation of the capability set that a member of society can have, being directly in contradiction with a freedom approach. On the contrary, a society that works toward the expansion of freedom or capabilities will aim to maintain or even increase the existing stock of natural resources. This entails a wider capability set for the members of a given society and a development approach that is compatible with sustainability.

Taking into account this conceptualization of environmental sustainability and combining it with the social development process proposed in Fig. 2, a normative argument is put forward on why Sen's Human Development is not only useful in studying the phenomenon of this thesis but it is also relevant as a sustainability paradigm in the goal of achieving sustainable development. However, in order to achieve this purpose, this theoretical argument has to be linked with the social reality that we experience nowadays. It is why in this work, the relations and context surrounding an existing accelerator and the effect that they have on its framework is studied.

Furthermore, within the relationships and elements described in Fig. 2, I propose to integrate Sen's sustainability paradigm in the framework of a given accelerator for the purpose of this thesis. Even though this approach can certainly come from the social entrepreneur's standpoint, from a given social enterprise or from different sectors of society, I see accelerators as a leverage point as they come in to contact with several entrepreneurs and enterprises in addition to other institutions and actors that have influence in the development of society. Accelerators can achieve the difficult task of working within the current economic system that is already in place but merging the solution of social and environmental challenges as their final goal. They can also aid social enterprises in managing the different economic relations they will be subject to such as the requirement of making a certain profit or the process of getting funding from governmental institutions. Nevertheless, through a capability approach, accelerators can manage this complexity in their framework in order to support social enterprises toward the achievement of sustainable development.

Finally, in order to achieve this difficult task, accelerators may need the support of other institutions or organizations. Some of them will have requirements or demands from the accelerator in order to

facilitate this collaboration. Some others, like science, can contribute to the understanding and alignment of these different interests in society with the integration of a theoretical framework that can provide valuable knowledge and solution-oriented results. Therefore, I have decided to conduct transdisciplinary research with an existing accelerator in order to find the possibilities and limitations of the practical implementation of Sen's Human Development as sustainability paradigm, which I will now refer as the *capability approach*.

3 Case-Study – SoPact

The collaborator of this transdisciplinary research process is SoPact, an accelerator based in Helsingborg, Sweden. Helsingborg is a city located in southwestern Sweden, a location that has resulted in concentrations of high employment due to its closeness to Malmö and Lund, and to Denmark via train or ferry (Kettinger & Andersson, 2012). Helsingborg is part of the Scania County and as with most of the cities that are part of this county, their focus lies on working with environmental and social challenges (Region Scania, 2018). Regarding the environment, the city has implemented certain ecosystem services in their strategy of sustainable planning (Brink et al., 2018). Regarding society, as with several cities in Sweden, Helsingborg has to work with immigration policies and the challenge of integrating newcomers in the labor market and social activities (Fridell, 2017). Helsingborg has also certain areas that are categorized as "vulnerable areas" by the Swedish police, which define them as "low socio-economic status where criminals have an impact on the local community" (The Local, 2017).

The accelerator SoPact was founded in 2016 and has supported a total of 42 social enterprises up until now (SoPact, 2019). The social entrepreneurs behind these social enterprises were required to attend in person to three days of introduction in Helsingborg city followed by weekly meetings in order to be part of the program. Examples of solutions that social enterprises provide and have been supported by SoPact range from developing a solar powered source of clean water (Salt Water Farming) to the inclusion of recently immigrated Swedes in the labor market and in social activities (Peers Bridge). These elements allow to connect the specific context of SoPact to the proposed capability approach as shown in Fig. 3.
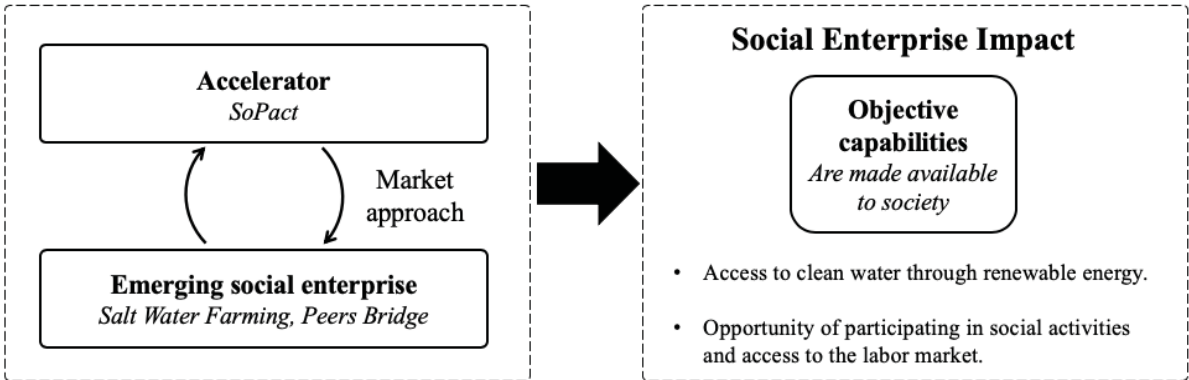
Figure 3. SoPact within a capability approach. SoPact interacted with the social enterprises Salt Water Farming and Peers Bridge to make available certain capabilities to society.

In the spring of 2019, SoPact started two new projects on social innovation in collaboration with several partners such as Helsingborg City, Lund University Campus Helsingborg, Region Skåne, Coompanion Skåne, Vinnova and other organizations. This fact illustrates the high degree of complexity that an accelerator can be subject to and the different visions that need to be considered when designing its operations. This brings forward the argument of collaborating with an expert of the organization that can provide an informed overview of the current situation and the most pressing needs of the accelerator. It also presents an opportunity for sustainability science to collaborate in the learning process of the organization regarding sustainable development.

4 Methodology

In addition to producing scientific knowledge, this thesis applies a transdisciplinary research design for generating questions that are socially relevant and research that can address "real world problems" (Lang et al., 2012). Through the combination of these two pathways, the thesis aims to contribute with methodological insights and innovation that can be fundamental for practical results in both spheres. In order to achieve this, the ideal-typical transdisciplinary research process proposed by Lang et al. (2012) is followed. The process is divided in three phases that are described next, including the explanation of how they were applied to this specific research.

4.1 Phase A: Building a collaborative team and framing the problem

Phase A consists of delimiting the collaborative team, defining the real-world problem, designing a joint definition of the research boundaries and the formulation of the research sub-questions. The team consisted only of myself as the sustainability researcher and the co-founder of SoPact as the expert in social enterprises and accelerator programs. The objective of the research was to produce knowledge that has a practical application by integrating sustainability into SoPact goals and at the same time, provide valuable research for sustainability science. To achieve the formulation of the research sub-questions, the first requirement was to understand the current situation of both members of the team with their respective expectations on the outcome of the process and the practical results that would be needed to be achieved at the end of the collaboration.

The delimitation of the team is of particular importance due to the timeframe and the length of this thesis. Being only two members in the team allowed to have productive meetings in order to achieve a meaningful result within the scope of this work. During this step, it was necessary to have an effective communication from each of the team member's perspective. From my side, I needed to transmit the current state of sustainability science and the importance of conducting transdisciplinary research by aligning objectives between academic and non-academic actors. From the co-founder's side, he needed to communicate the main goals of the accelerator, the relationships that is subject to, the tools that it currently uses and those that could be integrated into their existing framework. This communication allowed to answer sub-question 1 and to formulate sub-questions 2 and 3 as an opportunity to improve the accelerator's operationalization of sustainability and the existing framework that they use for supporting social enterprises.

4.2 Phase B: Co-producing solution-oriented and transferable knowledge

Phase B consists of collaborative research through integrative methods that allow to identify and combine different bodies of knowledge. The actors and tools related with SoPact resulting from Phase A were mapped using different conceptual models. This was done in order to start understanding their relationships and how the capability approach could be related to them. This mapping also facilitated a mutual agreement between the SoPact's co-founder and me to revise if the expected outcomes agreed on Phase A were still valid or there was a need to make certain modifications after answering research sub-question 1.

The practical steps taken after revisiting the expected outcomes was to link the SoPact goals to the capability approach. To achieve this, the terminology of (1) objective capabilities, (2) selected capabilities and (3) prioritized capabilities was introduced. This allowed two stages of integration. The first one narrowed down these terms aligning the capability approach and the goals of the actors related to SoPact. The second stage consisted on matching the mentioned alignment with the tools of SoPact in order to improve its framework. Phase B allowed to answer research sub-question 2.

4.3 Phase C: Integrating and applying the produced knowledge in both scientific and societal practice

Phase C consists of implementing the results of the collaborative research into a tangible product that can be used in societal practice and in an outcome that can motivate stakeholder engagement into the joint learning procedures of sustainability science. To achieve this, the result from Phase B was used to transform the current framework of SoPact into a template that can be more easily understood and used by social enterprises. To achieve this transformation, the capability approach was also used, and two terms were introduced in this phase to facilitate the process: (1) environmental prioritized capabilities and (2) social prioritized capabilities. This resulted in the answer to sub-question 3 and the achievement of the goal that was agreed in Phase A of this methodology.

