



UPPSALA
UNIVERSITET

Master thesis in Sustainable Development 2019/45
Examensarbete i Hållbar utveckling

Enabling Circular Economy with Digital Technology -A case study On the Swedish Online Secondhand Business Sellpy.

Jakob Roséen

DEPARTMENT OF
EARTH SCIENCES

INSTITUTIONEN FÖR
GEOVETENSKAPER

Enabling Circular Economy with Digital Technology -A case study On the Swedish Online Secondhand Business Sellpy.

Jakob Roséen

Supervisor: Per-Anders Langendahl
Subject Reviewer: Cecilia Mark-Herbert

Enabling Circular Economy with Digital Technology - A Case Study on the Swedish Online Secondhand Business Sellpy

JAKOB ROSÉEN

Roséen, Jakob., 2019: Enabling Circular Economy With Digital Technology - A Case Study on the Swedish Online Secondhand Business Sellpy. *Master thesis in Sustainable Development at Uppsala University*, No. 2019/45, 49 pp, 30 ECTS/hp

Abstract:

Recognizing the responsibility businesses has in sustainable development, a rising number of entrepreneurs are attempting to innovate business models together with digital technology to address environmental and societal needs. Circular business models is an example of how businesses can become more sustainable. However, there is a growing phenomenon of entrepreneurs suggesting digital platforms as a supportive element in an enterprise to enable circular features. This research aims to investigate the role of a single entrepreneur as a transition intermediary to sustainable development by using digital platforms. Additionally, this research aims to explore the success factors and challenges this entrepreneur can uncover. Contrary to most studies, this thesis adopts the entrepreneur's perspective as being a key actor in sustainable development but also as an innovative force in a socio-technical system. A case study was conducted on the Swedish online secondhand store Sellpy. The qualitative data were collected using semi-structured interviews. Given the thesis' exploratory research design, the finding can be used in further research as artifacts for more conclusive and generalizing research. The entrepreneur, as a transition intermediary, can establish valuable partnerships and networks to accelerate circulation and sustainability awareness. Additionally, the entrepreneur can influence others by spreading knowledge to engage other entrepreneurs to innovate businesses towards sustainability. The main success factors found in this case study is the approach to develop with the user community, digital ownership, skilled and diverse workforce, and partnerships with similar businesses. The challenges discovered was to maintain and find new users to enter the circular system and the external skepticism towards sustainability-oriented businesses.

Keywords: Innovation management, Circular Economy, Transition Intermediaries, Sustainable Development, Strategic Management, Sustainable Business Models

Jakob Roséen, Department of Earth Sciences, Uppsala University, Villavägen 16, SE- 752 36 Uppsala, Sweden

Enabling Circular Economy With Digital Technology - A Case Study on the Swedish Online Secondhand Business Sellpy

JAKOB ROSÉEN

Roséen, Jakob., 2019: Enabling Circular Economy With Digital Technology - A Case Study on the Swedish Online Secondhand Business Sellpy. *Master thesis in Sustainable Development at Uppsala University*, No. 2019/45, 49 pp, 30 ECTS/hp

Summary:

Businesses are, by some seen as the primary reason for the world's current environmental and social depletion. However, businesses are by some also regarded as one of the most important actors to accelerate sustainability-innovation. In recent years, new apps such as Karma, Too Good To Go, Sellpy, or Olio that claim they promote circular and sustainable lifestyles with the use of digital platforms has increased. Regardless if these apps have the sustainable impact they claim they have is yet unknown. However, they become examples of the increasing efforts in innovating business models to explore business opportunities in sustainability. In the meantime, there is an ongoing debate on whether these sustainability-oriented businesses accelerate a sustainable transition within the business community and if they are capable of turning profitable. There are different methods in observing and understanding these sustainability-oriented businesses. This thesis is investigating the online secondhand store Sellpy to understand the role of the entrepreneur in circular economy and their challenges and success factors. This research is done by conducting a case study on Sellpy using in-depth interviews to retrieve valuable data. This thesis hopes to shed light on the entrepreneur's role in a significant industrial change towards the more sustainable.

Additionally, it can provide knowledge to further encourage generalizations in the topic of sustainable entrepreneurship, sustainable development, and digital business. By using the theories on transition intermediaries and circular economy, this thesis can grasp a theoretical approach of analyzing the entrepreneur and its sustainability efforts. This research finds that the entrepreneur, as a transition intermediary, can build valuable partnerships and networks to stimulate circular economy and sustainability awareness. Additionally, the entrepreneur can influence others by spreading knowledge to engage other entrepreneurs to innovate businesses towards sustainability. The main success factors found in this case study are the approach to develop with the user community, digital ownership, skilled and diverse workforce, and partnerships with similar businesses. The challenges discovered are to maintain and find new users to enter the circular system and the external skepticism towards sustainability-oriented businesses.

Keywords: Innovation management, Circular Economy, Transition Intermediaries, Sustainable Development, Strategic Management, Sustainable Business Models

Jakob Roséen, Department of Earth Sciences, Uppsala University, Villavägen 16, SE- 752 36 Uppsala, Sweden

Table of Contents

1 Introduction.....	1
1.1 Focus, Aim and Research Question.....	2
1.1.1 Delimitation and Focus.....	2
1.1.2 Aim and Research Question.....	2
2 Empirical Background.....	3
2.1 Innovation and Sustainability Transition.....	3
2.2 Digital Technology and Sustainability.....	4
2.3 Intermediaries in Innovation.....	5
3 Theoretical Framework.....	6
3.1 The Concept of Circular Economy.....	6
3.1.1 Circular Economy.....	6
3.1.2 Thinking Circular Economy - Theory and Practice.....	7
3.2 Circular Economy and Business Models.....	8
3.2.1 Business Model Definition.....	8
3.2.2 Circular Business Models.....	9
3.3 Theory of Intermediaries and Business models.....	10
3.3.1 Transition Intermediaries in Innovation and Sustainability.....	10
3.3.2 User Intermediaries.....	11
3.4 Theoretical Framework of User Intermediaries Enabling CBM.....	11
4 Methods.....	13
4.1 Philosophical Stance.....	13
4.2 Research Approach.....	13
4.3 Research Design.....	14
4.4 Research Strategy.....	14
4.5 Data Collection and Analysis.....	14
4.5.1 Selection of Case and Data Collection Method.....	14
4.5.2 Interview with Lisa Book Taube Sellpy.....	15
4.5.3 Data Analysis.....	15
4.6 Validity, Reliability and Generalizability.....	15
4.7 Limitations.....	16
5 Empirical Results.....	17
5.1 Case Overview.....	17
5.2 Summary of Findings.....	17
5.2.1 Entrepreneurship.....	17
5.2.1 Challenges and Success Factors.....	18
5.2.3 Business Model.....	19
5.2.4 Digital Technology.....	20
5.2.5 Competitors.....	20

6 Analysis.....	22
6.1 The Role of the Entrepreneur as an Intermediary.....	22
6.2 Circular Business Model and Intermediaries: Challenges and Success Factors	23
6.2.1 User Community	23
6.2.2 Business Model	24
7 Discussion	26
7.1 The Role of the Entrepreneur as an Intermediary.....	26
7.2 Circular Business Model and Intermediaries: Challenges and Success Factors	27
7.2.1 External Skepticism.....	27
7.2.2 User Community	28
7.2.3 Digital Platform and Digital Ownership	28
8 Conclusions.....	30
8.1 Key Findings and Contributions.....	30
8.2 Suggestions for Further Research.....	31
Acknowledgement	32
References.....	33
Appendices	41
Appendix 1 A linear versus a circular industrial model	41
Appendix 2 - Features of CBMs and Conceptualization.....	42
Appendix 3 - Theoretical Framework of User Intermediaries Enabling CBM.....	42
Appendix 4 - Results from Analysis	43
Appendix 5 Interview Guide and Design and Data Analysis from Theoretical Framework	44

1 Introduction

The WWF (2016) estimates that the economy alone, in terms of consumption and production, exhausts the earth's natural capital to the degree that the world needs 1.6 earths to meet the human consumption, for the year 2012. While some researchers argue that businesses are the primary cause for this outcome, others argue that the business community is adapting innovation to seek new business opportunities in sustainability, which could be a possible path to accelerate a sustainable transformation (Gajda 2004). Both terms, sustainability and sustainable economy, have been highly debated in policy making and the media for the last 30 years (Beckerman, 1994). The most widely acknowledged definition of sustainable development is found in the report of the World Commission on the Environment and Development in 1987, also known as the Brundtland Report (Banerjee, 2003; Gladwin et al., 1995). The Brundtland (1987) definition claims that “*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*” (Brundtland, 1987, p. 41). Additionally, debates concerning the term sustainable development, corporate sustainability that, in-short, aims to address sustainable development within businesses, has failed to produce a transformation that harmonizes and prospers the relationship between ecology, economy, and society (De Angelis, 2018). Gradually, Business as well as Natural Environment academics request more fundamental changes and especially innovative business models grant new methods of creating, delivering and capturing value while generating positive ecological and social impact (Haigh and Hoffman, 2014).

The linear logic of take-make-dispose in current industrial models does not only generate resource depletion, waste, energy use, and other environmental burdens, but is also questioned by socio-economic and regulatory trends, such as volatile resource prices and an increasing middle class that accelerates consumption (Ellen MacArthur Foundation, 2015b). The concept of circular economy (hereby CE) has the potential to replace the linear logic of old industrial models with components regenerating value, delivery, and capture in the business model and thus result in a circular business model (hereby CBM) (Ellen MacArthur Foundation, & McKinsey, 2012). With that said, the Ellen Macarthur Foundation (2016) calls for more research regarding the implementation of circular practices in business models. Collaterally to the debate on new business models for sustainability, the rise of digital technology has paved the way for new production and distribution methods with new business models aimed at accelerating digital transformation and productivity (Ustundag and Cevikcan, 2018). Additionally, entrepreneurship can create innovation by matching technological possibilities and market demand (Weiblen and Chesbrough, 2015). In the shadow of the rise of digital business models, innovative businesses have emerged unifying digital transformation and sustainability.

Startup investor such as Norrsken Foundation in Stockholm, Sweden, have recognized this branch of new innovative startups. According to Norrsken (2019), they aim to bridge digital technology and sustainability to create commercial businesses that make a positive impact. Additionally, while supporting sustainability-oriented startups with financial capital and guidance, these investors such as Norrsken also seek to minimize the gap between traditional industries and innovative sustainability-oriented startups (Farmbrough, 2018). The theoretical perspective on digital technology in sustainability is reasonably new but lack research (Kivimaa, 2019). Researchers have brought attention to transition intermediaries as a way to conceptualize innovative business models using digital technology in sustainability. Kivimaa et al., (2019) argue that the concept of intermediaries can be a possible way to explore and understand sustainability-oriented startups and SMEs role in a sustainable transformation. Intermediaries are defined as actors who create spaces and opportunities for support and usage of rising technical or cultural products (Stewart and Hyysalo, 2008). This thesis will draw from the two theoretical fields, transition intermediaries and CE, to investigate the role of the entrepreneur which uses digital platforms to enable CBMs.

1.1 Focus, Aim and Research Question

1.1.1 Delimitation and Focus

Two distinct focus areas are identified to conduct this study. Firstly, this study does not intend to investigate how a transition from one socio-technical system to another may come about. Rather it focuses on a key actor within society that may have relevance for transition to more sustainable society. Since innovation and transition cannot be fully known considering they are complex and uncertain, this study focus on what happens in society as part of innovation and change for sustainability. The decision to only investigate in a single actor is also motivated due to the lack of studies exploring the role of an entrepreneur in a transitioning socio-technical system. Thus, research on innovative business models (De Angelis, 2018), in this case CBMs, that may promote and accelerate a sustainable transition is needed (ibid). Therefore, the concept of intermediaries can provide new knowledge to the understanding of the role of actors, in this case, the entrepreneur and its innovative business model, within a sustainable transition. With that stated, the phenomena of claimed sustainable innovative business initiatives, outlined in the introduction, using digital platforms or digital technology as their primary business model support lead to the second focus area of this thesis. This thesis conducts a case study on the online second-hand shop Sellpy to investigate the role of the entrepreneur for three reasons. Firstly, entrepreneurs as small medium-sized businesses (SME) are more tangible to generate or adapt innovation as they are less complex than large corporations (De Angelis, 2018). Secondly, SMEs stand for 99 % of all businesses in the EU and account for more than half of the EU's GDP, which makes them a critical stakeholder to take into consideration (EC, 2013). Lastly, the research conducted about SMEs and innovation which addresses ecological and social matters is marginal and needs to be deepened (Halme and Korpela, 2014).

1.1.2 Aim and Research Question

Like stated before, today's society has been exhausting natural capital to a great extent and corporations in the market-based economy are accused of contributing to the current ecological crisis (Porter & Kramer, 2011). Some researchers argue there is an increasingly strong consensus in that corporations are the most prominent dominating entity in the economy with vast resources to drive change and a sustainable transformation (Shrivastava et al., 2013; Winn and Pogutz, 2013). Therefore, it is necessary to involve the business community to transition towards a more sustainable economy (ibid). Management research confirms that CBMs are a potential approach for the business community to increase sustainability while regenerating and capturing value for the enterprise system (Ellen MacArthur Foundation, & McKinsey, 2012). Additionally, the advancements in information and communication technology aligned with transformation in organizations can facilitate opportunities to innovate traditional business models by using the concept of CE (De Angelis, 2018). Researchers such as Kivimaa (2019), who focuses on innovation research, recognize transition intermediaries as a concept to drive and accelerate innovation in sustainability. Briefly, transition intermediaries can be described as agents connecting users with knowledge, services, or products that promote sustainability (Kivimaa et al., 2019). Due to the lack of studies in only exploring and understanding a single actor in a transition (ibid), this paper aims to explain the role of the entrepreneur that uses digital technology to enable CE or CBM. Additionally this paper aims to identify the challenges and success factors a startup encounter when using digital technology to enable a circular business model. This thesis aims to fill that gap proposed by Kivimaa et al., (2019) by answering the following research questions.

What is the entrepreneur's role as an intermediary in the circular economy?

What challenges and success factors do startups encounter when using digital technology to enable a circular business model?

2 Empirical Background

This chapter gives an overview of the current literature and empirical context regarded relevant for this study. This overview includes literature on innovation and sustainability transition as well as on the development of digital technology within the field of sustainability.

2.1 Innovation and Sustainability Transition

In innovation research and transition theories, there is a divergence and lack of conceptual foundations how entities within a socio-technical system accelerate transition (Kivimaa et al., 2019). The sustainability challenges are worsened by path-dependencies and lock-ins. At the same time, technological development thrives, established technologies are highly intertwined with lifestyles, business models, value chains, user practices, and organizational structures (Markard et al., 2012). Some researchers argue that the socio-technical system transforms in relation to infrastructure, actor groups, and technology and its context of application (Van Lente et al., 2003). The need for intermediary action is a result and consequence of changing contexts and changes in the position of interconnectivity between actors (Moss, 2009). The study of intermediaries is a relatively new concept to use in sustainability transition, with some exceptions of early research on transition processes and intermediaries (Van Lente et al., 2003; Moss, 2009).