Finally, this phase also allowed to answer the overarching research question based on the answers to each of the sub-questions. The answer elaborates on how this sustainability paradigm can be introduced in accelerators of social enterprises and what are the factors that can define the success of this integration. This answer aims to contribute in the scientific practice of sustainability science.

5 Results

The results of the research described hereafter follow the structure presented in the methodology chapter.

5.1 Goals and tools of SoPact: Phase A – Answer to sub-question 1

The two elements that need to be considered in order to have a relevant understanding of the current framework of SoPact for this thesis are: (1) Goals of SoPact and their relation to sustainability and (2) tools used by SoPact. These are explained in the next two sub-sections. The last sub-section presents the logic behind the formulation of sub-questions 2 and 3.

5.1.1 Goals of SoPact and their relation to sustainability.

The existence of SoPact depends entirely on public funding which dictates the focus and main goals of the organization. Their three sources of income are: Vinnova, at national level; and Lund University and Helsingborg City, at regional level. Vinnova (2019) is the governmental agency in charge of funding innovation projects that contribute to sustainable growth and facilitate collaboration between universities, companies and other institutions. In the Scania region, Lund University (2019) aims to be a world leader in education and research with a campus located in Helsingborg City: A city that has developed a vision to become "a creative, vibrant, common, global and balanced city for people and companies" in 2035 (Helsingborg City, n.d.).

The alignment of SoPact to national objectives can be seen in its requirement of supporting social enterprises that address at least one of the 17 Sustainable Development Goals (SDGs), either at local or global level (SoPact, n.d.). Nevertheless, the United Nations (2015) states that these goals are integrated and indivisible; and their implementation varies depending the specific economic and social needs of each country or region. This point was discussed during the process of building the collaborative team and framing the problem. SoPact has had trouble in the past to find organizations, consultants or manuals that can provide valuable input on how to operationalize these global goals to its specific context. Therefore, this challenge provides an opportunity for sustainability science to make a contribution in the functioning of this organization.

The objectives of SoPact are also influenced by the different regional organizations that collaborate with them as mentioned in Chapter 3. However, due to the location of SoPact in the city of Helsingborg and the important support that it receives from the city's municipality, it was agreed that the Program for Quality of Life that Helsingborg City (2016a) adopted was to be included in this

research process. The program is aligned to the Sustainable Development Goals by using as inspiration the conceptualization proposed by the Stockholm Resilience Centre (2016) which interconnects the different goals among each other using food. However, Helsingborg City interchanges the two upper levels to reach its final proposal as shown in Fig. 4.

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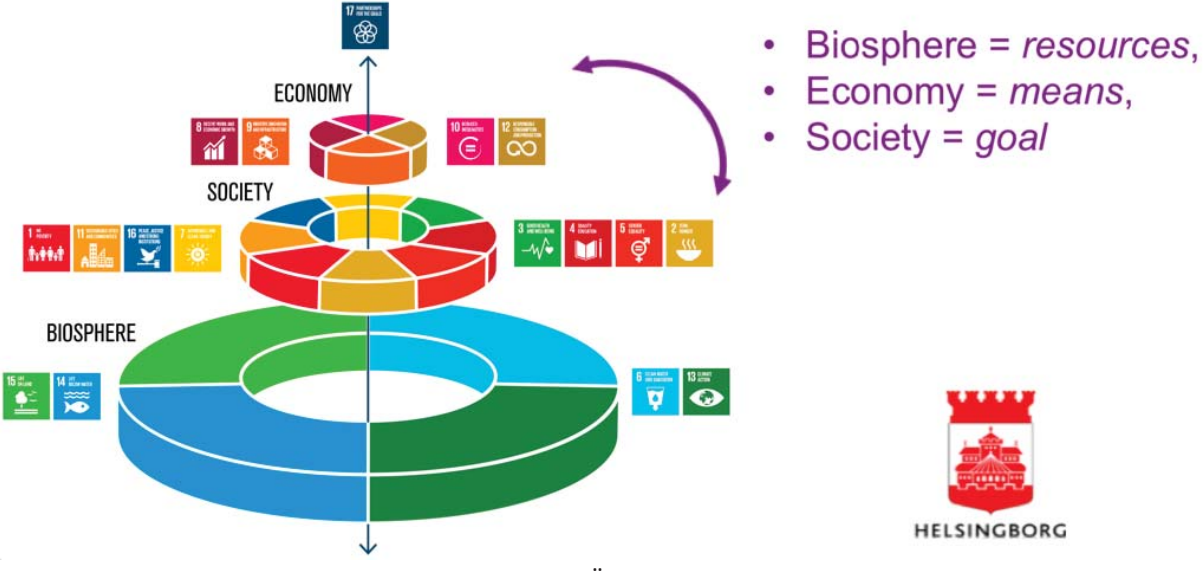
Figure 4. Helsingborg City conceptualization of SDGs. The figure shows the alignment of the city to the Sustainable Development Goals. In the first level they acknowledge the environmental boundaries of the city's activities and the reliance that it has on the biosphere as source of resources. The middle level sees the economy only as a mean to focus primarily on the generation of positive outcomes in society (Helsingborg City, 2016b).

The program has also its own approach toward the development of the city recognizing the gap between knowledge and action and proposing the empowerment of the members in the city in order to achieve sustainability. The city uses the definition of quality of life proposed by the World Health Organization (2019):

> Quality of life is an individuals' perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations and standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, and their relationship to salient features of their environment.

The assumption is that the adoption of this definition will focus the operations of the organizations in the city into seeing the improvement of society as the main goal. It also expects to empower the inhabitants of Helsingborg to actively participate in the sustainable development of the city.

5.1.2 Tools of SoPact

SoPact has a framework that uses a diverse range of methods and tools that aim to improve the innovation processes of their social entrepreneurs. Some examples are the identification of root causes of a problem, the improvement of decision making, thinking differently than business-as-usual and value chain diagrams that guide the creation of shared environmental and social value. All these conceptual tools aim to support the emerging social enterprises to become economically independent and to work toward the solution of environmental and social challenges.

From this framework, the three most relevant tools for the scope of this research were selected according to the co-founder's experience and understanding of the acceleration of social enterprises. The first one was the SoPact Business Model Canvas (SoPact BMC) which provides a comprehensive overview of the social enterprise. The second and third were the most efficient and helpful tools for impact measurement which are the Theory of Change (TOC) and the Social Return on Investment (SROI). The principles of these tools along with their functioning and their relevance for sustainability will now be described.

SoPact Business Model Canvas

In order to map the functioning of conventional enterprises, the Business Model Canvas template has been a popular tool to design the operations and strategies of a business as it helps to represent the company's main components in a visual and easy to understand diagram (Osterwalder & Pigneur, 2010). Inspired in this approach, SoPact has taken this template and added certain fields that are relevant for the creation of social enterprises, resulting in the template shown in Fig. 5.

Most of the fields in this adaptation are taken directly from the original template, however the added fields "Positive and Negative Impact on Society" and "Purpose" require special attention. The first one is of particular importance since as mentioned in Chapter 1, one of the complexities of sustainability science relies in the fact that the solution of problems in a certain sector of society may produce a problem in some other sector. Therefore, it is a relevant approach from SoPact to include the potential positive and negative impacts in order to motivate the social entrepreneurs to consider them appropriately when designing their social enterprise. The second one, "Purpose", is relevant as its function is to keep the focus on the problem that is aimed to be solved and explicitly shows that the core values of the social enterprise have an aspiration that goes beyond the generation of profit. The field is sometimes linked to an inner motivation that can come from past experiences of the

social entrepreneur, the problems related to her or his specific context or any other drive that makes a given member of society to follow this endeavor.

Other fields that are directly taken from the original Business Model Canvas but are also relevant for this study are "Resources", "Activities" and "Value Proposition". These fields are important as they map and summarize the next information of the social enterprise: (1) their needs such as human capital or material means; (2) the key activities that they need to perform effectively to increase their probability of success; and (3) their outcome that will be valued by the socio-economic context where they operate.