Historically, research on actor roles and agency in sustainability is related to the concept of intermediaries (Kivimaa et al., 2019). This research has focused much on the role of actors in urban and energy contexts (Hodson and Marvin, 2009; Rohrer, 2009). Without explicitly using the term intermediaries, the scholars use notions such as “middle actors” or “boundary spanners” with the characteristics of intermediaries (Kivimaa et al., 2019). Other researchers describe mediating space such as “user assemblages” or “interaction areas” which without mentioning intermediaries refer to intermediation for technologies in transition (Hyysalo et al., 2017).

Like stated before, there is a recent rise in articles regarding intermediaries in sustainability transition. However, emerging research in transition intermediaries has been inconsistent regarding categorization and defining transition intermediaries (Polzin et al., 2016; Barrie et al., 2017). The studies on sustainability transition have founded a broader standpoint on innovation than regular innovation studies (Kivimaa et al. 2019). Sustainability transition looks beyond product or process innovation and towards systemic change for sustainable futures. The literature in sustainability transition promotes a transformative change seen as sets of processes resulting in shifts in socio-technical systems and linking modification to technological, organizational, economic, and socio-cultural dimensions (Markard et al., 2012).

It is important to note that there is a broad range of relevant theoretical approaches to explain transition such as evolutionary economic theory (van den Bergh and Gowdy, 2000; Nelson and Winter, 1977) or technological innovation systems (Bergek et al. 2008). Sectors like water supply, fashion or transportation can be conceptualized as socio-technical systems (Markard et al., 2012). A socio-technical system consists of institutions (societal and technical norms, regulations or standards) and a network of actors (firms, individuals or organizations) and knowledge. Together they interact and provide certain services for society (Markard et al., 2012). The concept of socio-technical systems emphasizes the fact that a broad variety of elements are interrelated and dependent on each other (Finger et al., 2005). A socio-technical transition such as sustainability transition is made out of a set of processes that motivate a significant shift in the socio-technical system (Geels and Schot 2010). A transition means extensive changes along various dimensions such as technological, cultural, organizational, or political. During a transition, new products, services, business models, and organizations evolve (ibid). Markard et al. (2012) describe that in the meantime of transition, consumption changes as well and socio-technical transition includes changes in user practices and institutional structures. A sustainability transition is long-term and includes changes in multiple dimensions and fundamental transformation processes which causes a socio-technical shift to more sustainable practices in consumption and production (Markard et al., 2012). What is important to note is that guidance and governance plays a significant role in sustainability transition. Markard et al., (2012)

conclude in their paper *Sustainability Transitions: An emerging field of research and its prospects*, that there is a knowledge gap between the socio-technical transition in sustainability transition and other fields of research, such as economic geography and management studies. By combining management studies and sustainability transition, one can examine the organizational strategies and capabilities for accelerating or meeting sustainability transition.

Karolina Safarzynska, Koen Frenken, and Jeroen van den Bergh (2012), identifies four core mechanisms where transition studies could develop a more understandable formalization. Firstly, they argue that multi-level mechanisms explain rising properties from the interaction of certain actors. Secondly, they claim that co-evolutionary development involves the joint co-determination of user preferences and strategies of firms that may provide acceleration to particular socio-technical trajectories. Lastly, there is social learning which relates to the active questioning of core structures on which development or trajectories can grow. These mechanisms represent factors that can accelerate the transition and thus are significant to use when analyzing innovative or divergent development of one or a few actors within the socio-technical system. The mechanisms draw to the topic on network and partnership which Garud and Gehman (2012) argue can produce unfavorable power relationships and conflicts in a transition process which are important to note when analyzing transition.

2.2 Digital Technology and Sustainability

This area of digital transformation has changed the game for various industries and science fields. Osburg and Lohrmann (2017) argue in their book *Sustainability in a Digital World* that new models which are often based on sharing are close to the key principle of sustainability thinking. The authors state that digital technology provides mobility which can enhance connectivity and availability based on trust of systems and people. Furthermore, new economic models have emerged from digital technology, e.g., providing personal data in exchange to free services or products. Additionally, the so-called Industry 4.0 which refers to the reinvention of work, provides breakthroughs in delivering enhanced productivity, environmental benefits, and collaborative work concepts (Osburg and Lohrmann, 2017). Despite the greatness of digital development, the authors also highlight concerns. For instance, people need to be responsive to change more than ever before. This has caused a division of digital elites and analog illiterates that will have consequences for societies. Additionally, this development reflects the social sustainability concerns in which transition causes. As a result, the economic advantages are catered towards the ones who can and are willing to adopt. The authors argue that data and algorithms are both big focus areas, with some arguing that it is the new oil. Businesses, government, or other organizational entities seize the advantage of using data to target information, products, and prices (Wadhawan, 2016). Digital businesses argue that using data creates a more customized user experience while some customers claim they are unaware of this data tracking (Osburg and Lohrmann, 2017) This process determines that an unintentionally provided trust is put onto the companies (ibid).

Consequently, trust has become a vital component for digitalization while promising cleaner energy, higher productivity, shared economy, or less resource usage. Osburg and Lohrman (2017) describe that data and algorithms are all interlinked and present both opportunities and challenges in how we want to live and work. According to Eldelman (2016), there is a modest increase in trust towards business by consumers around the globe. Additionally, people who understand the transitions and are willing to adapt are more inclined to trust the changes that business and technology commence. Therefore, understanding the concept of the New World means having trust in the key actors (Eldelman, 2016). Similarities are found in Rachel Botsman and Roo Roger's (2010) research on collaborative consumption where trust is also a principal prerequisite and the presented concept of the Trust Stack. Peer-to-peer marketplaces make up the sharing economy that depends on the social glue of trust connecting strangers and Botsman's research shows that people are currently shifting towards trusting people more than institutions such as corporations or government. Botsman's research from 2016 describes trust as sort of capital, specifically called reputation capital. Reputation capital is the sum value of online and offline behaviors across communities

and marketplaces that have become vital for customer offering. The layer of trusts proposed by Botsman (2016) is the trust in new ideas and trying them, trusting platforms and systems that facilitates exchange and lastly, there is trust to other users while interacting with each other. Consequently, people become willing to change their behavior the more they exist within the structures of trust. Policy and regulation later on adapt towards a more sustainable digital world (Botsman 2016). Digitalization requires trust as a new glue but does not come without prerequisites on businesses and regulation.

For startups and SMEs, opportunities can be found in the wake of digital development as digitalization enables processes to be split up in smaller parts which pave the way for co-creation, cooperative, or open innovation (Osburg and Lohrmann, 2017). The flexibility digitalization brings for sustainable or innovative businesses is the opportunity in accompanying processes in various regions or industries in which they can find profit. Additionally, Osburg and Lohrmann (2017) claim that customer relationship is one key success factor for innovative business models and that entrepreneurs will nurture their business when increasing customer offering. Engaging in building relationships and partnerships will make the new business more resilient. Based on stable, durable and reliable relationships, resilient systems recover fast and can suffer shocks with renewed strength (Osburg and Lohrmann, 2017). Furthermore, Osburg and Lohrmann (2017) argue that businesses today cannot approach sustainability as an add-on but need to integrate it into the core business. Firstly sustainability will be a competitive advantage, both in terms of supply and fulfilling customer demand. Secondly, the business will profit from sustainability being part of the value creation. Additionally, well-embedded sustainability can result in a success spiral which leads to more sustainability (Osburg and Lohrmann, 2017).

2.3 Intermediaries in Innovation

The innovation and science community have for a long time paid particular attention to sustainability transition, specifically to intermediaries as a transformative actor within transition (Kivimaa et al., 2019). Some scholars regard intermediaries as facilitators of innovation by engaging in network and system building activities (Klerkx and Leeuwis, 2009). The literature on intermediaries lacks clarity in how intermediation can be defined, where it starts and ends, and when interaction becomes intermediation (Kivimaa et al., 2019). Studies on transition have shown that intermediation between actors within experimental projects is an important micro-scale activity. The intermediation occurs on a project level between purposes of vision formation and project implementation (Kampelmann et al., 2016). One of the notable conceptual categorization and recognition of transition intermediaries is the article *Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda* by Paula Kivimaa, Wouter Boon, Sampsa Hyysalo and Laurens Klerkx (2019). The researchers address the overall issue with the merging body of research in intermediaries in transition which is the inconsistencies and classification of “transition intermediaries”. The existing research analyses the aggregation of multiple projects to build typologies but does not engage in the role of a single intermediary in transition (Kivimaa et al., 2019). The researchers argue that much of the literature lack conceptualization of intermediaries and much of the academic research rather emerges from empirical observations. This has led to a lack of understanding and bridging intermediaries in sustainability transitions, and what they intermediate between. Additionally, Kivimaa et al. propose the definition of transition intermediaries as “*actors and platforms that positively influence sustainability transition processes by linking actors and activities, and their related skills and resources, or by connecting transition visions and demands of networks of actors with existing regimes in order to create momentum for socio-technical system change, to create new collaborations within and across niche technologies, ideas and markets, and to disrupt dominant unsustainable socio-technical configurations*” (Kivimaa P., Boon, W., Hyysalo, S., Klerkx, 2019, p. 1072). The study concludes that intermediaries attach experimental projects to build new solutions for future socio-technical configurations to enable the transition. The key role found in their study is that intermediaries have the role of negotiating between different interests and priorities to facilitate unified visions and facilitating between emerging and ruling socio-technical system configurations (Kivimaa et al. 2019).

3 Theoretical Framework

This chapter outlines the theoretical framework and perspectives of this study. Firstly, the main theoretical concept of CE, CBMs, and transition intermediaries are presented. Lastly, the theories on CE, CBM, and transition intermediaries are compiled into a theoretical framework which is used to analyze the collected data.

3.1 The Concept of Circular Economy

3.1.1 Circular Economy

The linear logic of take-make-dispose in current industrial models is not only the source of many environmental concerns such as natural resource depletion, waste management and energy use is also challenged by socio-economic, and regulatory trends (Ellen MacArthur Foundation & McKinsey, 2012; Ellen MacArthur Foundation et al., 2015b; Esposito et al., 2017). Among these trends is the increasing pressure on natural resources, increasing resource price volatility, more middle-class consumers entering the market, sharing-and-renting economy, climate change, and lastly growing regulatory interventions on waste (Ellen MacArthur Foundation & McKinsey, 2012; Lacy and Rutqvist, 2016). The World Bank projects increased prices for industrial commodities for the current and the next year (World Bank Group, 2017). With a tremendous increase in population and continuous exploitation of natural resources, the shared utilizations of goods in production is also reaching consensus in shared-based consumption (Ellen MacArthur Foundation & McKinsey, 2012; Ellen MacArthur Foundation et al., 2015b). Over the years, attention to and interest in social and environmental sustainability have increased significantly inside the business community (De Angelis, 2018).

Business scholars argue for radical, fundamental changes and especially for innovative business models that offer new ways of creating, delivering, and capturing value while being less harmful to the environment (ibid). Like stated before, corporations are the most dominant coordinating institution on in our global economy with the capability to transform the economy (Hoffman and Ehrenfeld, 2015). Overcoming the separation between businesses and society plays a significant role to address environmental and societal concerns. The presence of CE has increased in business, academic, and policy spheres. However, there is a demand for more clarity in the definition and its usage. The definitions offered in the emergent academic literature on CE differ rather than being similar. Additionally, academics tend to add unnecessary complexity to the terminology. (De Angelis, 2018). Geissdoerfer et al., (2017) explain CE with the definition as:

“A regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (Geissdoerfer, M., Savaget, P., Bocken, N.M.P., Hultink, E.J., 2017, p. 759).

Other scholars define CE as:

“An economic model wherein planning, resourcing, procurement, production, and reprocessing are designed and managed, as both process and output, to maximize ecosystem functioning and human well-being” (Murray, A., Skene, K., Haynes, K., 2017, p. 9).

One concept emerging from CE is the development of circular production systems (De Angelis 2018). The technological change in traditional linear-industrial production enables companies to seize value by reusing components in a regenerative system. For example, Apple seizes \$40 million from materials formerly discarded. (Lacy, 2017). Additionally, these changes in the macro environment develop new

competitive advantages, necessitating major transformations in value creation underlying traditional business models while creating new sources of values. By meeting changing market consumption patterns, companies can obtain an additional market advantage. (De Angelis, 2018). However, can linear industrial models compete given changing modes of consumption, disruptive technology, supply volatility, and resource scarcity? The concept of CBMs can be described as an industrial system that is restorative or regenerative by intention and design that replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, declined use of toxic chemicals and encourage reuse and elimination of waste. The latter part happens through the design of materials, product, systems creating a circular flow of resources. (Ellen MacArthur Foundation & McKinsey, 2012). Business models implementing CE could bring a significant impact on production but also consumption systems. CE is an economy that provides multiple values creation decoupled from the consumption of finite resources. (Ellen MacArthur Foundation et al., 2015b).

3.1.2 Thinking Circular Economy - Theory and Practice

There are three main principles to engage with CE-thinking. The first is to *preserve and enhance natural capital*. Manufacturing should only include renewable energy and materials should be used whenever possible to deliver utility virtually and materials. At the end of natural resources usage, renewable materials must be returned to nature to enriching natural capital (Ellen MacArthur Foundation et al., 2015b). *Optimize resources yields* is the second principle which involves maximizing the value of resources over time in both *technical* and *biological cycles*. (ibid). Product durability, in this system, is enhanced and product sharing contributes to extending a product life cycle. Lastly, the third principle is '*foster system effectiveness*' which means the approach to eliminate the negative environmental extern. (ibid).

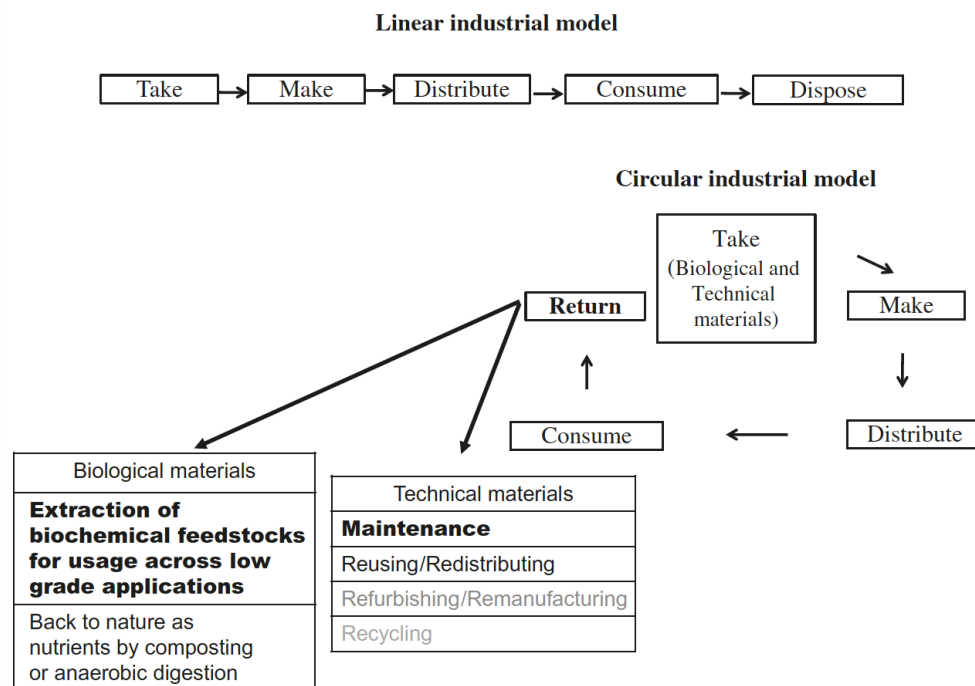


Fig 3.1: A linear versus a circular industrial model (De Angelis, 2018, p. 21)

The Ellen Macarthur Foundation and McKinsey (2012) define five characteristics of CE:

- *Design out waste*: The concept of waste does not exist in a CE and is obtained by circulating materials in biological and technical cycles. (ibid.).
- *Build resilience through diversity*: biodiversity ensures resilience in a living system, consequently, CE values diversity in the economy to build system resilience and prosperity. For example, different scales of business. (ibid.).
- *Shift to renewable energy sources*: Renewable energy sources powers a CE which facilitates system resilience in terms of reduced exposure to external shocks, i.e. supply volatility and less dependency on scarce resources. (ibid.).
- *Think in systems*: CE appreciates interdependencies among entities, and by implementing systems thinking, businesses can consider how to organize the transition. (ibid.).
- *Think in cascades*: Biological materials are cascaded across different applications and then returned to nature. (ibid.).

These four building blocks of CE are used to promote implementation presented by Ellen MacArthur Foundation (2015a):

- *Circular product design and production*: product design and careful material selection are essential for materials to circulate appropriately in technical and biological cycles.
- *New business models*: business models that incorporate access over ownership, design for disassembly, product durability and other circular features that convert products with new value are necessary to compete against linearly produced and low-cost products, successful business models.
- *Reverse cycle*: circular loops help reverse logistics to function, e.g., collection, sorting, and warehousing.
- *Enables favorable system conditions*: within the organization, there should be enabling factors for CE; this can be education, financing CE projects and collaborative platforms. Also, new economic frameworks that prices externalities and more inclusive metric of wealth assessment.

3.2 Circular Economy and Business Models

3.2.1 Business Model Definition

The definition of a business model is not yet fully agreed on by academics (Arend, 2013). However, there is a significant interest in business models (hereby BM) within the academic and business sphere to develop ways to understand and study BMs (Wirtz et al., 2016). Especially developing innovative BMs, because it is recognized as an essential root of competitive advantage for managers. (Casadesus-Masanell and Ricart, 2011; Spieth et al., 2014). Since the rise of information and communication technologies, the interest for BMs has emerged due to the new opportunities for value creation or capture. (Wirtz et al., 2016). Like stated before, there is no consensus on what defines a business model and how it is applied in a coherent manner (De Angelis, 2018). Zott et al. (2011) explain that a BM describes both value creation and value capture. Other describe a BM as the architecture of value creation, delivery, and capture mechanisms employed. (Teece, 2010). The architecture approach to a business model paved way for the BM framework 'Canva' which is based on the following nine dimensions: *customer segments, value proposition, channels, customers, relationships, revenue stream, key resources, key activities, key partnerships, and cost structure* (Osterwalder and Pigneur, 2010).

A more straightforward explanation is Richardson's (2008) BM framework built on 'value' and comprising the 'value proposition' to the customer (customers' offering), the 'value creation and delivery' (how value for customers is created and delivered and thus including resources and capabilities, activity system and supply chain) and 'value capture' (reflecting a firm costs and revenues structure and flow).

3.2.2 Circular Business Models

Above, the basic concept of a business model is outlined and described. This section will describe how CE can be implemented in a business model and a few examples will be described. Implementation of CE affects every element of a BM framework (De Angelis, 2018). As a reminder from the section above, the elements in a BM framework are; value proposition, value creation, value delivery, and value capture. A CBM is built around value and is therefore attuned with the business community. In De Angelis' (2018) book *Business Models in the Circular Economy*, the author conducts an extensive literature review to identify different CBMs in the economy. With CE defined as “an economy that provides multiple value creations mechanisms which are decoupled from the consumption of finite resources” (Ellen MacArthur Foundation et al., 2015b, p.23), it is clear that ‘value’ is a central factor in CE literature. Additionally, ‘value’ is present in BM literature, where BM is focused on ‘value’ (De Angelis, 2018).

In the BM concept, value is represented in the components in a BM such as value proposition, value creation and delivery and value capture. De Angelis (2018) explains that merging these BM components with the application of CE principles would identify the qualifying features of the value proposition, value creation and delivery, and value capture to the conceptualization of CBM. De Angelis (2018) proposed features and conceptualization of CBMs is found in image 3.2. In a CBM, the *value proposition* is achieved when enhanced customer value is the result of a circular offering and circular relationships (De Angelis, 2018). For example, product as a service or access over ownership such as leasing or renting. *Value creation and delivery* in CBM is characterized by maximizing resource value across the activity system and supply chain. Furthermore, the CBMs maximize the boundary spanning relational competence for the adaption and development of circular resources and capabilities (De Angelis, 2018). *Value capture* in CBMs is recognized as the reduced costs from the recovery of materials and the shift in the source of revenues (ibid). Other sources of revenue can be selling by-products, offer services to customers over the product life cycle or turn waste into inputs for new products (ibid).

<i>BM's components</i>	<i>Qualifying features of BM's components in a CE</i>
Value proposition (Customers' offering)	P₁: Enhanced customers' value as a result of more comprehensive 'circular offerings' (e.g. products as services; greater convenience; dematerialised products; superior product durability and ecological performances; product upgradability; take-back schemes) and 'circular relationships' (access over ownership, e.g. leasing, renting, sharing)
Value creation and delivery (How value is created and delivered)	P₂: Diffused value creation, maximisation of resources value across the activity system, local/regional supply chains and boundary spanning relational competences for the adaptation or development of 'circular' resources and capabilities
Value capture (Costs and revenues)	P₃: Idiosyncratic value capture mechanisms
<i>Circular business models are business models wherein enhanced customers' value is produced as a result of more comprehensive 'circular offerings' (e.g. products as services; greater convenience; dematerialised products; superior product durability and ecological performances; product upgradability; take-back schemes) and 'circular relationships' (access over ownership, e.g. leasing, renting, sharing). In circular business models diffused forms of value are created, local/regional supply chains are implemented, maximisation of resources value across the activity system is pursued, boundaries spanning relational competences for the adaptation or development of 'circular' resources and capabilities are developed, and idiosyncratic value capture mechanisms are observed</i>	

Fig 3.2: Features of CBMs and Conceptualization (De Angelis, 2018, p. 65)

3.3 Theory of Intermediaries and Business models

The research in transition intermediaries show, by linking actors, can be influential in transition processes and, work as a catalyst to speed up change towards a more sustainable socio-technical system (Kivimaa et al., 2019). Intermediaries link actors, both new entrants and incumbents – and their activities, skills and resources, to create a momentum for change and collaboration with new technology, ideas or markets (Kivimaa, 2014; White and Stirling, 2013; Fischer and Newig, 2016). However, the emerging research in transition intermediaries has been inconsistent regarding categorization and defining transition intermediaries (Polzin et al., 2016; Barrie et al., 2017). This has led to misconception and understanding of what transition intermediaries are and its conceptual value in innovation and sustainability management. Additionally, this happens due to different starting points and conceptual foundation in research. The analytical focus varies from innovation processes to analyzing experiments, or more similar to this thesis, how the concept of intermediaries can describe organizational bodies (Polzin et al., 2016; Barrie et al., 2017). This thesis will use the Kivimaa et al. (2019) study *'Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda'* as a theoretical foundation and typology on transition intermediaries. Kivimaa et al. (2019) study the conceptual gaps in intermediary research which results in a categorization of different transition intermediaries and their functional purpose.

3.3.1 Transition Intermediaries in Innovation and Sustainability

Like stated before, the concept of intermediaries is still vague, yet has the potential to describe how entities can drive change in a socio-technical system (Kivimaa et al., 2019). Some scholars describe intermediaries as facilitators of innovation by engage a network and construct systems where goods, knowledge or services are passed on in the system and are not altered or changed by the actors within (Klerkx and Leeuwis, 2009) while other scholars see intermediaries as actors shaping entities that flow within the system (Pielke and Jr, 2007; Klerkx and Leeuwis, 2009). E.g., consultants translating scientific knowledge. Kivimaa et al., (2019) states that intermediaries actors are identified based on their function. For example, they make up a specific actor category as an individual or an organization (Kivimaa et al., 2019). To make the concept of intermediaries easily understandable, Van Lente et al. (2003) describes three types of intermediaries in innovation systems. Hard intermediaries engage in transfer technical knowledge or technology. Hard intermediaries can, for example, be research and technology organizations. The second is soft intermediaries which can be chambers of commerce or innovation centers that aim to intermediate skills, human resources or learning from business innovation. Lastly, there are systematic intermediaries with multiple actors, organizing discourse and creates conditions for learning.

Additionally, Moore et al., (2012) make the further remark that intermediaries evolve, change or transition according to the configuration of the socio-technical system. For example, changes in the electricity and water market will lead to the creation of new intermediaries connecting disconnected parts of the system. As the transition advances, intermediaries become subjected to conflict and competition within a system which may take focus from the core assignment (Moore et al., 2012). Additionally, assignments of intermediaries that support certain niches are prone to be taken over by regime players, making intermediaries less important or become institutionalized as a part of the new regime (Bergquist and Söderholm, 2011). Studies in sustainable development and transition intermediating show that intermediating between projects, communities or partnerships can facilitate and drive best practices, resources and global visions for sustainability (Raven et al., 2011; Seyfang et al., 2014; Holden et al., 2015). There is another form of transition intermediation that can exist between consumers and producers where ideas and interest and shifting power position are intermediated. Consumers can adopt new technology through this process which might require adjustment and re-innovation, or consumers may have to adapt to new routines and practices (Judson et al., 2015; (Hyysalo et al., 2013, 2017; Schot et al., 2016). To understand transition intermediaries, it is important to note the overall system and how it compromises both niche and regime actors, where intermediation is depicted as occurring between multiple network partners or system actors (Kivimaa et al., 2019). Consequently, transition intermediaries have the ability to suggest

radical change or alternatives for the current socio-technical regime by linking niche actors with dominant socio-technical structures, negotiate change by building alliances and bring in supporters from the dominant regime (Kivimaa et al., 2019). Easily described as the ability to disrupt or change a system with or without the dominant regime by pooling interest, knowledge or priorities for a shared vision. Organizations or administrations have the ability to conduct this by using their organizational culture or rationale for action but thus require intermediation when creating new innovation systems (Mattes et al., 2015). Intermediaries make up an ecology of actors in a network or system that creates new markets for innovation solutions by pooling knowledge, finance, and people while challenge existing market structures (Kivimaa, 2014). Consequently, transition intermediaries can be described as an entity that connects peers and provides a flow of information or services that form a system or network which acquires the ability to drive change and innovation.

However, like Kivimaa et al., (2019) reveal in their systematic review of intermediaries, transition intermediaries are prone to have some bias and agency concerning the normative position and strategic goals in their network. Like government or industrial partners in their intermediation, intermediaries can be commercially or financially dependent. Neutrality or bias can be dependent on the technological, financial or political direction (Kivimaa, 2014). For example supporting specific political actions or sustainability solutions. Contrary to transition intermediaries, strategic intermediaries support diversification of biases to establish intermediation. (Schot et al., 2016).

3.3.2 User Intermediaries

In Kivimaa et al. (2019) study *'Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda,'* the researchers identifies five different types of transition intermediaries. Through a thorough system review, they identify characteristics between different descriptions and condensed five broad types of transition intermediaries. (Kivimaa et al., 2019). This thesis will use the concept of user intermediary suggested by Kivimaa et al. (2019) in order to answer the proposed research questions. Their research state that user intermediaries are peers or user support organizations who connect new technology and practices to citizens. The study concludes that user intermediaries rely on a community that adapts to the use of new technological solutions. Additionally, it is crucial for user intermediaries to maintain its community or network in order to survive (Kivimaa et al. 2019). User intermediaries aim to instruct users to use sustainable technological options by changing technical and social elements of novelty (Hyysalo et al., 2017). Kanger and Schot (2016) explain that this stage is critical to accelerating transition through the adoption of solutions. Furthermore, user intermediaries work in between niches and the dominant socio-technical system, while collecting and forecasting their user community's future demand regarding rising sustainable technologies (Kanger and Schot, 2016). Eventually, when a user intermediary reaches stability, and the niches become mainstream, user intermediaries grow into regime-based intermediaries (Kanger and Schot, 2016).

3.4 Theoretical Framework of User Intermediaries Enabling CBM

The theoretical framework (See figure 3.3) comprise and represents the theoretical concepts used in this paper which are outlined above. Consequently, the theoretical framework will support as a theoretical lens to explore the role of the entrepreneur, which uses digital technology to enable CBM. The theoretical framework includes the expected constructs and details which are outlined in the previous chapter. Moreover, the theoretical framework is broken down into interview questions and compiled into a analytical criteria framework for data analysis (See Appendix 5). To summarize, transition intermediaries are actors that promote and facilitates change such as sustainable development with innovation. In the case of this paper, innovation is the usage of digital platforms to enable CBM, and thus promote a sustainability transition. Rationally, CBM and CE become another theoretical concept in which this research examines.

Therefore, the concept of CE and how it can be incorporated into the business model was discussed in sections 2.1 and 2.2.

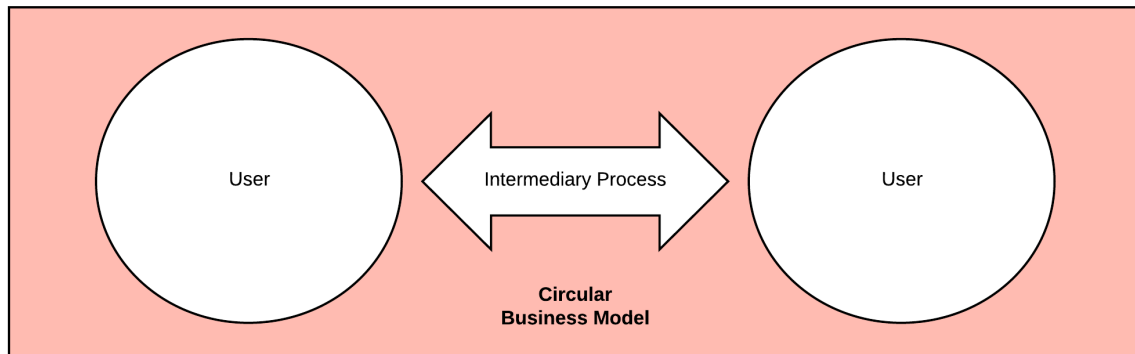


Fig 3.3: Theoretical Framework of User Intermediaries Enabling CBM.