SoPact Business Model Canvas

Negative Impact on Society			Positive Impact on Society	
Partnerships	Activities	Value Propositions	Target group relations and channels	(End) user/ Target group
	Resources	Purpose	Customer & financial relationships and channels	Paying customer or financer
Cost Structure			Revenue Streams	
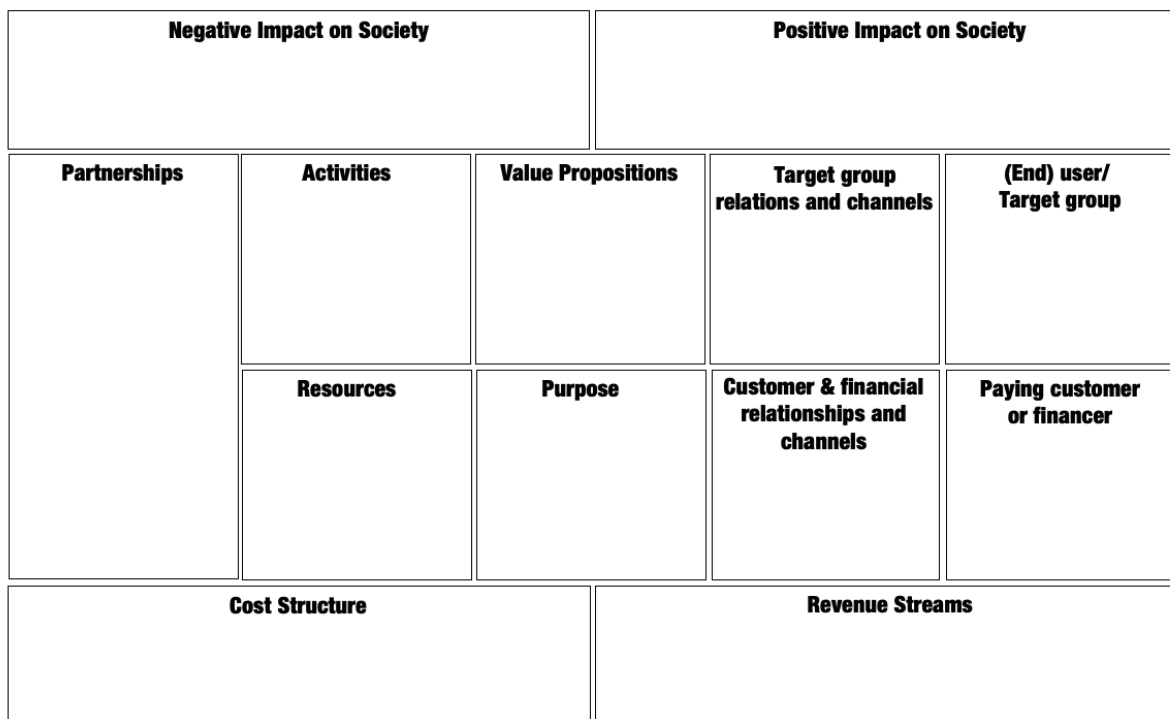
SOPACT — Inspirerad av Business Model Canvas: strategyzer.com

Figure 5. SoPact Business Model Canvas. The template adds certain fields to the conventional Business Model Canvas. It maintains the simplicity and the visual appeal that allow social entrepreneurs and other members of society understand easily the key components of the enterprise. The added fields are: Positive and negative impacts on society, purpose and a division between the financers and users of the product or service (Template provided by SoPact).

In general, the SoPact Business Model Canvas is one of the most relevant tools in the accelerator's framework as it contains comprehensive information of the social enterprise and the key elements that can define its success. Therefore, it was identified as one of the most adequate tools that could

potentially be used toward the improvement of SoPact's framework and in the attempt to integrate the capability approach as sustainability paradigm.

Theory of Change

The Theory of Change (TOC) is a visual tool that allows to map the pathway of an organization, initiative or program that aims to produce change in society and that is economically feasible (Walk et al., 2015). The selected source to work with in this process is a handbook available in the website of Mötesplats Social Innovation (2019) which is an organization that defines itself as the "collective national knowledge node" for social innovation and social entrepreneurship. Its purpose is to bring together different societal actors such as academia, industry, and public and non-public organizations in order to always be at the forefront of social innovation. The handbook is written by Berlinger & Singhal (2018) describes the theory of change as follows:

> Theory of change is a theory that helps us to build a plan for the change we want implement and how it should go. From our interviews with the contractors, research and many conversations with people in the field, we have identified the theory of change as a good reason for successful impact measurements. The theory is the best way to visualize effects and causal relationship between the different steps. Some entrepreneurs apply the theory already from day one. Others use parts of it without knowing about it. The theory is a system perspective on the whole process.

The visual diagram that illustrates the five steps of TOC is shown in Fig. 6.

Figure 6. Theory of Change. The five steps illustrate the system with their causal relationships and final effects. The system is composed by the required inputs that the social enterprise needs in order to perform certain activities, and the final effects can be divided in the immediate output of the activities, measurable results after a certain time span and the larger impact made on society (Berlinger & Singhal, 2018).

To exemplify how these five steps are related I will use the case of the social enterprise mentioned by Walk et al. (2015). The social enterprise is a Canadian non-profit organization that aims to empower women, primarily immigrants, through a skill development program in order to facilitate their access to employment. In the "Input" field, this enterprise would identify the women in need of this program, funding from some organization, specific knowledge of the context and human capital

such as staff, volunteers and instructors. These inputs are the components of the "Activities" field where they are interrelated among each other through different dynamics depending on the functioning of the social enterprise. In this specific example, activities could include workshops, lectures, employment training and other activities that the enterprise considers important to achieve the "Output" field. The "Output" field is catalogued as the immediate effect of the activities. In this case, the output would refer to the women finishing the program that now have higher chances of being employed. The "Results" field is related with the effect of the output in the next years (usually 1-5 years) and can also be used to evaluate the impact of the social enterprise. In the next section that presents the SROI, the "results" field is of particular importance since it allows to make a comparison of the difference in those years between women that took the program and those who did not. For example, this comparison could represent savings in public expenses such as unemployment insurances. Furthermore, the proposed threshold of five years is in order to fit financial models that usually estimate the SROI for 1-5 years. Finally, the "Social Impact" field refers to the long term, wider vision and the eventual social change that the enterprise can create. In this example, it can refer to the achievement of gender equality or to having a more inclusive community.

It is important to mention that this last example works mostly on the social and economic spheres. However, the TOC can also illustrate material or resource inputs that can be directly related with environmental assets. For example, in the mentioned case of Salt Water Farming that was supported by SoPact, inputs such as technology, energy or minerals can form part of the "Input" field. This consideration will be important later in this paper when integrating the *prioritized capabilities* with the TOC tool.

Social Return on Investment

Social Return on Investment (SROI) was derived from the financial metric "Return on Investment" that is used to make an assessment of a monetary investment and determine its effectiveness in creating private wealth (Gargani, 2017). SROI purpose is also to make an assessment of a given investment, nevertheless it aims to measure the impact that organizations and programs have on society and the environment. This tool is of particular importance due to the fact that even when there could be appealing and very desirable effects of a social enterprise in its TOC, the economic factors will still regulate the subsistence and success of it. If this financial metric is well understood by the social entrepreneurs and they are able to communicate the impact of their enterprises using arguments that integrate economic, environmental and social benefits, stronger arguments can be brought forward for the investment on social enterprises.

The calculation of the SROI is influenced by different assumptions such as the discount rate and the elements considered in order to generate revenue or create savings for a certain organization. The details of the different methods to calculate the SROI and the range of possible approaches will not be discussed here as it moves out of the scope of this thesis. However, the general approach written by Olsen (2003) will be described in order to provide the necessary understanding of SROI to illustrate its importance and the reason for its integration into SoPact's framework.

The first step relies on quantifying the non-financial impact of the enterprise, either on the social or environmental spheres or both. An example on the social angle would be an enterprise that hires homeless people and provides them with healthcare that would result in the reduction of expenses of the city by cutting down the number of visits to emergency rooms. A different example, now from the environmental angle, would be an enterprise that facilitates the reduction of greenhouse emissions by improving the supply chain of a given company. These impacts must be represented in quantifiable numbers, for example the reduction of visits to emergency rooms in percentage per year or the percentage of greenhouse emissions cut down in a certain time period.

The second step uses this data generated and translates it into monetary terms in order to estimate "social cash flows". Using the previous example, with the data of how much each visit to the emergency room costs, one could calculate the savings in money by multiplying this cost by the number of visits to the emergency room that were avoided thanks to the social enterprise. In the case of greenhouse emissions, the regional emissions trading market can provide earnings to the social enterprise. With this data, one can estimate the savings or the revenue that the social enterprise would generate in a certain amount of years. Since most of the financial projections are based on a five-year time-span, the revenue generated during this time can be divided by the initial investment on the social enterprise, resulting in the final value for the SROI.

It is important to mention that these are hypothetical examples that depend on the enterprise's economic context, the problem that it addresses and the business model that it uses. Because of this reason, SROI is not exemplified in a more detailed manner as further research on the topic would require specific case-studies. Nevertheless, the method is important for two reasons: On one hand it is in line with the theoretical framework where the social enterprises must be in accordance with a market approach but still must prioritize social and environmental goals. On the other hand, it is important for the accelerator as it solves the challenge of translating into measurable units the benefits of social enterprises and it builds a stronger argument on why they should receive investment and support.