4 Methods

This chapter outlines the methodology used in this study. More specifically, the philosophical stance is introduced and then follows an outline of the research approach, design, and strategy. Lastly, the data collection is described with remarks on validity, reliability, generalizability, and the limitations of the study.

4.1 Philosophical Stance

In this under section, the philosophical stance and the associated epistemological and ontological assumptions will be outlined. The purpose of describing the researcher's philosophical stance is to be transparent regarding philosophical assumptions that may have influenced the study (Cresswell, 2013). *Epistemology* refers to the way knowledge is generated, while *ontology* shapes how the research question is interpreted and how its methods and results are understood (Wenning, 2009). Researchers Saunders et al., (2012) claim that using an interpretivist perspective is suitable for addressing complex situations of interaction between different social actors. Thus, interpretivism explains that the social realm cannot be studied with the scientific methods that are usually employed within the natural sciences (Macionis and Gerber, 2011). Additionally, the researchers explain that interpretivism advocates for the understanding of differences between humans in their role as social actors. Since this research aims at investigating a social phenomenon, the methodological assumptions follow along the lines of interpretivism. In consequence, the examination will gravitate towards the perceptions of the interviewees. Moreover, the philosophical stance relates to approaching entrepreneurs as intermediaries enabling social interactions that form networks of social actors that utilizes a sustainability transition, or a sustainability-oriented business model, such as CBM. As a research philosophy, interpretivism is underpinned by subjectivist ontology which views the nature of reality as socially constructed (Saunders et al. 2012). Subjectivist ontology argues that social actors interpret or perceive situations or relationships depending on their view of the world which means that social interactions between actors are in a constant state of revision (Saunders et al. 2012).

Additionally, sustainability as an idea is ascribed specific meaning to it which means it can differently interpreted between different actors, and be a subject of negotiation. For example, the perception or interpretation of sustainability can reflect the organizational, business, or functional decisions - a manager might have another view of sustainability than the person implementing a sustainability policy which may cause disagreements. Consequently, this research can mirror the subjective meanings and understandings of the particular person or business interviewed for this paper.

4.2 Research Approach

Researchers mostly choose between a deductive or an inductive approach based on the rationale, theory, and design of the study (Saunders et al. 2012). A third option is an abductive approach when the research process is devoted to explaining certain phenomena where different theoretical lenses can be used (ibid). This research aims to explore a phenomenon with incomplete observations to formulate a prediction of its existence and impact. The concept of transition intermediaries is one of many theoretical lenses to investigate the phenomenon of businesses using digital platforms to create a more sustainable business model. By combining transition intermediaries and CBM as a theoretical lens, this research could explore how the study object perceived how digital platforms could enable CBM and the role of the entrepreneur. These findings could provide the best prediction or visible pieces of an incomplete area of observation. With this reasoning, an abductive approach was decided. However, the body of research used existing theories and generalizing to the specific, which mean a deductive approach could be applicable (Saunders et al. 2012).

4.3 Research Design

Since the field of innovative business models accelerating sustainable transition needed more research, the nature of this study was determined to be exploratory. Exploratory research, together with only using one study object, was decided to deepen the knowledge of the entrepreneur's role in society's transition towards sustainability. Exploratory research is, therefore, in this case, appropriate when investigating complex changes or occurring phenomena in society (Saunders et al., 2012). In this case, the phenomenon was entrepreneurs using digital platforms to enable sustainability-oriented business models. Therefore, this study used the concept of intermediaries as a theoretical lens to explore this phenomenon. In order to align the nature of the study with the philosophic stance and research approach, a qualitative study was considered to be the most suitable option. This was decided because qualitative research allows the researcher to explore rich data collections suitable for exploratory research (Saunders et al. 2012). Furthermore, qualitative study accompanied by exploratory research provides the necessary research design to obtain data (Hair, 2007) usable this research's focus on complexities and social relations in society.

4.4 Research Strategy

Within qualitative research, there are various research strategies one can use to examine, depending on the goal of the study (Saunders et al. 2012). While research strategies have specific significance and scope with a certain set of procedures, they do not share similar ontological and epistemological origin and characteristics (ibid). In this case, by exploring in-depth through an interpretivist perspective to find patterns and ideas that could be generalized across other contexts, a case study was the appropriate research strategy. A case study is relevant because it enables a rich understanding of the context and its processes enacted (Eisenhardt and Graebner, 2007). Conducting a case study is appropriate when investigating a phenomenon through a theoretical concept within its context, and or contribute with new insights to contemporary research (Saunders et al. 2012).

4.5 Data Collection and Analysis

4.5.1 Selection of Case and Data Collection Method

The theoretical framework was constructed from an extensive literature review on CE, CBM, and transition intermediaries. The Uppsala University library utilized the supply of literature. The semi-structured interview questions used in an in-depth interview with a representative from Sellpy. Semi-structured interviews refer to unstandardized interviews with vague underlined themes that the interview centers around (Saunders et al. 2012). Using semi-structured interviews helps to enable the respondent to elaborate on the topic candidly (ibid). Aligned with the interpretivist philosophy of this study, the data collected from the case study needed to meet specific criteria based on the theoretical framework and the expectations the theories posits. Therefore, the theoretical framework was used to formulate semi-structured interview questions (See Appendix 5). The result of the in-depth interview was then used as primary data for this thesis. Primary data refers to results from respondents and target users (Habib et al. 2014). The data gathered from the semi-structured interviews were triangulated by collecting additional information about the chosen study object from their website and marketing material.

Additionally, to secure the accessibility of data, the selected study object was based in Stockholm, Sweden. This was decided because of the author's contextual understanding of the sustainability-oriented entrepreneur scene in Stockholm. In addition to the limited time and resources available for this thesis, purposive sampling was decided due to it facilitates enriching and in-depth interviews (Saunders et al. 2012) appropriate to the nature of this study. The study object had explicitly claimed their business model as sustainable, CE and withheld structural elements in which could be recognized as a transition intermediary.

4.5.2 Interview with Lisa Book Taube Sellpy

The interview for this paper was conducted with Lisa Book Taube, Sustainability Manager at Sellpy. The contact was initiated by Taube as she contacted the Uppsala University's Department of Earth Sciences, Natural Resources and Sustainable Development, and asked if any students were interested in conducting a study on Sellpy. The contact was established via email and the aim and scope of the study was explained in advance. In the beginning, the interview was supposed to be held on site but was later changed by Taube due to lack of time. Therefore, the interview was done over the phone. The interview was held in Swedish and recorded. The recording was then transcribed into text format for the analysis. The interviewee approved being cited by name in this study. Additionally, the interviewee approved the company being named in this thesis. The interview was 1 hour and 30 minutes long and a draft of the questions was given in advance. However, the questions were only used as guidance. Taube neither saw the transcript or listened to the recording nor read she the thesis before publication.

First contact: April. Inquiry to participate in an interview for this study.	Second contact: April – May Decision on a date and provision of research aim.	Interview: May Provision of questions on Monday, May 6, and conduction of the interview on Friday, May 10.
--	---	--

Table 3.5.2 Timeline of contact

4.5.3 Data Analysis

The data collection followed with a mapping of the answers using the theoretical framework. By mapping the data with the framework, conceptual patterns and other findings became visible, and conclusions could be made. In detail, the questions were formed through a categorization of elements collected from the theoretical concept of transition intermediaries and CBM. The entire theoretical breakdown is found in Appendix 5. The data was then mapped out in which themes and pattern could be discovered. This process ensures that the data collection and processing is aligned with this study's aim and focus.

4.6 Validity, Reliability and Generalizability

The topics of generalizability, validity, and reliability are crucial aspects when conducting a case study (Saunders et al. 2012). Reliability addresses the extent to which data collection returns consistent findings (ibid). The interview was carried out over the phone, which implies that non-verbal communication, such as facial expressions and gestures, could not be taken into account. However, the constraints of only conducting one case study could delimit the result which implied the validity of the study. Validity refers to that the data collection method accurately measure what is intended to be measured (Saunders et al. 2012). Moreover, this field of research is yet unexplored and thus conducting an in-depth study of one study object could provide with more essential insights to address theoretical and conceptual gaps in previous and for future studies. However, the decision of using one study object can endanger the thesis' external validity. Saunders et al. (2012) describe external validity as the concern of generalizing a study's findings to other relevant groups or settings. In terms of generalizing and external validity of this study, the findings could be used for broader qualitative research to explore multiple startups or SMEs. Consequently, this study provided useful insights for future studies within CBM and intermediaries in which there is a practical knowledge gap.

4.7 Limitations

Like stated before, the first limitation regards the study itself. Moreover, businesses with self-claimed characteristics of a CBM are scarce, and the chosen startup or SME needed to be using a type of digital platform to support their business model. Therefore, it became challenging finding and getting in touch with a business that was aligned with the study focus and goal. Moreover, entrepreneurs in startups lack resources and the time to engage in in-depth interviews which added to the range of difficulties of conducting this study. Furthermore, only one representative was interviewed, which limits the perception and interpretation of the interview. Secondly, the time frame of this study limited the length of data collection which paved the way for risks not only during the actual interview but also the lack of iterative processes to analyze the collected data.

5 Empirical Results

Firstly, this chapter presents a summary of the case study conducted on Sellpy. This includes key information about the business. Secondly, this chapter demonstrates the key findings from the interview with Sellpy's Sustainability Manager Lisa Book Taube. The interview was conducted over the phone and the duration was around 90 minutes.

5.1 Case Overview

Sellpy resells second-hand consumer goods using their own-developed e-commerce platform and the Swedish auction site Tradera.se. The company was founded in Stockholm, Sweden, in 2014 and employs, as of now, 210 people (Sellpy, 2019). Accordingly, to the company listing site Allabolag.se (2017), Sellpy had a yearly turnover of 88 million SEK (approx. 8 200 000 Euro) in 2017. Summarized on Sellpy's website page 'How it works', Sellpy sends the user a bag via mail, and the user fills the bag with goods they want to get rid off. Henceforth, through the platform, the user can order a collection of the bag or leave it at the nearest package station. By using data analysis, the bag is sorted and estimated if the individual product can be priced at 50 SEK or above. If the system determines that the product does not comply with the sales forecast, the product is donated to charity or returned to the seller. Thereafter if the product complies with the pricing, the goods are photographed and uploaded to Sellpy's sales channels, which are their website and Tradera.se. Once the assortment, pricing, and upload are finished, the user can log onto the Sellpy platform and give feedback. For example, if a product is under or overvalued, the user can adjust the price. As a next step, Sellpy handles the online advertising of the products to match a product to a potential buyer. This advertisement is mostly done with Google and Facebook. The user can then follow the sales of their products on the Sellpy platform. What is unique about Sellpy compared to services like eBay or Amazon is that they take on the responsibility to create ads, set prices, and are in contact with the buyer. In Taube's experience, these steps lower the threshold for people to start selling their items.

5.2 Summary of Findings

5.2.1 Entrepreneurship

Taube claims Sellpy is groundbreaking in terms of making secondhand trade more available and safer for everyone. She argues that Sellpy accelerates the normalization and increases the status of buying second hand by being an e-commerce platform that values service and customer agreements. She adds that Sellpy collects over 50 000 pieces of clothing every week, which makes them unique in how they have built the capacity to handle that amount of clothes. She believes they are able to inspire more entrepreneurs to see the opportunities that are emerging out of the increasing debate and awareness regarding sustainability. However, she admits there are still vast concerns from entrepreneurs regarding profitability, which also put much pressure on finding an innovative business model that can generate a profit on recreated or captured value. A year ago, Sellpy decided to position themselves as a sustainability-oriented company firmly. One approach was a communication strategy focused on sustainability and circular consumption, which made many people question the direction the business was taking. Taube recalls that many people not only started questioning how Sellpy would become more sustainable, but that the conversation encompassed many different issues, such as resolving climate change.

"You can't say 'We are sustainable' without getting the question 'But how are you dealing with this' [another aspect of sustainability]..." Lisa Book Taube, Sustainability Manager.

She argues that it has become a big challenge and a threshold for entrepreneurs starting this type of business because there is much resentment when companies try to implement sustainable solutions. She adds that when a company starts talking about sustainability, they need to have the arguments straight and be very knowledgeable on sustainability issues. Otherwise, it can become a slippery slope, and the learning-by-doing curve is not accepted. Taube explains that in the case of Sellpy, they, of course, want to be as sustainable as possible, tackle all the challenges immediately, and improve their circular system continuously, but the lack of financial resources delay the process. Taube states that entrepreneurs play an essential role as inspirators by venturing innovative business models that comply with sustainability. Additionally, she explains that there are many sustainable business ideas, but the challenge is to find a model that can create profit. She adds that Sellpy can act as a role model in regards to trying to be a profitable business that contributes to something positive. Furthermore, she argues that in Sweden, they are making a difference by enabling an extension of the product life cycle. Additionally, she explains that the relationships and partnerships Sellpy creates with charitable secondhand chains such as *Myrorna* or *Stadsmisionen* (two charity organizations working to support people in need such as homeless people and refugees), but also with regular retail businesses such as *& Other Stories* help to extend and connect multiple business models creating new circular flows.

“By joining forces with popular brands, we can together raise the status of secondhand shopping... With our system and logistic solution, we can provide a service for other retail companies or consumer-oriented business become more sustainable.” Lisa Book Taube, Sustainability Manger.

She gives an example from their partnership with *& Other Stories* when they provided the service of setting up an *& Other Stories* secondhand shop. This also allowed Sellpy to be seen with the *& Other Stories* brand to enhance their own. The need to have other brands enhancing propose that Sellpy needs social validation. Taube explains that these partnerships are important to promote more circular consumption to new customer segments that Sellpy alone would have difficulty reaching.

5.2.1 Challenges and Success Factors

Like mentioned above, partnerships with other brands is a vital asset for increasing outreach and raise the status of shopping secondhand. However, it also sheds light on one challenge Sellpy has encountered. Taube explains that partnerships with high-status brands provide the opportunity to increase the prices of certain products. However, this increase requires reaching consumers that are willing to pay extra for particular brands or products. Taube explains that they focus significantly on targeting the right products to the right users. This process requires digital infrastructure and a skilled workforce within IT. She adds that this is also important for securing user satisfaction and experience. She continues explaining that the pricing and targeting products are challenges they frequently work with.

“We have over 300 000 unique items which all have a different value. On top of this, these items are switched out frequently which means we can never forecast our supply of tomorrow.” Lisa Book Taube, Sustainability Manger.

The always-changing supply puts considerable pressure on targeting not only prices but also the products themselves with a high frequency to the right user. She explains that users are not patient searching for the correct item, so the platform has to do it for them. She emphasizes that this process is critical to maintain user frequency. To target products to the right customer segments, Sellpy uses ads driven by search engines and social media that are customized to specific customer segments. Taube explains that being able to target ads and using data to drive sales adds to the list of benefits for a user to sell products via Sellpy. There is a tug-of-war between the sellers and the buyers.

“Sellers want to sell at the highest possible price, while buyers want to make a bargain.” Lisa Book Taube, Sustainability Manager.

Taube elaborates on this topic by explaining that everyone becomes dependent on a functional and optimized website where the right products are visible to the right customer. Tracing back to the beginning, profitability is a significant challenge for companies like Sellpy. Taube addresses this challenge by first explaining that the market is not ready yet for paying a higher price of second-hand items despite them being in a solid condition. Secondly, she argues that many clothes do not have a high second-hand value. These two factors make it hard for Sellpy to develop since the existing resources are minimal. Additionally, this puts pressure on using manual labor in the value chain. Taube describes that one of the success factors of Sellpy is its organizational structure and culture. She says everyone needs to be able to take on new tasks and be equal to their work. The second success factor Taube claims is that Sellpy built its own IT-system and logistics. Despite taking a long time, Taube argues that the IT-system they have built has given them a considerable advantage in terms of know-how but also gives flexibility in change and transformation. Moreover, they are able to access and collect data suitable for their present and future needs. By building their own system, Taube also explains that they are able to innovate and continuously adjust the system after user demand or optimize processes to increase efficiency. Additionally, Taube highlights that the current debate in the world regarding sustainability is another success factor, and she believes it has given Sellpy strength to grow and become more popular. She adds that sustainability was not as popular four years ago as it is now.

5.2.3 Business Model

“Give your stuff a longer life by using us as an enabler in the middle to make it happen. We empower everyone to live circular.” Lisa Book Taube, Sustainability Manager.

Sellpy was created out of the idea that people still have too much “stuff” at home, and formulated the proposition to make it easier for people to clean out the house. From a seller’s perspective, cutting away the difficult parts of selling second-hand online like making ads, setting an accurate price, or dealing with potential buyers, Sellpy also makes it easier for people to sell at bigger capacity. The seller only has to fill up bags with items and Sellpy does the rest. Additionally, by using a digital platform and a smart logistic system, they also make it available for everyone, despite geographical location, to sell or buy. As time moved on, Sellpy realized that there is an additional value proposition towards buyers, in which they could propose people to engage in living more circular by buying second hand. Through this, Sellpy also proposes that the seller and buyer together can give products longer life-cycles. Taube argues that, compared to their competitors, Sellpy is working with their community to make it as easy as possible to engage in the CE despite where one lives or how much one wants to sell.

On the topic of circularity, to enhance the user notion on sustainability, Taube describes that Sellpy has developed a carbon and water footprint calculator on every user’s profile. The calculator displays how much a user saves in terms of water and carbon dioxide by shopping or selling via Sellpy. She says that they are proud of how Sellpy can inspire user’s to live more circular and become more sustainable in their consumption. Furthermore, to maintain the user’s circular consumption, Sellpy offers sellers to receive Sellpy credits instead of money. These credits can later be used by the seller to shop on the website. Sellpy develops their business model and digital platform together with their users by frequently conducting customer and market research. Even the management team engage in this research and every week they call randomly selected customers to talk about what they feel about the service and what they think Sellpy can do better. Additionally, Sellpy has a customer support team that regularly addresses customer’s requests.

Moreover, there is a quality assurance team that maintains quality checks for ads and items. Taube argues that these user supporting components are critical in the business model when handling complex diversity of products. Taube explains that digital marketing and targeting products are vital for the user experience, both for the seller and buyer. Taube adds that they are working with a self-developed customer

retention strategy which helps Sellpy maintain their user community. Collecting and using user data is crucial for Sellpy in order to make the digital platform relevant to the individual user and to limit returns of the ordered clothes. Taube describes that Sellpy saves all data on orders and products they have ever had in stock and processed, which they will use for a not-yet launched service. This not-yet launched peer2peer-service will use the historical data to make it easier for buyers to start selling products. Taube explains that when a Sellpy member has used their clothes sufficiently, they can activate the ad of the product and start selling.

“We have a vision to make your whole wardrobe up for sale - all the time but for the right price.”
Lisa Book Taube, Sustainability Manger.

With this extension of their service, a user can make their entire wardrobe always available for sale. Sellpy believes this new service will additionally simplify the circular connection between the users in the user community and thus be an additional driving force to promote circular consumption. The use and collection of data is not only applied to enhance user experience but throughout the whole business model and value chain. Like described before, the sorting collection use data analysis to estimate price and suggest changes. Taube describes that they are always exploring new ways to improve processes to enhance circular capacity. Taube adds that data is also crucial to maintain and increase profitability in terms of refining the cost structure. Because Sellpy has data available, some products, when returning to Sellpy, can skip the sorting process and be immediately available for sale. Like mentioned before, Taube describe that Sellpy’s digital platform is a crucial factor and component to maintain and develop their business model and its circular features. It helps cutting costs while assessing information that can help staff develop the model and create important partnerships. Taube argues that this is one primary reason for the competitiveness but also requires that the digital platform is always compliant with external and internal changes. Sellpy uses their digital platform to handle sales, logistics, enhance customer experience such as the footprint calculator but also to explore new business ideas including partnerships or other clothes sharing services.

5.2.4 Digital Technology

When asking the question regarding what role digital technology has for Sellpy, Taube quickly says that their platform is everything to them. Like stated before, the digital platform supports multiple the critical processes throughout the value chain, such as internal supply chain, digital marketing and online sales. Taube explains that the data collection and processing will be even more vital for the development of the business. Their cost structure is rationalized by automation of processes and the use of machine learning helps Sellpy become more efficient. However, Taube says Sellpy is more like an advanced IT-company with a heavy labor force, since there are still many manual processes in place in the warehouse.

5.2.5 Competitors

According to Taube, it is hard to determine who Sellpy can regard as their competitor. Taube elaborates and explains that bigger e-commerce platforms such as *Amazon* and *Zalando* can be regarded as competitors. However, she admits that Sellpy rarely talks about competitors.

“To talk about competitors in this sustainable second-hand sphere is a wrong approach because there are so many items that have not reached the CE yet, which means that there are so many items for Sellpy and other second-hand stores to share...As of now, there will never be a lack in supply of items that can potentially be circular, therefore it is more beneficial for us and others to create networks and relationship rather than regarding others as competitors.” Lisa Book Taube, Sustainability Manger.

Taube explains that Sellpy rather sees other second-hand shops as partners or potential partners in their network. Like mentioned before, the items Sellpy ends up not selling are donated to charity second-hand shops such as *Myrorna* or *Stockholms Stadsmission*. Taube argues that by working together with other second-hand shops they can normalize and increase the status of buying second-hand, consequently more people will start selling.

6 Analysis

In this chapter, the empirical findings are analyzed with the help of the theoretical framework presented in chapter 3. Furthermore, the analysis focuses on the role of the entrepreneur, user intermediaries and CBM.

This paper investigated the following research questions:

What is the entrepreneur's role as an intermediary in the circular economy?

What challenges and success factors do startups encounter when using digital technology to enable a circular business model?

6.1 The Role of the Entrepreneur as an Intermediary

The current socio-technical system is complex and the concept of intermediaries as a driver of innovation is still vague (Kivimaa et al. 2019). Yet, within the realm of business and innovation, Sellpy as an example gives a clearer vision over not only the individual transition intermediary's features, challenges, and success factors, but shed light on its entire network within the socio-technical system. Firstly, Sellpy's role as an intermediary and entrepreneur is to inspire others to innovate business models by adapting the circulatory principles, secondly they show the importance of not only inspiring others but also the importance of engaging in partnerships to include more entities within the CE in the socio-technical system. The partnerships found could have the similar effects as agglomeration economies, when businesses localization and network favors from spillover effects such as knowledge transfer (Meliciani and Savona, 2015). Furthermore, Sellpy becomes an example of how these partnerships both help to support and extend the internal circular system, for example the partnership with charity second-hand shops. But it also how partnerships with other actors in the socio-technical system, outside '*sustainability sphere*', can be used as a tool to capture new markets and customer segments. Sellpy's partnership with *& Other Stories*, is an example of that innovative market capture to engage other non-circular businesses to become circular. In terms of transition, consumers or users might require to adopt new technology, routines, and practices in order for the mediation process to function (Judson et al., 2015; Hyysalo et al., 2018; Kanger and Schot, 2016). However, Sellpy shows that a transition intermediary can lower the threshold of engagement for potential users to enter in the CBM and CE by forming new partnerships outside of the niche. Additionally, as Kivimaa et al., (2019) suggest, transition intermediaries have the ability to suggest radical change or alternatives for the current socio-technical regime by linking niche actors with dominant socio-technical structures, negotiating change by building alliances and by including supporters from the dominant regime. Evidently, Sellpy approaches other businesses as potential partnerships rather than as competitors. These partnerships can be recognized in what De Angelis (2018) purpose of creating alliances to suggest a radical change. To go a bit further into the relationship between Sellpy and the regular fashion industry, De Angelis (2018) argues that when investigating the clothing industry, it is appropriate to show how the industry can mitigate its environmental impact. Using this notion, one could argue that Sellpy as an intermediary can to some extent support the fashion industry's mitigation of environmental impact.

Innovative businesses like Sellpy can potentially supply that demand of environmental impact mitigation, and thus find additional profitable opportunities, like the partnership with *& Other Stories*. However, more research has to be conducted, especially concerning market dependency, supply of second-hand goods, and circular capacity. As of now, the fashion industry cannot rely on intermediaries such as Sellpy or other second-hand stores to take on all their clothes floating around in the market. There is a need for more stable and increased capacity in circular flows between intermediaries. However, building networks and partnerships such as Sellpy does, make up a great example of how it can be done. Drawing back to the beginning on the topic network and partnership, Sellpy also sees the potential to maintain and establish a network of different sustainability-oriented entrepreneurs as they together have the ability to increase the status outside of the CE, in this case, second-hand shopping and selling, to be sustainable, and thus normalize it.

To summarize, the role of an entrepreneur as an intermediary is to influence innovation such as CBM, within the socio-technical system by using partnerships and network to engage and promote adaptation in sustainability. Consequently, Sellpy shows that there is a potential to increase status of sustainability, for example, second-hand shopping and selling as well as learning from each other. Secondly, partnerships and forming a network outside of the niche, provide the opportunity to enter new markets and capture new customer segments. In Sellpy's case this has helped engaging new customer segments to enable new (previously owned) items to enter the CE. Like Sellpy explains, they could not have done this without joining forces with other brands. These partnerships with businesses outside the sustainability-sphere is beneficial but it raises the question on its capacity to enforce CE. Partnerships with companies using unsustainable business practices could pave the way for unfortunate dependencies which raises the skepticism regarding Sellpy's stance on sustainability. Lastly, like stated earlier, transition intermediaries such as Sellpy, have the potential to mitigate environmental impact from the regular fashion industry.

6.2 Circular Business Model and Intermediaries: Challenges and Success Factors

6.2.1 User Community

Sellpy can be regarded as a user intermediary due to its characteristics of being a support organization of a user community that connects users using new technology and practices (Kivimaa et al. 2019). Like described by Taube, Sellpy is heavily reliant on their user community which results in much pressure put on the digital platform and internal processes to continuously change and optimize together with their user community. Sellpy does this using community checkups, digital marketing, and market research. However this process requires digital infrastructure and a skilled workforce within IT. The reliance and dependency observed is described by Kivimaa et al., (2019) as crucial for user intermediaries to maintain its community or network in order to survive. Evidently, Sellpy explains that being able to maintain their user community is a challenge but also a success factor. Sellpy processes user data to be able to pinpoint a particular product to a particular customer. With this method for information management, Sellpy can make it easier to supply individual users with customized advertisement and thus enhance the customer experience. Furthermore, as mentioned before, the partnerships with the dominant socio-technical system are potential ways to capture new customer segments. These partnership exemplifies the way user intermediaries can work between niches and the dominant socio-technical system, while collecting future user's demands regarding sustainability (Kanger and Schot, 2016).

Data collection and analysis has more functional areas than just marketing products to potential buyers. Prior to this, data is also used to ensure sales are maximizing the products sales price. In this way, Sellpy can ensure the seller a fair price for their item. One could recognize sellers and buyers as two user communities or types in which Sellpy is mediating between. This implies several challenges such as the dilemma concerning selling for a bargain to satisfy the buyer, or maximizing profit for the buyer. Furthermore, the user community relies on the internal supply chain and other processes that uphold an efficient distribution of products. Regarding CBM and the user community, the circular features of Sellpy's business model is strongly dependent on the user community. By always concerning and listening to the community, Sellpy can enable favorable system conditions to enhance circularity. This is one of four building blocks of CE proposed by the Ellen Macarthur Foundation (2015a). A full disclosure of these blocks and components of CBM will be addressed later. Furthermore, outlined in the section about CE, The Ellen Macarthur Foundation and McKinsey (2012) propose that CE is characterized by interdependencies among entities, implementing systems thinking and valuing diversity in the economy to build resilience. These characteristics can be recognized in user intermediaries approach towards their user community.

By using the strategy of maintaining user frequency while exploring new user segments, Sellpy maintains the circular flow of products while enabling new second-hand products to be captured by the CBM. Additionally, Sellpy embraces partnerships with regular fashion businesses such as & *Other Stories* to increase the status and normalize second-hand shopping. In this way, Sellpy and their partnerships are able to enable additional favorable system conditions such as collaborative platforms. To summarize, expanding and retaining user community is a challenge and success factor for a user intermediary like Sellpy to maintain their CBM. Furthermore, engaging in user community, evidently, requires a solid digital infrastructure but also required business support functions such as customer service and marketing. These business support function requires a qualified and specialized workforce for a growing SME (Skala, 2018).

6.2.2 Business Model

"Give your stuff a longer life by using us as an enabler in the middle to make it happen. We empower everyone to live circular." Lisa Book Taube, Sustainability Manager, Sellpy.

Identified by De Angelis (2018), CBM need to provide circular offerings to enhance customers' value. In the case of Sellpy, they want to make it easier for people to live circular by lowering the threshold of selling used items online. Thus, enhancing customers' value by engaging in the circular relationship Sellpy enables. Taube describes that despite being an innovator and inspiring more entrepreneurs to explore business opportunities in sustainability, there is a challenge to position a business as sustainable. When Sellpy positioned themselves as a sustainability-oriented business, many external actors started to put pressure on them, questioning their idea and goal. Additionally, there was a demand to solve every sustainability problem outside of their business immediately. Taube explains that this skepticism and being put in the limelight, creates fear in many entrepreneurs which also makes them hesitant to realize their own sustainable business model, such as Sellpy's. Because user intermediaries are dependent on its user community and network (Kivimaa et al., 2019), skepticism could be threatening to the stability of these community and network as the trust towards the intermediary decreases. This skepticism can be beneficial to some extent, because businesses need meet critics to develop and adapt to change, however, in the case for Sellpy, there is little understanding of how and when a business can implement changes and improvements. Partnerships or what De Angelis (2018) call - *circular relationship*, make up an important component for value creation and delivery but also acts as a success factor and challenge. The challenge arises due to the skepticism towards businesses that position themselves as sustainable. As Taube describes, in order to meet the skepticism, a business needs to meet this skepticisms by displaying knowledge and preparing well-formulated arguments.