5.1.3 Formulation of sub-questions 2 and 3

Up until now, I have argued that when accelerators are informed by a capability approach, social enterprises could be a mechanism to solve environmental and social challenges in ways that contribute toward sustainable development. Nevertheless, a fundamental question lies on how social enterprises can be introduced more efficiently in the economic system of their context and how can they respond to the requirements of the organizations that collaborate with their accelerator. In the case of SoPact, this question translates into how social enterprises can have more encompassing approaches toward the SDGs and at the same time answer to the objectives of the Program for Quality of Life (PQL) adopted by Helsingborg City. Two proposals are given by the transdisciplinary team from each of their experience areas. From my side as sustainability researcher, the theoretical framework proposed in this thesis and the use of Sen's capability approach can bring important contributions to the necessary considerations that need to be made when creating and defining the objectives of a social enterprise. From SoPact's co-founder side, the integration of impact measurement tools in their framework in order to prove the relevance of social enterprises to their context and to build stronger arguments on how they contribute to their collaborator´s objectives. These two insights resulted in the formulation of sub-questions 2 and 3 that focus on the integration and transformation of SoPact's framework through a capability approach.

5.2 Integration of SoPact's Framework: Phase B – Answer to sub-question 2

One of the complexities of transdisciplinary research is getting a joint understanding of the relations between the different concepts, objectives, actors and scales of the elements involved in the process. Several conceptual models were created and discarded during the collaborative research process and even though they are not included in this final paper, they facilitated a joint learning process between the co-founder and me. One of the most relevant diagrams that was created is shown in Fig. 7. The diagram allowed to identify the relationships between the different elements of the research and the possible relationships they may have among each other. The diagram also facilitated a comprehensive understanding of the general scope of the research.

To start untangling the complexity of the diagram, it was necessary to perform a gradual integration of certain elements to identify the interconnections between them and to consequently add the missing ones. The first stage consisted in conceptualizing the relationships between the capability approach, the SDGs and the PQL. This process is described in sub-section 5.2.1. Then, sub-section 5.2.2 presents the second stage which integrates all elements of Fig. 7 and formulates a proposal to improve SoPact's framework as the answer to research sub-question 2.
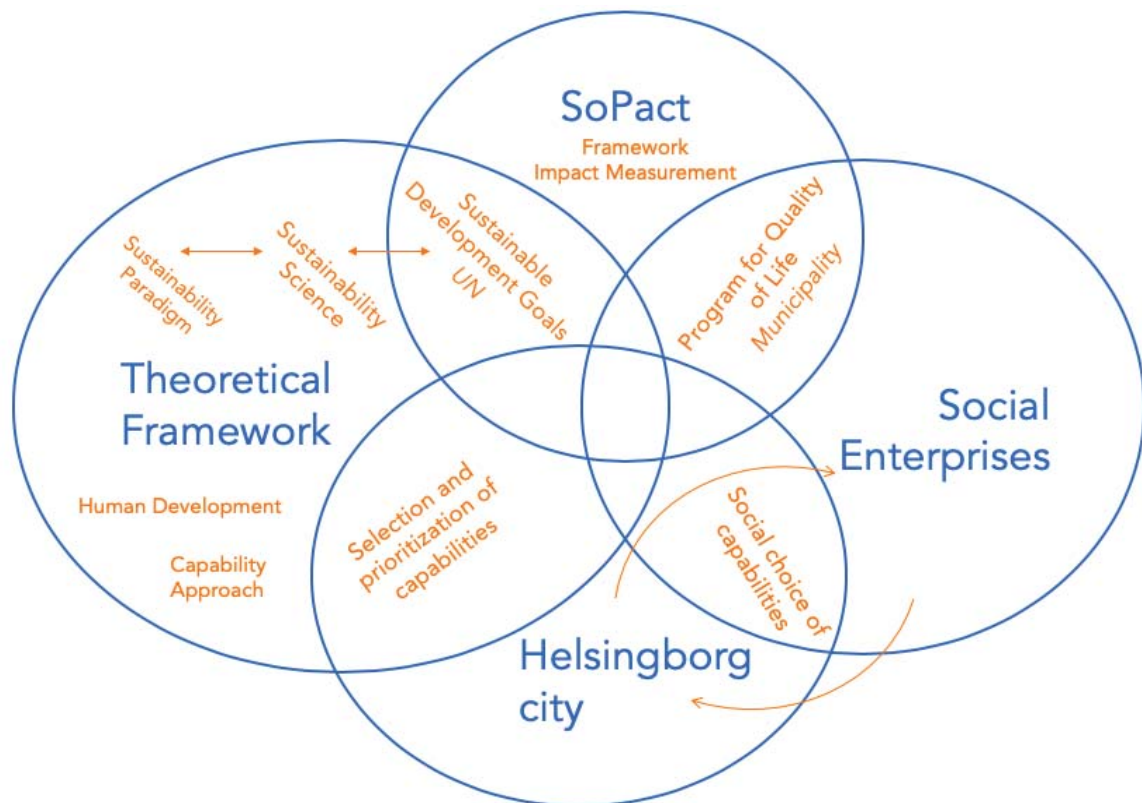
Figure 7. Diagram of the transdisciplinary research. The figure presents the elements that need to be considered in order to guide the research. This visual representation allows to start identifying certain relations that occur in reality and potential interactions to move forward in their integration.

5.2.1 Integration of SoPact's goals and the capability approach

In an ideal capability approach, objective capabilities would be selected by all members of society and then be ranked in order to assign a level of priority when working toward them. This sub-section draws on these two idealized steps as it achieves the first stage of integration.

Selection of Capabilities

Nowadays, the complexity of the different organizations' interests and the plurality of values that can be seen around the world present severe difficulties to implement the first step of the capability approach. Years ago, in order to conciliate this plurality of interests and values, including the operationalization of sustainability among them; Solow (1993) proposed economic growth as the final measure of development and the ultimate objective that nations should follow. We have seen that this approach has failed to achieve sustainable outcomes in our society, generating an economy that can drive global warming to devasting consequences for humanity. Due to this situation, the Paris Agreement brought together most of the nations under a common goal of limiting this warming to 1.5 degrees Celsius (United Nations, n.d.). It also proposed the SDGs in order to create a global

common pathway toward development and to define a blueprint that would facilitate the collaboration and the merging of objectives between different nations and organizations (United Nations, 2018).

As time has advanced, some institutions in different parts of the world have aligned and acknowledged the relevance of these goals. Regardless of the flaws or contradictions that they may present; it is a fact that they provide a platform and a pathway on how our current society can collaborate toward sustainable development. The goals are also relevant for the scope of this thesis for three reasons. (1) They are important for SoPact since they and their supporters – Vinnova, Helsingborg and Lund University – are aligned to the SDGs. (2) The targets under the SDGs can be used as metrics that can be included in the impact measurement tools of SoPact. (3) A conceptual link can be made between the SDGs and the *objective capabilities* in Sen's approach. For these reasons, and since the scope of this thesis does not lie on analyzing or implementing an ideal process for social choice under Sen's approach, I rely on the SDGs to identify capabilities that are to be followed when integrating the sustainability paradigm proposed in this work. I will hereafter refer to the SDGs as the *selected capabilities* when talking about them through the lens of Sen's Human Development.

Prioritization of Capabilities

In order to assign a level of priority to the *selected capabilities,* the argumentation done in the first step is followed. As seen in the answer to sub-question 1, Helsingborg City has already prioritized certain SDGs in their PQL. This ranking is relevant for the integration of the goals and capabilities for two reasons: (1) The PQL is an official guideline for the institutions and organizations working under the municipality's jurisdiction and part of SoPact goals. (2) The ranking presents assumptions that are in accordance to Sen's capability approach.

I will now elaborate over the second reason. The PQL assumes that creating a synergy between the environment and the public health will create the right conditions for well-being and sustainable development. The program focuses on the development of the people in order to facilitate their engagement and contribution to the social, ecological and economic dimensions of sustainability. The empowerment that is expected to be transferred to the citizens of Helsingborg mentioned in the answer to sub-question 1 can be understood as an aim to increase their *objective capabilities* and in this way, allow them to create further expansions of them. The next quote communicates the reliance on citizens to use these capabilities in order to improve their quality of life and at the same time, work toward the solution of environmental and social challenges.

(The program aims to) make people more aware of and willing to take responsibility for solving our common challenges. Solving these challenges does not have to limit our possibilities to satisfy our own needs. On the contrary, solutions based on volunteerism and conscious choices can contribute to a feeling of increased quality of life. Working with quality of life helps to create a balance between different needs, where everything interacts so that we can feel good at the present moment and to ensure the long-term survival of our planet (Helsingborg City, 2016a, p. 6).

The PQL lists five main intentions in order to achieve this synergy:

- A Warm Welcome

- Everyone's Participation

- Lifelong Activity

- Valuable Relationships

- Long-term Responsibility

Within each of these intentions, there are conceptualizations on how to make them a reality and what are the practical steps that are being prioritized in order to achieve this. Instead of describing these conceptualizations, I propose to use Sen's Human Development to identify the capabilities that are being prioritized. I list them now as follows:

- Capability of having the same opportunities for all inhabitants of the city regarding housing and occupation.

- Capability of participation to influence the development of the city and of their own lives through knowledge and gender equality.

- Capability of having different activity options such as access to recreational and nature spaces in order to maintain a constant movement in the city and the physical and mental well-being of its inhabitants.