Additionally, this factor also is aligned with having a competent workforce when developing innovative business models (Skala, 2018). Similar to Sellpy, it becomes a question of prioritizing financial capital. Sustainability-oriented SMEs such as Sellpy that are not yet profitable, are not able to solve every problem at once. However, Sellpy recognizes its workforce as one of their success factors, especially in order to operate with scarce resources and adapt to external feedback like mentioned above. For growing businesses, a qualified workforce is critical to develop and change (Skala, 2018). Another qualifying feature of BM's components in CE is to maximize resources across the value chain and enhance circular resources and capabilities with supply chain and competence for development and adaptation (De Angelis, 2018). For Sellpy, maximizing resources is not only critical for maintaining the circular value creation and delivery but also vital to increase profitability and cut costs. Additionally, Sellpy handles a unique variety of goods, which pave the way for limited forecasting and increasing need for traceability and transparency.

In detail, Sellpy's business functions such as supply chain, assortment, quality control and logistics lay the foundation of their circular features. Additionally, they are supported by their internal IT-system as well as manual workforce, and manual processes. Despite having an established IT infrastructure, there are still areas in their support functions that are in need of automatization and digitization to increase value creation and delivery. Digital strategy for enabling circular value creation and delivery could also be associated with Sellpy's digital marketing strategy which targets pricing and products. In this way, both

buyers' and seller's demands can be taken into account while lowering the threshold for engaging in a CE. As a business, being in constant development and transformation to enforce product development, market acquisition and acquiring resources, is essential to stimulate growth (Picken, 2017). Evidently, user intermediary as a business model's most valuable asset becomes the user community. Sellpy shows that processes such as data collection, tracking, and processing becomes a vital component to establish and support a circular system but also to withhold the intermediation. Additionally, to develop the user intermediary together with the user community becomes a vital development approach. In practice, Sellpy suggests that implementing user retention strategies, conducting market research, and use digital marketing and data analysis are examples of these development practices.

Success Factors	Details	CBM Feature
User Community	<i>Listen to and develop with the community, constantly optimize manual processes and digital platform.</i>	Value proposition, value creation and delivery.
Digital Platform & digital ownership	<i>Being supported by a sophisticated digital solution does not only enhance the potential to handle complex assortments but collect and track order, customer, and product data to optimize processes, target products, and innovate further.</i>	Value proposition, value creation and delivery, value capture.
Skilled and diverse workforce	<i>A skilled and diverse workforce implies be equal in their work, innovative with low budget, and be adaptive.</i>	Value proposition, value creation and delivery, value capture.
Partnerships and relationships	<i>By identify competitors as potential partnerships and network is essential to enforce transition in the socio-technical regime, capture new markets, reach new customer segments, and extend the circular flow.</i>	Value proposition, value creation and delivery.
Challenges	Details	
User Community	<i>Maintaining and developing platform with user community is vital but requires market research, customer support, digital marketing.</i>	
External Skepticism	<i>Skepticism towards sustainability-oriented businesses can bring uncertainty when building critical partnerships and relationships. Also external pressure to handle all aspects of sustainability.</i>	

Table 6.2 Results from Analysis

7 Discussion

In this chapter, the results in the analysis are discussed and compared with previous research. The structure follows the research questions of the study. The results are contextualized with the empirical background on innovation, sustainability, and digital technology.

This paper investigated the following research questions:

What is the entrepreneur's role as an intermediary in the circular economy?

What challenges and success factors do startups encounter when using digital technology to enable a circular business model?

7.1 The Role of the Entrepreneur as an Intermediary

According to the analysis, Sellpy has become an actor in distributing circular features and inspiring others to innovate towards a more sustainable business model. Makard et al. (2012) argues that established technologies are highly intertwined with lifestyles, business models, value chains, user practices, and organizational structures. Similar to Makard et al. (2012) recognize, by establishing partnerships and relationships within and outside of the sustainability sphere, Sellpy becomes an intermediary for transition by engaging in untwining established business models, value chains, user practices, and organizational structures. Evidently, partnerships with established brands such as *& Other Stories* help changing user practices by introducing secondhand to new customer segments. Looking back at the literature on sustainability transition, the transformative change is the set of processes that influence technological, organizational, economic, and socio-cultural dimensions (Makard et al., 2012). This aspect also shows how an entrepreneur in practice can establish relations and find additional business opportunities in different dimensions in the sustainability transition within the socio-technical system. Osburg and Lohrmann (2017) argue that businesses need to implement sustainability in the core of the business. This will provide a competitive advantage in creating new value for customers.

Furthermore, as an entrepreneur, Sellpy claims, they have the capability to influence other entrepreneurs to engage in the sustainability transition by innovating their businesses. This claim leads to the topic of transition mechanisms. Karolina Safarzynska et al. (2012) describe four mechanisms that represent factors that accelerate transition. The authors argue that joint co-determination of user preferences and strategies of the firm provide acceleration to socio-technical trajectories. Likewise, Sellpy claims there is a need for a joint effort to change the clothing industry, and they do what they are capable of to be a source of inspiration. Businesses, as actors with different properties, can together change and learn from each other to change core structures (Karolina Safarzynska et al., 2012).

Therefore, the efforts Sellpy puts into establishing partnerships and relations both inside and outside of the sustainability sphere are essential for the overall acceleration of trajectories. Mitigation for environmental impact. An actor of transition does not only have the capability to transform business practices but also consumption. Makard et al. (2012) highlight the multi-dimensional approach to transition that impacts both production and consumption. Sellpy has been engaging in user practices by both using partnerships to reach out to new customer segments with targeted data-driven marketing. These practices thus become important to sustain the user community but also to find new business opportunities. On the one hand, they extend the engagement of transition for the socio-technical transition. On the other, establishing user communities also require trust. Rachel Botsman's research (2012) on trust in the sharing economy brings valuable insight to empirically argue for that user-dependent businesses as intermediaries, like Sellpy, not only mediate sustainability transition but also trust in digital platforms. Like mentioned in the analysis and result chapters, Sellpy is dependent on its data tracking and processing to maintain its user community, which requires responsibility and transparency on what and how user data is processed. This responsibility also requires well-established strategies, determination, and transparency on what the business claims is sustainability and how it is sustainable.

However, compared to Botsman (2012), Sellpy never explicitly states trust as a valuable aspect for their business model, but indirectly by stating that its user community is the business most valuable asset, Sellpy maintain trust in forms of showing CO2 savings or including the user community in the development of the platform. Consequently, transparency also becomes a critical aspect of a digital platform and as an entrepreneur. Reputation capital has become vital for customer platforms and systems which are critical for facilitating exchange and interaction between seller and customer (Botsman, 2012). In the literature on digital development, the topic of trust is increasing but not addressed in innovation and intermediary research. There is a need for research that explores transition intermediaries' obligation on trust. Additionally, there is a need for more research on how building trust in sustainability-oriented businesses impacts business governance and processes. For Sellpy's part, this means having a sustainability manager, customer service, and a well-established marketing team. However, the lack of top management's perspective and interpretation of sustainability and reputation capital limits the discussion. Furthermore, Osburg and Lohrmann (2017) argue that in the wake of digital development, processes can be split up in smaller parts, which pave the way for co-creation or cooperation. The instability regarding profit makes it critical for a user intermediary to be able to determine the value of new partnerships. Following Osburg and Lohrmann's (2017) opinion, a user intermediary is also one actor in a network which becomes resilient when more actors are added to the network. However, there are also intentions driving unfavorable power relations that could determine the direction of a socio-technical transition. This requires more research in the relationship between transitioning intermediaries and the dominating regime.

7.2 Circular Business Model and Intermediaries: Challenges and Success Factors

Sustainability transition has brought a lot of attention in the field of innovation research, especially intermediaries as a transformative actor within the socio-technical transition (Kivimaa et al., 2019). Like mentioned before, there is a lack in the literature in determining when intermediation starts and ends. Using Sellpy as a study object bring insight into how an intermediary work on a micro scale. The classification of intermediaries brings the research further in also determining the organizational and business structures that are required, which in this study can be traced to the challenges and success factors found in this study. However, it is important to note that user intermediaries are not only defined after its business model but also how knowledge is shared and how partnerships, user community, and networks are established. Learning from this study, the type of business model in place might determine the intermediary to some extent. Sellpy shows that there are sub business functions that facilitate how these determine the elements of an intermediary. The study carried out by Kivimaa et al., (2019) conclude that intermediaries have the role of negotiating between different interests and priorities to facilitate unified visions between emerging and ruling socio-technical system configurations. This study shows that in terms of being an intermediary using digital technology to support the facilitation, as mentioned in section 6.1, there is a need of reputation capital and trust (Botsman, 2016).

7.2.1 External Skepticism

In practice, Sellpy argues that this requires having a well-established understanding of what sustainability is and how they are taking action to re-engineer processes to meet skepticism. Often small businesses do not have the resources or capacity to meet the skepticism to withhold their reputation capital, which is, according to Botsman (2016), crucial for growth. From a consumer's perspective, trusting new ideas, platforms, and systems facilitate exchange and interaction (Botsman, 2016). In the literature, the willingness to adopt technology and innovation is shown to be crucial, which requires trust and transparency. Thus linking back to user intermediaries, or transition intermediaries in general, while the user or consumer needs to have faith in innovation, likewise transition intermediaries need to be transparent.

The growing potential of intermediaries creating networks and relationships represents a network of trust in both how technology is handled (in terms of data and algorithms) but also how sustainability is perceived and defined in the core value of a business. Makard et al., (2012) describe that technological development thrives and established technologies are intertwined with our lifestyles where trust and transparency become the glue in a socio-technical system. Thus transition intermediaries need to adopt trust and transparency in their core to establish themselves in the socio-technical system. Additionally, intermediaries that take trust and transparency into account will create more value for their user community or customers.

7.2.2 User Community

For a user intermediary, the user community is an important factor to acknowledge. Like stated in section 5.2.1, the IT-infrastructure supports maintaining Sellpy's user community. The user community can be regarded as one of the most important success factors and challenges for a user intermediary since they both provide input and output for a user intermediary. Drawing back to the empirical background, serving the user community means enhancing transition with customer offering and increased value creation. Socio-technical systems consist of norms and standards (Makard et al., 2012) in which seen on a micro level; a user intermediary has to account for. However, maintenance of user community does not solely regard the primary users such as buyers and sellers but also the partnerships with other businesses. Within socio-technical transition theory, actors can establish networks in which helps influence interviewed dimensions such as organizational structures, norms, or technological acceptance or even influence consumption behavior (Makard et al., 2012). The case study on Sellpy shows that partnerships with companies outside of the sustainability sphere help to create new mechanisms with the ability to broaden transition behavior.

Sellpy's partnerships with other brands are a significant asset to reaching out to new customer segments while providing the partner company to adopt circular thinking. In this way, socio-technical dimensions can be untwined by partnerships. Makard et al., (2012) argue consumption changes in the meantime of transition. Likewise, Sellpy sees differences in people's perception of second-hand clothing when partnering with brands outside of the sustainability sphere and thus can change consumer behavior. A user intermediary's potential to influence institutionalized consumption behavior could also be revealed in how Sellpy uses data and user retention strategies to obtain new users or maintain old ones. Data-driven marketing is vital for the business to secure financial stability but also to enhance customer satisfaction. This also enhances the value capture of a CBM to optimize resources. However, this study was only conducted on a single intermediary, which makes it difficult in conceptualizing findings and patterns. However, there is a significant result arguing for user community as a critical asset for a user intermediary in the form as an online business.

7.2.3 Digital Platform and Digital Ownership

Like mentioned earlier in this paper, the digital platform and ownership was a large success factor for Sellpy. Recognized by Hyysalo et al., (2017), mediating space or interaction areas are an important factor when recognizing transition and innovation. As a user intermediary, digital platforms but also the knowledge of digital technology facilitates capacity in supporting critical areas within the business model. For example, maintaining the user community. Consequently, within digital development literature, data processing and collection is brought to the table as a concern but also as a success factor. But also as sustainability transition literature argue it is important to understand how these processes influence the systemic change for a sustainable future (Makard et al., 2012). The discussion on data takes two directions. Firstly, It can be regarded as a success factor to maintain the user community and enhance value creation and delivery. Sellpy uses user data to match products with users, set prices, or customize the user experience. This also acknowledges the managerial setting in which an innovative CBM should have in place to be successful as a transition intermediary. Secondly, through a digital development perspective,

data and algorithmic processing are concerning. Osburg and Lohrmann (2017) argue that new economic models have emerged from digital technology where user data is a huge asset but at the same time has provided breakthroughs in delivering enhanced productivity or environmental benefits. Additionally, The willingness to adapt to digital technology is argued by the researchers to be a mean of survival. As user intermediary, the concerns regarding user data should be highly valued and prioritized. There is a modest trust that platforms such as Sellpy have an ethical approach in data tracking. Trust has been highlighted before in this discussion and cannot be left out when analyzing digital platforms. In the same way, trust is also important to acknowledge in IT governance and business development for user intermediaries.

8 Conclusions

This chapter presents the key findings of the study and the empirical contributions made. Furthermore, suggestions for further research is mentioned.

8.1 Key Findings and Contributions

The increasing phenomena of entrepreneurs suggesting digital platforms as a supportive element in an enterprise to enable sustainable business models brought the attention of the author of this research to intermediaries in innovation. Therefore, this research aimed to investigate the role of the entrepreneur as an intermediary that enables CE with the support of digital platforms. This research shows that entrepreneurs potentially play an essential part to promote sustainability-oriented innovation, e.g., the adoption CBM, or circular features within the entrepreneur's network. An entrepreneur as an intermediary can play a vital role to generate a transition to enable and facilitate CBM that can influence businesses outside of the sustainability-sphere. These networks or partnerships have some prerequisites. Firstly, to involve others, the business model requires initiatives to connect circular elements with other businesses to create circular partnerships. In this way, the CBM has the opportunity to increase brand image, reach new customer segments, and provide services and knowledge to non-circular businesses, which can bring additional profitability. For example, Sellpy's partnership with charitable secondhand chains such as *Myrorna* or *Stadsmissionen* collects the surplus of unsold goods, which extends and supports the circular system and business model. Additionally, Sellpy's partnerships with regular fashion brands such as *& Other Stories* facilitate access to new customer segments and increase brand recognition. Secondly, these partnerships could create lock-in effects and unpleasant dependency. For example, by reaching out to other companies which use unsustainable practices, businesses like Sellpy could be exposed to greenwashing or a decrease in trustworthiness. However, these remarks were not sufficiently reviled in this research, but the tendencies are yet essential to consider in future research.

Furthermore, entrepreneurs like Sellpy possess the potential to influence other entrepreneurs seeking business opportunities by innovating business models or transforming existing business models that aim at becoming more sustainable. By learning and stating examples, entrepreneurs can adapt and further develop sustainability-oriented business practices. However, research on these new business models and if they are sustainable or not should be carried out further. This study also shed light on the ability to use transition intermediaries to understand relationships within the socio-technical system and how these provide benefits for the transition. Furthermore, the use of digital platform as support requires trust as a form of glue within the digital development. User intermediaries using digital technology need to understand the general field in digital development and how trust is becoming a vital aspect for success and digital sustainability.

Additionally, there is an imminent skepticism towards innovative businesses aiming at being sustainable, which could have an impact on these businesses' success and survival. Evidently, Sellpy interpreted the skepticism from the public as a reaction from not fully understanding the concept of sustainability and the development of a business. This phenomenon makes it attractive to investigate how this skepticism in practice limits the growth of sustainability-oriented businesses. The challenges and success factors found in the study suggest that launching a CE service like Sellpy is capital intensive in terms of knowledge and financial resources. Developing and maintaining ownership over a digital platform requires skills, time, and financial investments. Since user intermediaries are heavily reliant on the user community, digital platforms support the development of a business model together with the user community. Additionally user intermediaries using digital platforms to connect actors within the socio-technical system require trust from its users. To summarize, this paper cannot conclude if CBMs using digital platforms are the golden way forward for entrepreneurs to approach sustainable development to transform the entire economy or industries. However, this research provides an understanding of a key actor

and its ability to try to accelerate sustainability transition in a complex socio-technical system and its success factors and challenges that could come along with it.

8.2 Suggestions for Further Research

This case study has been focusing on the entrepreneur's role as an intermediary of transition and its challenges and success factors. This research used several quality assurance measures which have been used throughout the case study. Since this case study only focused on a single actor to gain in-depth knowledge it is difficult to make any generalizing conclusions that would extend the theoretical construction and debate. However, this case study could exemplify the theoretical patterns found in the literature. This study concludes that the micro classification of intermediaries such as user intermediaries fill the gap of empirical evidence that can draw further conclusions to other fields of studies. For example, this case study identifies business functions or strategies that can be further investigated in other innovative businesses. This could be carried out in a comparative study on different innovative initiatives that draw similarity to user intermediaries. It would also be important to understand the flaws of the network user intermediaries function within. Furthermore this research suggests that more research is needed within consumption in a CE or shared economy. Additionally, more research is needed that explores the different actors' connectivity and dependencies within the socio-technical system. Lastly, the topic of trust and transparency is an important aspect of digital development which should be further investigated in the field of intermediaries.

Acknowledgement

First and foremost, I would like to express my gratitude to my supervisor Per-Anders Langendahl of the Swedish University of Agriculture for critically revising my work and for giving valuable feedback, while being a great source of inspiration. Also, I would express my appreciation to my subject reviewer Cecilia Mark-Herbert of the Swedish University of Agriculture. Furthermore, I sincerely thank Sellpy for being transparent and helpful in this research. I also thank my fellow students and friends for critically revising my work and encouraging me throughout my studies. Also, I would like to express my gratitude to the associate professor Malgorzata Blicharska of Uppsala University for assisting with information and supporting my fellow students and me in our thesis projects. Lastly, I express my appreciation to Uppsala university and the Swedish University of Agriculture for an inspiring and rewarding year at the Master Program in Sustainable Development.

Uppsala, May, 2019
Jakob Roséen

References

Arend, R.J. (2013). The business model: Present and future—beyond a skeumorph. *Strategic Organization*, 11(4), pp.390–402.

Banerjee, S.B. (2003). Who Sustains Whose Development? Sustainable Development and the Reinvention of Nature. *Organization Studies*, 24(1), pp.143–180.

Barrie, J., Zawdie, G., João, E. (2017). Leveraging triple helix and system intermediaries to enhance effectiveness of protected spaces and strategic niche management for transitioning to circular economy. *International Journal of Technology Management & Sustainable Development*, 16(1), pp.25–47.

Beckerman, W. (1994). “Sustainable development”: is it a useful concept? *Environmental values*. Available at:
<https://www.ingentaconnect.com/content/whp/ev/1994/00000003/00000003/art00001>.

Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S., Rickne, A. (2008). Analyzing the functional dynamics of technological innovation systems: A scheme of analysis. *Research policy*, 37(3), pp.407–429.

van den Bergh, J.C.J.M., Gowdy, J.M. (2000). Evolutionary Theories in Environmental and Resource Economics: Approaches and Applications. *Environmental & Resource Economics*, 17(1), pp.37–57.

Bergquist, A.-K., Söderholm, K. (2011). Green Innovation Systems in Swedish Industry, 1960–1989. *Business history review*, 85(4), pp.677–698.

Botsman, R. (2016). Currency of trust. Available at: <http://rachelbotsman.com/thinking/>.

Botsman, R., Rogers, R. (2010). *What's Mine Is Yours: The Rise of Collaborative Consumption*, Harper Collins.

Brundtland, G.H. (1987). Our common future. *New York*. Available at:
<https://books.google.com/books?hl=en&lr=&id=3lRtBQAAQBAJ&oi=fnd&pg=PA29&dq=Brundtland&ots=QRQbweGMiJ&sig=Gi4Os4uoYEqQYwy4bI3m99t5MEw>.

Casadesus-Masanell, R., Ricart, J.E. (2011). How to design a winning business model. *Harvard business review*, 89(1/2), pp.100–107.

Chowdhury, I. (2012). *Scaling in social entrepreneurship: partnerships, knowledge transfer, and business models*. Cergy-Pontoise, Ecole supérieure des sciences économiques et commerciales. Available at: <https://www.theses.fr/2012ESEC0002>.

Cresswell, J. (2013). Philosophical assumptions and interpretive frameworks. *Qualitative inquiry and research design: choosing among five approaches*. Los Angeles: Sage Publications, pp.15–

41.

De Angelis, R. (2018). *Business Models in the Circular Economy: Concepts, Examples and Theory*, Springer International Publishing.

EC. (2013). *Fact and figures about the EU's Small Medium Enterprises (SME)*. Retrieved,

Edelman. (2016). Edelman trust barometer: Executive summary. *Report*. Retrieved from [http://www. Scribd. Com/Doc/79026497/2012-Edelman-Trust-Barometer-Executive-Summary](http://www.Scribd.Com/Doc/79026497/2012-Edelman-Trust-Barometer-Executive-Summary). Accessed September, 10, p.2014.

Eisenhardt, K.M., Graebner, M.E. (2007). Theory Building From Cases: Opportunities And Challenges. *Academy of Management Journal*, 50(1), pp.25–32.

Ellen MacArthur Foundation. (2017). *Achieving “Growth Within,”* Ellen MacArthur Foundation. Available at: <https://www.ellenmacarthurfoundation.org/publications/achieving-growth-within>.

Ellen MacArthur Foundation. (2015). *Towards a circular economy: business rationale for an accelerated transition*, Ellen MacArthur Foundation.

Ellen MacArthur Foundation. (2016). *Priority research agenda*, EMF. Available at: http://www.circulareconomy.com/assets/downloads/higher-education/EMF_Priority-Research-Agenda-copy.pdf. [Accessed April 2019].

Ellen MacArthur Foundation, M.&.S. (2015). *Growth within: A circular economy vision for a competitive Europe*, Available at: <http://www.ellenmacarthurfoundation.org/business/reports> [Accessed March 29, 2019].

Ellen MacArthur Foundation., McKinsey. (2012). *Towards the circular economy: Economic and business rationale for an accelerated transition*, Ellen Macarthur Foundation. Available at: <http://www.ellenmacarthurfoundation.org/business/reports> [Accessed March 29, 2019].

Esposito, M., Tse, T., Soufani, K. (2017). Is the circular economy a new fast-expanding market? *Thunderbird International Business Review*, 59(1), pp.9–14.

European Environmental Agency. (2018). Integrating circular economy and bioeconomy would improve sustainability in Europe. *European Environmental Agency*. Available at: <https://www.eea.europa.eu/highlights/integrating-circular-economy-and-bioeconomy> [Accessed April 22, 2018].

Farmbrough, H. (2018). Why Serious Business Is Backing Sweden’s Social Startups. *Forbes*.

Finger, M., Groenewegen, J., Künneke, R. (2005). The Quest for Coherence between Institutions and Technologies in Infrastructures. *Journal of Network Industries*, os-6(4), pp.227–259.

Fischer, L.-B., Newig, J. (2016). Importance of Actors and Agency in Sustainability Transitions:

A Systematic Exploration of the Literature. *Sustainability: Science Practice and Policy*, 8(5), p.476.

Gajda, R. (2004). Utilizing Collaboration Theory to Evaluate Strategic Alliances. *American Journal of Evaluation*, 25(1), pp.65–77.

Garud, R., Gehman, J. (2012). Metatheoretical perspectives on sustainability journeys: Evolutionary, relational and durational. *Research policy*, 41(6), pp.980–995.

Geels, F.W., Schot, J. (2010). The dynamics of socio-technical transitions: a sociotechnical perspective in grin'. *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change*. Ed. by J. Rotmans and J. Schot. London: Routledge.

Geissdoerfer, M., Savaget, P., Bocken, N.M.P., Hultink, E.J. (2017). The Circular Economy--A new sustainability paradigm? *Journal of cleaner production*, 143, pp.757–768.

Gladwin, T.N., Kennelly, J.J., Krause, T.-S. (1995). Shifting Paradigms for Sustainable Development: Implications for Management Theory and Research. *AMRO*, 20(4), pp.874–907.

Habib, M.M., Pathik, B.B., Maryam, H. (2014). *Research Methodology - Contemporary Practices: Guidelines for Academic Researchers*, Cambridge Scholars Publishing.

Haigh, N., Hoffman, A.J. (2014). The New Heretics: Hybrid Organizations and the Challenges They Present to Corporate Sustainability. *Organization & environment*, 27(3), pp.223–241.

Hair, J.F. (2007). Research Methods for Business. Available at: <https://digitalcommons.kennesaw.edu/facpubs/2952/> [Accessed May 5, 2019].

Halme, M., Korpela, M. (2014). Responsible innovation toward sustainable development in small and medium-sized enterprises: a resource perspective. *Business Strategy and the Environment*, 23(8), pp.547–566.

Hodson, M., Marvin, S. (2009). Cities mediating technological transitions: understanding visions, intermediation and consequences. *Technology Analysis & Strategic Management*, 21(4), pp.515–534.

Hoffman, A.J., Ehrenfeld, J.R. (2015). The fourth wave: Management science and practice in the age of the Anthropocene. *Corporate Stewardship: Achieving Sustainable Effectiveness*, pp.227–246. Available at: http://dx.doi.org/10.9774/gleaf.9781783532605_14.

Holden, M., Li, C., Molina, A., Sturgeon, D. (2015). Crafting New Urban Assemblages and Steering Neighborhood Transition: Actors and Roles in Ecourban Neighborhood Development. *Articulo*, (14). Available at: <http://journals.openedition.org/articulo/3114>.

Hyysalo, S., Johnson, M., Juntunen, J.K. (2017). The diffusion of consumer innovation in sustainable energy technologies. *Journal of cleaner production*, 162, pp.S70–S82.

Hyysalo, S., Juntunen, J.K., Freeman, S. (2013). Hyysalo, Juntunen & Freeman: internet forums and the rise of the inventive energy user. *Science & Technology Studies*. Available at: <http://sciencetechnologystudies.journal.fi/article/view/55307>.

Hyysalo, S., Juntunen, J.K., Martiskainen, M. (2018). Energy Internet forums as acceleration phase transition intermediaries. *Research policy*, 47(5), pp.872–885.

Judson, E.P., Bell, S., Bulkeley, H., Powells, G., Lyon, S. (2015). The co-construction of energy provision and everyday practice: integrating heat pumps in social housing in England. *Science & Technology Studies*. Available at:

https://eprints.ncl.ac.uk/file_store/production/216196/B41BAB4D-D0DE-4795-9FB3-ABF4C4FB4DB8.pdf.

Kampelmann, S., Van Hollebeke, S., Vandergert, P. (2016). Stuck in the middle with you: The role of bridging organisations in urban regeneration. *Ecological Economics*, 129, pp.82–93. Available at: <http://dx.doi.org/10.1016/j.ecolecon.2016.06.005>.

Kanger, L., Schot, J. (2016). User-made immobilities: a transitions perspective. *Mobilities*, 11(4), pp.598–613.

Kern, F., Smith, A. (2008). Restructuring energy systems for sustainability? Energy transition policy in the Netherlands. *Energy policy*, 36(11), pp.4093–4103.

Kickul, J., 2012. Kickul, J., & Lyons, T. (2012). Understanding Social Entrepreneurship: The Relentless Pursuit of Mission in an Ever-Changing World. Routledge Publishing. Available at: <http://dx.doi.org/> [Accessed March 27, 2019].

Kickul, J., Lyons, T.S. (2016). *Understanding social entrepreneurship: The relentless pursuit of mission in an ever changing world*, Routledge.

Kivimaa, P. (2014). Government-affiliated intermediary organisations as actors in system-level transitions. *Research policy*, 43(8), pp.1370–1380.

Kivimaa, P., Boon, W., Hyysalo, S., Klerkx, L. (2019). Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda. *Research policy*, 48(4), pp.1062–1075.

Klerkx, L., Leeuwis, C. (2009). Establishment and embedding of innovation brokers at different innovation system levels: Insights from the Dutch agricultural sector. *Technological forecasting and social change*, 76(6), pp.849–860.

Kramer M., P.M. (2011). Shared value. How to reinvent capitalism and unleash a wave of innovation and growth. *Harvard business review*, pp.62–77.

Lacy, P. (2017). These 5 disruptive technologies are driving the circular economy. *Weforum*.

Available at: <https://www.weforum.org/agenda/2017/09/new-tech-sustainable-circular-economy?platform=hootsuite>.

Lacy, P., Rutqvist, J. (2016). *Waste to Wealth: The Circular Economy Advantage*, Springer.

van Lente, H., Hekkert, M., Smits, R., van Waveren, B. (2003). Roles of Systemic Intermediaries in Transition Processes. *International Journal of Innovation Management*, 07(03), pp.247–279. Available at: <http://dx.doi.org/10.1142/s1363919603000817>.

Linnanen, L. (2005). An insider's experiences with environmental entrepreneurship. *Making ecopreneurs: Developing sustainable entrepreneurship*, pp.72–88.

Macionis, J.J., Gerber, L.M. (2011). Sociology, 7th Canadian edn. *Toronto, Ontario, Canada: Prentice Hall*.

Mair, J., Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), pp.36–44.

Mao, J., Li, C., Pei, Y., Xu, L. (2018). *Circular Economy and Sustainable Development Enterprises*, Springer Singapore.

Markard, J., Raven, R., Truffer, B. (2012). Sustainability transitions: An emerging field of research and its prospects. *Research policy*, 41(6), pp.955–967.