- Capability of being aware of the valuable relationships in the city between the people, events and the phenomena that exist and how they affect each other.

- Capability of having access to the same natural resources, including future generations.

In the PQL and the capability approach, it is important to mention that these capabilities are not only seen as a right that citizens are entitled to demand but they also assign responsibility on the them in being active participants in the development of quality of life they desire. This participation is indispensable in the conceptualization of Helsingborg City and in Sen's sustainability paradigm in order to achieve the intentions defined by the program and to expand the capabilities that provide

the right opportunities for people to follow lives that they have reason to value. It is for this reason that Sen's Human Development is comprehensive enough to argue on why the approach of Helsingborg City is relevant. On one hand it supports the approach of prioritizing the SDGs that are directly related with the development of society. And on the other hand, it allows to understand the program as a capability approach where the empowerment of the individual is important *as means for development* and to gradually achieve the *primary end* as the expansion of freedoms.

Figure 8 will now summarize the SDGs that are to be prioritized following the approach of the PQL, their relations or equivalents to the intentions written in the document of the program and how they are conceptualized as capabilities.


Figure 8. Prioritized capabilities by Helsingborg City. At the global level they can be identified with the selected SDGs. At the city level, they can be understood by the five overarching intentions of the city stated in the PQL. Both of these levels can be identified with the capabilities defined on the last column.

I will now refer to these capabilities as the *prioritized capabilities.* These *prioritized capabilities* can be related to the global level through the SDGs or to the local level through the PQL. The prioritization of these capabilities and their relation to institutional goals is important for SoPact as social enterprises can relate to them when creating their business model and to have stronger selling points when looking for funding. It is also valuable since it narrows down the extensiveness of the SDGs and facilitates the conceptualization of the PQL when trying to convey this information to social entrepreneurs. The next sub-section will now focus on integrating these prioritized capabilities to the SoPact tools in order to create a proposal for the improvement of its framework.

5.2.2 Integration of the prioritized capabilities with SoPact's tools

This sub-section presents the final conceptualization and the corresponding relationships resulting from Phase B that aim to inform and contribute to SoPact's framework. This conceptualization is also valuable as it links the theoretical framework of this thesis with a practical application in reality. Figure 9 provides a visual representation of the elements and relationships of Phase B and how they inform each other.
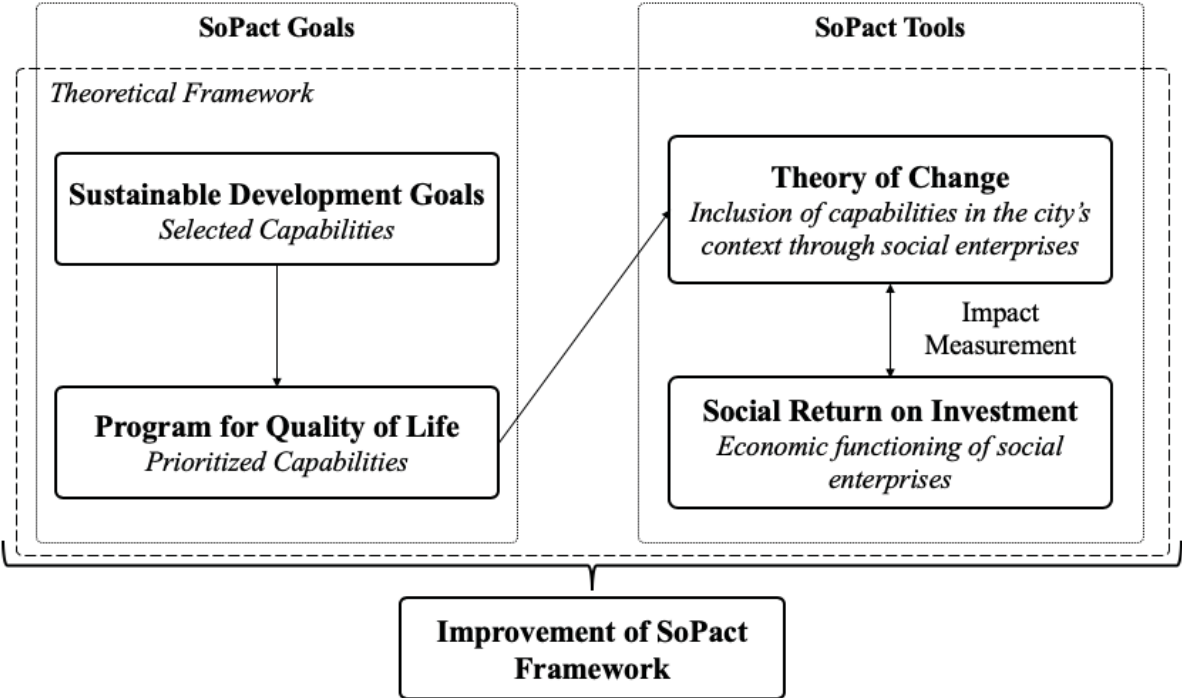
Figure 9. Capability approach integrated to SoPact tools. On one hand the goals of SoPact allow to merge the theoretical framework resulting in capabilities that are to be prioritized. Then the tools for impact measurement can make use of this merging to focus on these prioritized capabilities through their activities and relate to them when building their business model.

The theoretical framework of Sen's Human Development as capability approach is present in all the elements since it provides a comprehensive understanding and approach toward the achievement of sustainable development. Through the lens of this theoretical framework, SDGs were relabeled as the *selected capabilities* due to their relevance for SoPact and its connection to national and local goals. In the specific case of this work, the operationalization of Helsingborg City based on prioritizing the goals that are related to society is of important value for two reasons. First, according to the capability approach, a prioritization must be done by the members of society to select the capabilities that society must focus on. For this thesis, even though the prioritization is not made by social choice, the one proposed by Helsingborg City is used due to its validity in the influence of social reality as it will be followed by the different entities within the city. Second, this prioritization follows

Sen's Human Development by focusing on the development of society through the well-being of its members and their active participation complemented by the protection of the environment. The economy is seen only as a mean to achieve these main goals.

Then we move into the tools that can be used by social enterprises in order to introduce these *prioritized capabilities* into Helsingborg City. On one hand the TOC maps the inputs and activities that are needed in order to make available these capabilities. It then defines the short-term and long-term social impact that is aimed to achieve. In conjunction with this mapping, the Social Return on Investment allows to include the *prioritized capabilities* in the financial models in order to make the social enterprises function within the economic system.

This sub-section represents final answer to research sub-question number 2 by identifying the conceptualization of the global and local goals through the theoretical framework and the relations to the practical tools that can be used in the framework of SoPact. This understanding now allows to move to the third question where the transformation of SoPact's framework takes place in order to convey this complexity in the most adequate way to emerging social enterprises and social entrepreneurs.

**5.3 Transforming SoPact's Framework: Phase C – Answer to sub-question 3**

Throughout this work it has been possible to get hold of the complexity that a comprehensive study of sustainability science requires and the complexity that social enterprises face in order to achieve their objectives. Social entrepreneurs are generally very self-driven individuals that have an intrinsic motivation to implement innovative and practical solutions to the problems that currently exist. It is for this reason that the conventional Business Model Canvas has been widely used by accelerators due to its visual appeal and its usefulness in compiling the key information of an enterprise. It is also for this reason that it is necessary to summarize and convey the understanding acquired in this work in the simplest and most effective way.

In order to achieve this, I elaborated on environmental prioritized capabilities and social prioritized capabilities, presented below.

5.3.1 Environmental prioritized capabilities

The first step was to identify the *prioritized capabilities* related with the sustainability or protection of the natural resources that I will now refer as *environmental prioritized capabilities*. Looking at the available tools of SoPact, on one hand the SoPact BMC and on the other one, the TOC; the fields of

"Resources" and "Inputs" are present respectively. As mentioned before, these fields may refer to human capital or other type of elements that the social enterprises need. Nevertheless, it can also be related to the natural capital, making it necessary to acknowledge that the *environmental prioritized capabilities* must be taken into account in these fields. In addition, the field "Negative Impact on Society" must also consider these capabilities since the preservation of natural resources is vital for following the capability approach as mentioned in the conceptualization of the sustainability paradigm. Finally, not only avoiding having a negative impact on natural assets but also having them as a main goal for a positive contribution allows to locate these *environmental prioritized capabilities* on the fields of "Value Proposition" and "Positive Impact on Society". Figure 10 shows graphically the mentioned relations between these tools using SDGs 6, 13, 14, and 15 as the *environmental prioritized capabilities*.
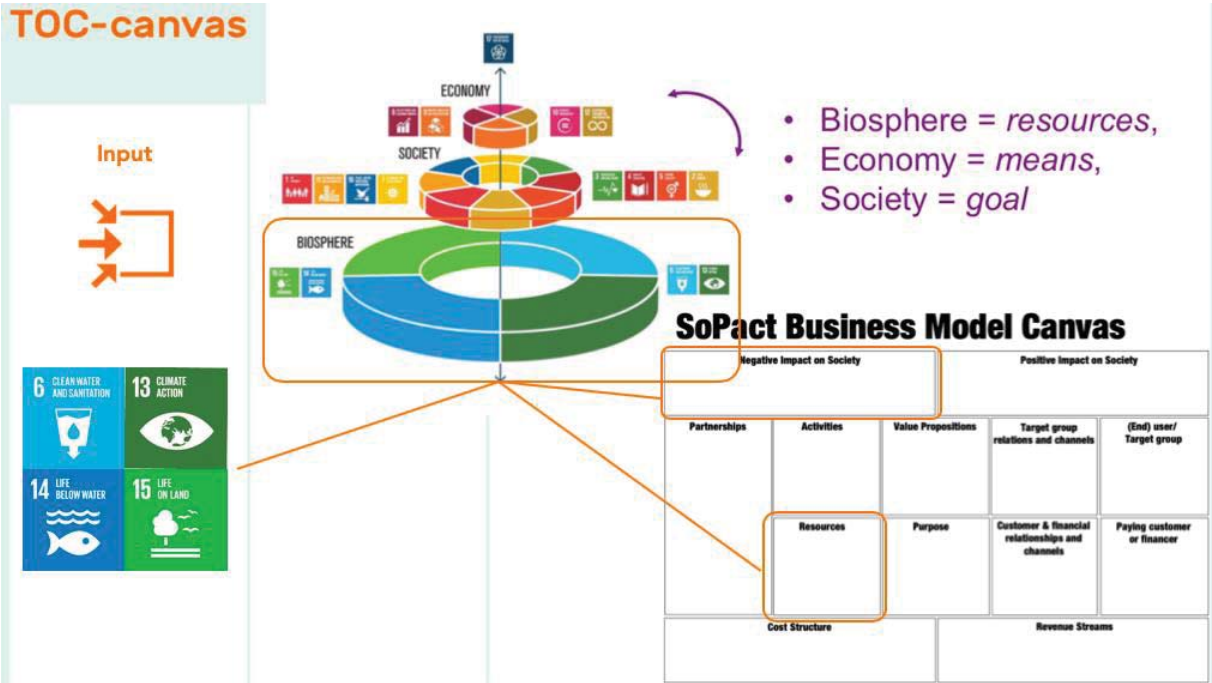
Figure 10. Environmental prioritized capabilities on SoPact tools. The SDGs 6, 13, 14 and 15 are used to represent the prioritized capabilities related with natural resources and are linked to the fields where they are relevant on the SoPact BMC and TOC.

The next step consisted into looking for similarities between the TOC and the SoPact BMC. Both tools contain the field "Activities" and refer to the same concept when talking about social enterprises. If we look at the SDGs that are not being prioritized in the capability approach (8 Decent Work and Economic Growth, 9 Industry Innovation and Infrastructure, 10 Reduced Inequalities, 12 Responsible Consumption and Production) and that conform the level labeled as "Economy" in the PQL, an argument backed up by the reason *as means for development* in Sen's approach can be made in this field. The argument is that if the *prioritized capabilities* are conceptualized as the *primary end*, then

the *means for development* reason would dictate that the economy, infrastructure and consumption patterns will gradually be shaped by an increasing number of members of society as the expansion of capabilities would allow more people to participate in this process. This means that these SDGs will also be transformed through the capability approach even if they are not the main objective. Their purpose would only be to facilitate the delivery of the *prioritized capabilities*. This is not only relevant on the theoretical sense but also practical. Relating social enterprises to these goals would make them acquire stronger arguments and selling points if they argue on how these SDGs are part of their activities. For example, social enterprises may provide decent work and contribute to a healthy economy as per SDG 8. They can also have industrial innovation and infrastructure (SDG 9) or activities that contribute in the reduction of inequalities (SDG 10) and the use of responsible patterns of production and consumption (SDG 12). As long as these goals occur as part of the process to achieve the *prioritized capabilities*, they can contribute to the argument on how social enterprises are connected to the SDGs and the PQL. Figure 11 shows how can these SDGs be included in SoPact tools.
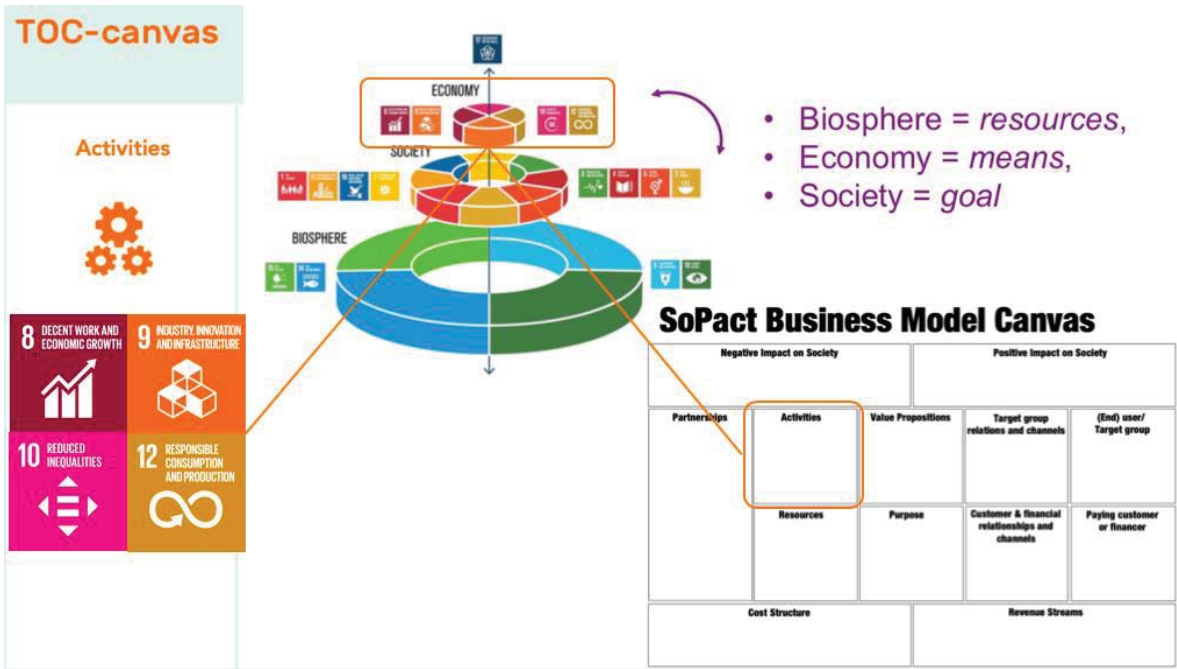
Figure 11. Relevance of non-prioritized capabilities on SoPact Tools. The SDGs 8, 9, 10 and 12 are used to represent the non-prioritized capabilities related with the economy and how they are linked to the fields where they are relevant on the SoPact BMC and TOC.

5.3.2 Social prioritized capabilities

The final step, following this line of thought, was to include the *prioritized capabilities* related with society, which I will now refer as *social prioritized capabilities.* These *social prioritized capabilities* can guide social enterprises into focusing on this approach. In the TOC tool, the identified fields are those

that represent the short and long-term effects of the social enterprise. In the SoPact BMC, the identified fields where the main goals of the social enterprises are mapped are the "Value Propositions" and "Positive Impact on Society" fields. Figure 12 shows graphically these relations where the *social prioritized capabilities* can be included on the SoPact tools.
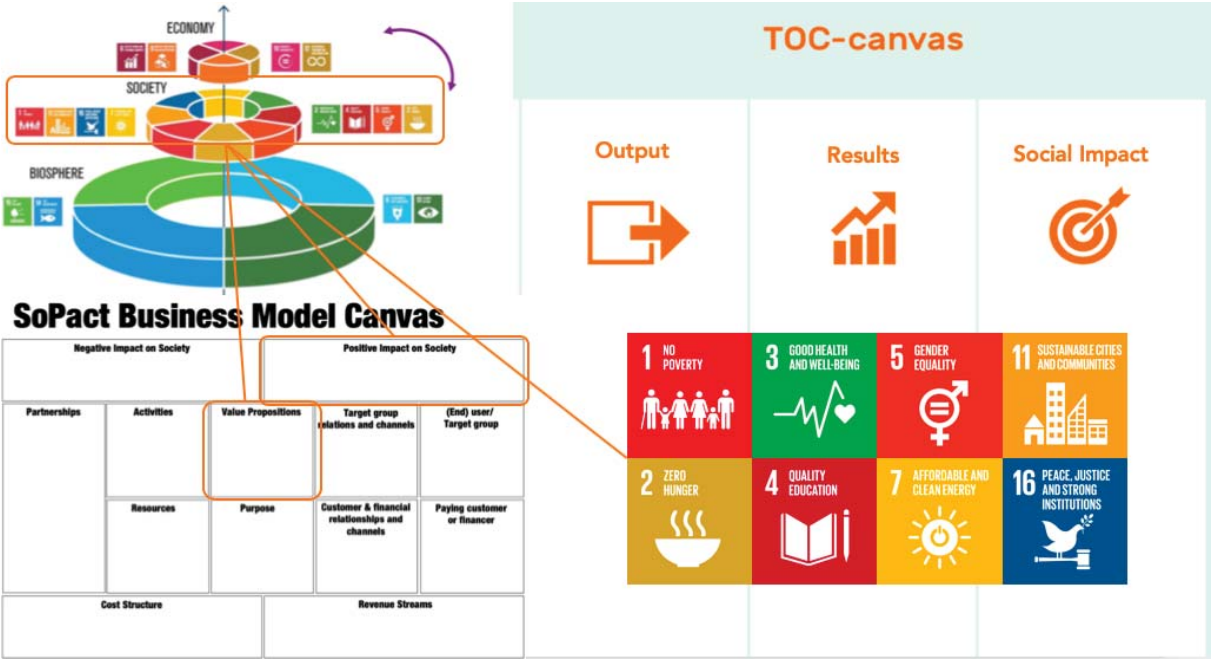

Figure 12. Social prioritized capabilities on SoPact tools. The SDGs 1, 2, 3, 4, 5, 7, 11 and 16 are used to represent the prioritized capabilities related with social goals and are linked to the fields where they are relevant on the SoPact BMC and TOC.

The process of identifying where the *prioritized capabilities* have the best fit in the tools according to Sen's Human Development allowed to find a relation between the SoPact BMC and the TOC. Strong similarities where found between the fields of each tool that shared specific prioritized capabilities in terms of the functions that the fields aim to achieve. This resulted in the opportunity of merging the SoPact BMC and TOC in order to facilitate the communication of this framework to emerging social enterprises and the entrepreneurs behind them. With this incorporation, the only missing tool to fully represent the logic behind Fig. 9 (answer to sub-question 2) was SROI. As we saw in sub-section 5.1.2., this tool is directly related to the finances of the enterprise but using information of other fields. Therefore, it is relevant to include it in the same template within the fields of "Cost Structure" and "Revenue Streams" as both are related with the economic functioning of the social enterprise. In addition to this incorporation, given the fact that SROI works with quantitative measurements; a report provided by the Global Reporting Initiative & United Nations Global Compact (2017) was identified. This report is relevant as its purpose is to aid companies in identifying linkages between the SDGs targets and measurable concepts that can be related to the social enterprises' operations.

The document is extensive and can be overwhelming, nevertheless with the conceptualization made in this thesis, the potential measurable concepts is narrowed down to certain targets that can facilitate the engagement of the social entrepreneurs with this source. The final integration of all the elements mentioned before is now shown in Fig. 13 including the fields where this last report can become useful for impact measurement.
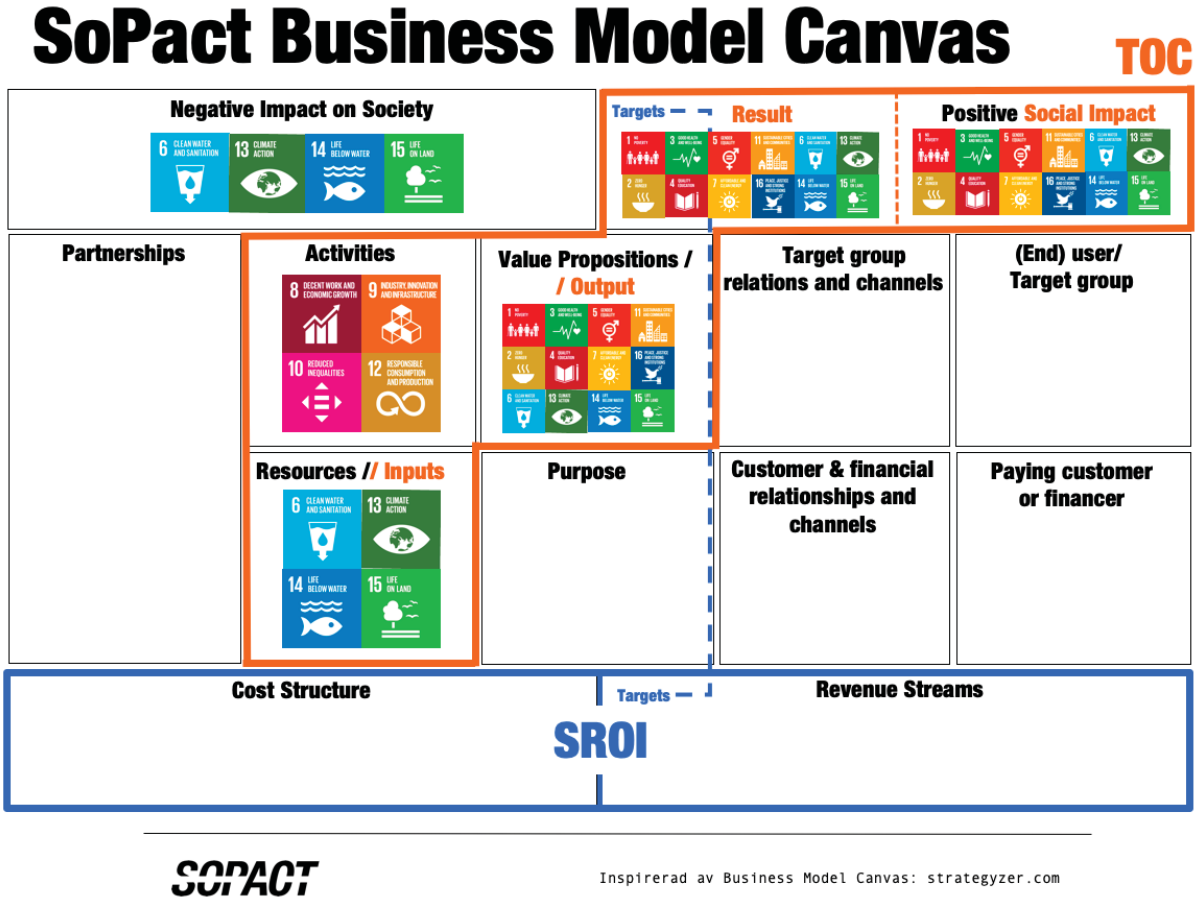
Figure 13. Final integration of SoPact's tools and the sustainability paradigm. The representation uses the SoPact BMC as the initial framework to add the TOC and the SROI in the fields that share the same purpose. Then, the distribution of the prioritized capabilities represented by the corresponding SDGs is also included. Finally, the fields that could have input from the Global Reporting Initiative & United Nations Global Compact (2017) report are identified with the label "Targets".

Figure 13 illustrates the final result of the transdisciplinary research process as answer to sub-question 3 by effectively transforming the existing framework of SoPact. This was done by applying a capability approach as sustainability paradigm to conceptualize the existing relationships between the accelerator and the objectives that their collaborators aim to achieve. The result is also a single visual representation that aims to effectively transmit the theoretical considerations behind the transdisciplinary research to social entrepreneurs in combination with the use of tools that are relevant for emerging social enterprises.

5.4 Generalizing Knowledge: Phase C – Answer to overarching research question.

This thesis asked how Sen's *Human Development* as *sustainability paradigm* could be used to create a framework that when used by *accelerators*, improves the outcomes of the *social enterprises* that it supports, both in the social and environmental spheres. As an important preface, we must recognize that the creation of a useful and impactful framework by and for accelerators is subject to the different goals, tools and interests of the partners, sponsors and collaborators of the given accelerator. Any framework applied by accelerators will also be in constant transformation and influenced by the funding that the accelerator receives, the time-frame that it has to be operationalized and the continuous interactions that the accelerator has with other actors in society. For this reason, it is important to notice that the framework is a changing element that aligns and transfers different goals and tools to social enterprises depending on the changing context of the accelerator.

I have argued that the inclusion of a comprehensive sustainability paradigm such as Sen's Human Development can help to anchor certain conceptualizations in the changing dynamics of the accelerator's framework. More specifically, through a transdisciplinary research it is possible to create a framework that translates the changing goals of the accelerator into prioritized objective capabilities that are aimed to be introduced into society, and with this, facilitate its operations. The findings of this thesis suggest that may require at least two conditions to be achieved.

A first condition concerns the benefits of having a transdisciplinary team that can effectively combine the knowledge of an academic actor (with an understanding of the given sustainability paradigm) and an experienced member of the accelerator (that can understand how this could, or could not, be applied). This can allow for an effective integration of the accelerator's goals with theoretical foundations.

A second condition to make possible this integration, is that the goals (and therefore also the funding) of the accelerator must to some extent be aligned with the capability approach in order for Sen's sustainability paradigm to be integrated. An accelerator that purely focuses on monetary valuations would probably impede the practical use of this sustainability paradigm. This relates to the tools analyzed in this case-study. The tools aim to work with the market approach by using financial components to inform on how the integration to the economic context of the social enterprise can be done. They also aim to identify and transmit the impact achieved by social enterprises. Nevertheless, the tools can be useful for any type of enterprises, both those that focus solely on economic growth and those that seek to contribute toward human development. The concepts used

in each field of each tool can dictate the operationalization of sustainability that enterprises will follow. Therefore, the sustainability paradigm as capability approach can be useful to identify the capabilities that are aimed to be expanded and then use them as the desired outcomes of the tools (i.e. contribute toward achieving Sen's Human Development).

6 Discussion

The outcomes of this research suggest that a specific conceptualization of sustainability can shape the assumptions and operations of an accelerator. If, for example, the circumstances of a given context require using only market value in monetary terms as the tool to evaluate sustainable development, the results of this work would probably differ. A purely market-oriented approach would entail making decisions only in terms of the economic feasibility of the projects and would prioritize tools such as Cost-Benefit Analysis (Boda & Faran, 2018). Nevertheless, as mentioned by Gargani (2017), tools that give purely numeric indicators leave out a range of impacts and perspectives when evaluating social or environmental projects.

The theoretical framework proposed in this thesis provides a set of conceptualizations, relations and understandings that can be useful for accelerators and social enterprises. The application of Sen's Human Development as a sustainable paradigm allowed for a shift away from purely economic decisions toward analyzing what development entails for society and suggesting other ways for how it could be operationalized. Sen's approach is valuable as it draws on the existing economic system but expands by shifting its considerations toward those that are necessary for the process of sustainable development. To generalize the findings of this research process and to make them applicable, it is necessary to understand the fundamentals of the reasoning process that led to this thesis and how they can be a valuable source of knowledge for sustainability science.

The first foundational point lies on analyzing the relationships that exist in the context where a given accelerator operates. As seen with the case of SoPact, these are two-way multi-stakeholder relationships between the accelerator and governments, municipalities, institutions and other organizations. Similarly, the accelerator is also embedded in a two-way relationship with the social enterprises or social entrepreneurs; where the success of both parties is interconnected. For these reasons, the understanding and mapping of the main interests of the different funding bodies and linking them with social enterprises is important since the accelerator functions as a node between them. It is within this set of relationships that the specific framework applied by the accelerator actually represents how the accelerator attempts to converge and integrate these different interests in benefit of all the actors involved. Therefore, I have argued that linking scientific understanding with accelerators is valuable as this can allow a more informed integration of both a relevant sustainable paradigm and the particular interests of the stakeholders involved.

Proceeding, a second fundamental lies in the use of a capability approach as sustainability paradigm; given that aforementioned interconnections allow it. This means that not only do the stakeholders of the accelerator have to prioritize other values besides economic growth, but also that the relationship between accelerators and enterprises explicitly aim to produce a net positive outcome in the environmental and social spheres of society. I have argued that with these pre-requisites present, the capability approach can be merged in the functioning of the accelerator through the identification of capabilities that are prioritized. The identification of *prioritized capabilities* can allow for a selection process where the most relevant elements of the framework (i.e. tools and templates) can be chosen to be integrated. Furthermore, a capability approach could here help expose and question what are the real objectives that stakeholders aim to achieve and how these are related to sustainability as human development.

Finally, another important consideration that has not been emphasized before in this work is the relevance of the political sphere and its support for the existence of social enterprises and their accelerators. Political support can come in the form of funding, material resources or the access to different networks and is linked to the vision of development that a given political jurisdiction has. The case of Helsingborg city can be discussed using the findings of this thesis. The municipality, representing the political sphere of parliamentary democracy, through its PQL has redirected the focus of sustainable development to society, including public investment in an accelerator that supports social enterprises. This can be seen as transferring a certain degree of agency into the social sphere and an attempt into reducing the dominance of the economic sphere. The identification of a context where the social sphere has a certain relevance and is not completely overshadowed by the economic sphere may provide a setting where accelerators and their social enterprises can be more prone to appear and succeed. If the political and economic spheres have outweighing dominant positions over the social one, it is possible that the probability of the emergence of this type of accelerators will be reduced.

6.1 Further Research

Three future research opportunities are now presented to conduct further research that can provide valuable insights for linking more effectively sustainability science with social enterprises and their accelerators.

First, when starting a social enterprise, the values, purpose and mission of it are very closely linked to the social entrepreneur. The social enterprise usually comes from the inner drive of an individual of solving a practical problem in society and possibly dedicating full-time work to achieve this solution.

As the social enterprise continues to evolve, goals and tools are introduced into its operations in order to allow its efficient functioning and expansion within the socio-economic context that it is part of. The expansion usually requires that members are integrated, and each partner inevitably comes with their own worldviews, beliefs and mindsets. Furthermore, they can come with their own conceptualizations of development, a specific approach toward sustainable development or even with their own problem framings that can influence how the initial problem was aimed to be solved. Due to these reasons, and as the social enterprise grows and increases its complexity through its operations with different stakeholders and collaborators, the social entrepreneur and the social enterprise start to become two different entities. Future research is proposed that analyzes possible strategies on how to maintain the focus on the solution of environmental and/or social challenges (i.e. through a capability approach) without falling into a purely economic growth paradigm. The research of this this thesis highlighted the field named "Purpose" in the SoPact BMC which intention is to tightly link the core problem or mission of the social enterprise to be valid through all the stages of its development. Research on how to conceptualize this relationship and how is affected by accelerators could contribute to sustainable science when analyzing how social enterprises can be a mechanism to implement sustainable development.

Second, most of the literature found throughout this research has related to specific cases of social enterprises and how they relate to the context where they appear. Drawing upon the findings of this research process, a more extensive study is proposed that effectively categorizes under a certain standard the types of goals that successful social enterprises have followed, including the most efficient tools that they applied in order to achieve these goals. This study would be valuable for sustainability science in order to have a more comprehensive understanding of how social enterprises operationalize sustainable development and for current accelerators in order to inform their frameworks. The research could also be complemented by analyzing what are the factors that determine the success and effectiveness of a social enterprise in solving environmental and social problems. Furthermore, social enterprises have appeared in developed and developing countries and in different types of contexts. Therefore, a study that illustrates what are the key factors that can increase the probability of success of a social enterprise is argued to be useful for sustainability science in order to create a generalizable knowledge of this phenomenon. In addition, it could also inform accelerators on ways to improve the framework that they use in order to accelerate social enterprises.

Third, in the specific case of SoPact, two of the main stakeholders' goals were used to perform the integration with relevant tools for impact measurement. A further inclusion of the goals and

approaches of the rest of the stakeholders and collaborators of SoPact could be an opportunity to expand this research with the possibility of being integrated into the framework resulting from this thesis. This could provide valuable knowledge for sustainability science in order to get an understanding of the full complexity that an accelerator holds and to understand how science could make a contribution through transdisciplinary research. The results would also generate outcomes for social practice if this further integration can be reflected in the framework of SoPact. Social enterprises could then relate themselves to the goals of all the actors related with the accelerator. In addition to this, research could be also done to analyze the relationships between Helsingborg City and the departments that operate under its jurisdiction to understand how they deal with social and environmental problems. A fundamental question would lie on how these departments align or operationalize the PQL or at what degree the program influences their operations. If tensions exist between the departments of Helsingborg City and the application of the PQL, social enterprises could function as an alternative to solve these tensions.

7 Conclusion

This paper started by pointing out the reason behind the creation of accelerators and their relevance to their corresponding social structural and institutional context. It then moved to social enterprises that focus on producing social and environmental value; even though they are also required to be economically functional. This starting point led to the elaboration of two tasks. First, the conceptualization of a theoretical framework that would allow for an understanding of how Human Development as sustainability paradigm can be matched with the relationships between accelerator and social enterprises, and their outcome to society. Second, the design of a transdisciplinary research process that could allow for an understanding of how this conceptualization could be related and applied to a specific context.

This thesis mainly focused on the second task; untangling the complexity of the accelerator SoPact through a research design that aimed to generate socially relevant questions and results and while also producing scientific knowledge. The operation of SoPact has to align its goals to a prioritization of the Sustainable Development Goals done by Helsingborg City and to use impact measurement tools such as Theory of Change and Social Return on Investment. These elements were conceptually integrated to the sustainability paradigm that focused on analyzing which capabilities are aimed to be introduced in the socio-economic context of Helsingborg and how the tools can support this inclusion. This conceptual integration was then used to produce a tangible outcome that could be relevant for social practice. The element that allowed to achieve this task was the SoPact BMC, a template that already contains several considerations to support both, the operation of social enterprises in their specific economic context and their focus of creating social and environmental value. Nevertheless, the template allowed to visually add this conceptual integration that aims to improve the process of supporting the operations of emerging social enterprises.

Finally, I argued that this process was only possible due to the alignment of the different actors involved in SoPact toward social and environmental goals. Without the explicit focus of Helsingborg City (an important source of funding for SoPact) on the development of society, the need of integrating scientific knowledge concerning sustainability science in relation to the Sustainable Development Goals, and the flexibility of the accelerator in integrating these approaches, the result of this process could have presented much more difficulties.

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