Mattes, J., Huber, A., Koehrsen, J. (2015). Energy transitions in small-scale regions – What we can learn from a regional innovation systems perspective. *Energy Policy*, 78, pp.255–264. Available at: <http://dx.doi.org/10.1016/j.enpol.2014.12.011>.

McGrath, M. (2018). Five things we have learned from the IPCC report. *BBC*. Available at: <https://www.bbc.com/news/science-environment-45784892> [Accessed March 27, 2019].

Moore, M.L., Westley, F.R. & Brodhead, T. (2012). Social Finance Intermediaries and Social Innovation. *Journal of Social Entrepreneurship*, 3(2), pp.184–205.

Moss, T. (2009). Intermediaries and the Governance of Sociotechnical Networks in Transition. *Environment & planning A*, 41(6), pp.1480–1495.

Murray, A., Skene, K., Haynes, K. (2017). The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context. *Journal of business ethics: JBE*, 140(3), pp.369–380.

Nelson, R.R., Winter, S.G. (1977). In search of useful theory of innovation. *Research Policy*, 6(1), pp.36–76. Available at: [http://dx.doi.org/10.1016/0048-7333\(77\)90029-4](http://dx.doi.org/10.1016/0048-7333(77)90029-4).

Ni, T. (1986). Living Planet Report 2016. Available at: <http://assets.wwf.org.uk/custom/lpr2016/>.

Norrskén Foundation, The Team. *Norrskén Foundation*. Available at: www.norrskénfoundation.org [Accessed 20190507].

Osburg, T., Lohrmann, C. eds. (2017). *Sustainability in a Digital World: New Opportunities Through New Technologies*, Springer, Cham.

Osterwalder, A., Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, John Wiley & Sons.

Phills, J.A., Deiglmeier, K., Miller, D.T. (2008). Rediscovering social innovation. *Stanford Social Innovation Review*, 6(4), pp.34–43.

Picken, J.C. (2017). From startup to scalable enterprise: Laying the foundation. *Business horizons*, 60(5), pp.587–595.

Pielke, R.A.Jr. (2007). *The Honest Broker: Making Sense of Science in Policy and Politics*, Cambridge University Press.

Polzin, F., von Flotow, P., Klerkx, L. (2016). Addressing barriers to eco-innovation: Exploring the finance mobilisation functions of institutional innovation intermediaries. *Technological forecasting and social change*, 103, pp.34–46.

Raven, R.P.J.M., Verbong, G.P.J., Schilpzand, W.F., Witkamp, M.J. (2011). Translation mechanisms in socio-technical niches: a case study of Dutch river management. *Technology Analysis & Strategic Management*, 23(10), pp.1063–1078. Available at: <http://dx.doi.org/10.1080/09537325.2011.621305>.

Richardson, J. (2008). The business model: an integrative framework for strategy execution. *Strategic Change*, 17(5-6), pp.133–144.

Rohracher, H. (2009). Intermediaries and the Governance of Choice: The Case of Green Electricity Labelling. *Environment & planning A*, 41(8), pp.2014–2028.

Safarzyńska, K., Frenken, K. & van den Bergh, J.C.J.M. (2012). Evolutionary theorizing and modeling of sustainability transitions. *Research policy*, 41(6), pp.1011–1024.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students*, Pearson Education.

Schaltegger, S., Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business Strategy and the Environment*, 20(4), pp.222–237.

Schot, J., Kanger, L. & Verbong, G. (2016). The roles of users in shaping transitions to new energy systems. *Nature Energy*, 1, p.16054.

Scott, J.M. (2012). *Making Ecopreneurs: Developing Sustainable Entrepreneurship* (2nd ed.)

2012 Edited by Michael Schaper. Making Ecopreneurs: Developing Sustainable Entrepreneurship (2nd ed.). Farnham: Gower 2010. 321 pp., ISBN: 978 0 566 08875 9. *International Journal of Entrepreneurial Behavior & Research*, 18(3), pp.383–386. Available at: <http://dx.doi.org/10.1108/13552551211228052>.

Sellpy., Press. *Sellpy*. Available at: <https://www.sellpy.se/press> [Accessed May 7, 2019a].

Sellhelp AB. *Alla Bolag*. Available at: <https://www.allabolag.se/5569961260/sellhelp-ab> [Accessed May 7, 2019b].

Seyfang, G., Hielscher, S., Hargreaves, T., Martiskainen, M., Smith, Adrian. (2014). A grassroots sustainable energy niche? Reflections on community energy in the UK. *Environmental Innovation and Societal Transitions*, 13, pp.21–44. Available at: <http://dx.doi.org/10.1016/j.eist.2014.04.004>.

Shrivastava, P., Ivanaj, S., Persson, S. (2013). Transdisciplinary Study of Sustainable Enterprise. *Business Strategy and the Environment*, 22(4), pp.230–244.

Skala, A. (2018). *Digital Startups in Transition Economies: Challenges for Management, Entrepreneurship and Education*, Springer International Publishing.

Spieth, P., Schneckenberg, D., Ricart, J.E. (2014). Business model innovation—state of the art and future challenges for the field. *R&D Management*. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/radm.12071>.

Stahel, W. (2010). *The Performance Economy*, Springer.

Stewart, J., Hyysalo, S. (2008). Intermediaries, Users And Social Learning In Technological Innovation. *International Journal of Innovation Management*, 12(03), pp.295–325. Available at: <http://dx.doi.org/10.1142/s1363919608002035>.

Ström, V. (2019). Di Digital, Norrskén och Google startar Impact Summit Åre. *Di Digital*. Available at: <https://digital.di.se/artikel/di-digital-norrskén-och-google-startar-impact-summit-are>. Published: 27 February 2019.

Teece, D.J. (2010). Business Models, Business Strategy and Innovation. *Long range planning*, 43(2), pp.172–194.

Ustundag, A., Cevikcan, E. (2018). Industry 4.0: Managing The Digital Transformation. *Springer Series in Advanced Manufacturing*. Available at: <http://dx.doi.org/10.1007/978-3-319-57870-5>.

Wadhawan, J. (2016). Dynamic Pricing: Kein Wert für alle.

Weiblen, T., Chesbrough, H.W. (2015). Engaging with Startups to Enhance Corporate Innovation. *California management review*, 57(2), pp.66–90.

Wenning, C.J. (2009). Scientific epistemology: How scientists know what they know. *Journal of Physics Teacher Education Online*, 5(2), pp.3–16.

White, R., Stirling, A. (2013). Sustaining trajectories towards Sustainability: Dynamics and diversity in UK communal growing activities. *Global environmental change: human and policy dimensions*, 23(5), pp.838–846.

Winn, M.I., Pogutz, S. (2013). Business, Ecosystems, and Biodiversity: New Horizons for Management Research. *Organization & environment*, 26(2), pp.203–229.

Wirtz, B.W., Pistoia, A., Ullrich, S., Göttel, V. (2016). Business Models: Origin, Development and Future Research Perspectives. *Long range planning*, 49(1), pp.36–54.

World Bank Group. (2017). *Commodity markets outlook. D.C Washington*, Available at: <http://pubdocs.worldbank.org/en/174381493046968144/CMO-April-2017-Full-Report.pdf>.

World Wildlife Fund (WWF). (2016). *Living Planet: Report 2016: Risk and Resilience in a New Era*, World wide fund for nature.

Zott, C., Amit, R. & Massa, L. (2011). The Business Model: Recent Developments and Future Research. *Journal of management*, 37(4), pp.1019–1042.

Appendices

Appendix 1 A linear versus a circular industrial model

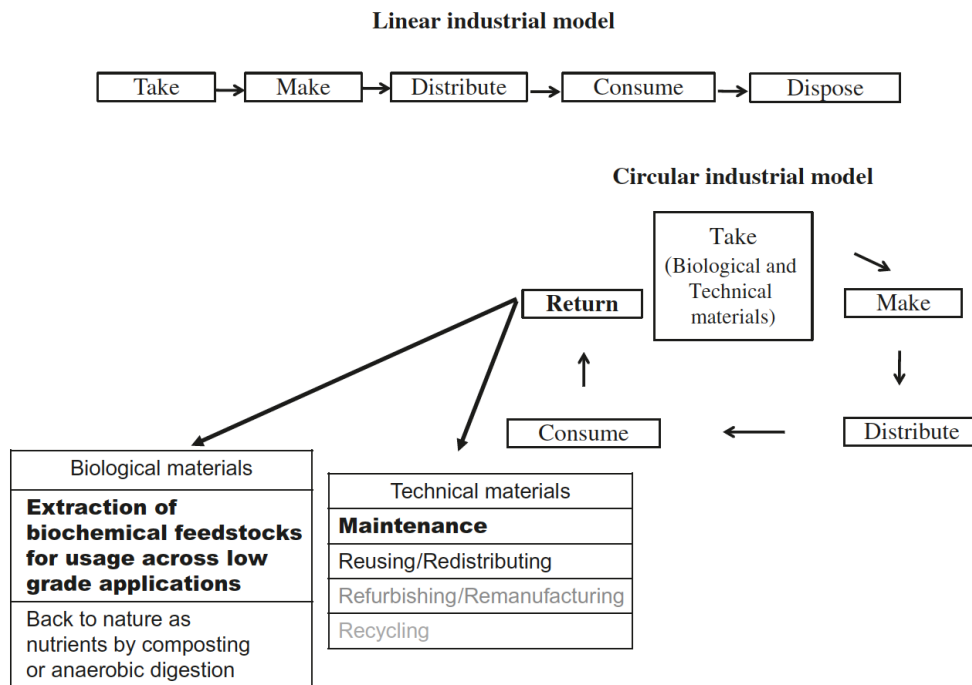


Fig 3.1: A linear versus a circular industrial model (De Angelis, 2018, p. 21)

The figure explains the difference between a circular industrial model and a linear industrial model. The circular model include features processing technical or biological material to restore the material's value (De Angelis, 2018).

Appendix 2 - Features of CBMs and Conceptualization

<i>BMs components</i>	<i>Qualifying features of BMs components in a CE</i>
Value proposition (Customers' offering)	P₁ : Enhanced customers' value as a result of more comprehensive 'circular offerings' (e.g. products as services; greater convenience; dematerialised products; superior product durability and ecological performances; product upgradability; take-back schemes) and 'circular relationships' (access over ownership, e.g. leasing, renting, sharing)
Value creation and delivery (How value is created and delivered)	P₂ : Diffused value creation, maximisation of resources value across the activity system, local/regional supply chains and boundary spanning relational competences for the adaptation or development of 'circular' resources and capabilities
Value capture (Costs and revenues)	P₃ : Idiosyncratic value capture mechanisms
<i>Circular business models are business models wherein enhanced customers' value is produced as a result of more comprehensive 'circular offerings' (e.g. products as services; greater convenience; dematerialised products; superior product durability and ecological performances; product upgradability; take-back schemes) and 'circular relationships' (access over ownership, e.g. leasing, renting, sharing). In circular business models diffused forms of value are created, local/regional supply chains are implemented, maximisation of resources value across the activity system is pursued, boundaries spanning relational competences for the adaptation or development of 'circular' resources and capabilities are developed, and idiosyncratic value capture mechanisms are observed</i>	

Fig 3.2: Features of CBMs and Conceptualization (De Angelis, 2018, p.65)
The qualifying features of business model components in a circular economy.

Appendix 3 - Theoretical Framework of User Intermediaries Enabling CBM

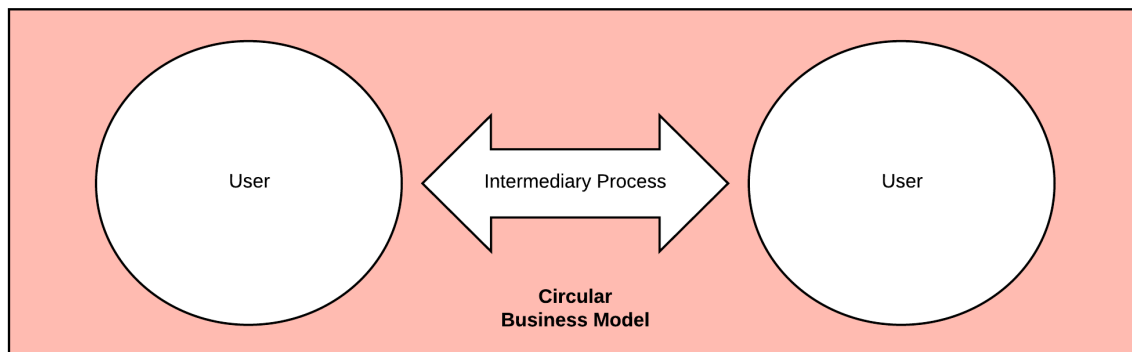


Fig 3.3: Theoretical Framework of User Intermediaries Enabling CBM.
The author's interpretation of user intermediaries and circular business models complied into a Theoretical Framework.

Appendix 4 - Results from Analysis

Sucess Factors	Details	CBM Feature
User Community	<i>Listen to and develop with the community, constantly optimize manual processes and digital platform.</i>	Value proposition, value creation and delivery.
Digital Platform & digital ownership	<i>Being supported by a sophisticated digital solution does not only enhance the potential to handle complex assortments but collect and track order, customer, and product data to optimize processes, target products, and innovate further.</i>	Value proposition, value creation and delivery, value capture.
Skilled and diverse workforce	<i>A skilled and diverse workforce implies be equal in their work, innovative with low budget, and be adaptive.</i>	Value proposition, value creation and delivery, value capture.
Partnerships and relationships	<i>By intentify competitors as potential partnerships and network is essential to enforce transition in the socio-technical regime, capture new markets, reach new customer segments, and extend the circular flow.</i>	Value proposition, value creation and delivery.
Challenges	Details	
User Community	<i>Maintaining and developing platform with user community is vital but requires market research, customer support, digital marketing.</i>	
External Skepticism	<i>Skepticism towards sustainability-oriented businesses can bring uncertainty when building critical partnerships and relationships. Also external pressure to handle all aspects of sustainability.</i>	

Table 6.2 Results from Analysis

Results from the analysis presented in a table covering success factors and challenges.

Appendix 5 Interview Guide and Design and Data Analysis from Theoretical Framework

Category	Theoretical Standpoint	Question
Circular Business Models/Entrepreneurship	CBMs archetypes, canvases, categories, elements, frameworks and strategies	Can you describe your circular system flow?
	Value proposition. Enhanced customers' value as a result of more comprehensive 'circular offerings' (e.g. products as services; greater convenience; dematerialised products; superior product durability and ecological performances; product upgradability; take-back schemes) and 'circular relationships' (access over ownership, e.g. leasing, renting, sharing)	What type of challenge or problem are you trying to address?
	Value creation and delivery. P2: Diffused value creation, maximisation of resources value across the activity system, local/regional supply chains and boundary spanning relational competences for the adaptation or development of 'circular' resources and capabilities	What type of challenges has occurred as a sustainability-oriented entrepreneur?
	Value capture P3: Idiosyncratic value capture mechanisms	What would you consider to be your success factors as a sustainability-oriented business?
		Can you describe the role of entrepreneurs in sustainable development?
		Have you identified any critical areas in the circular system?
		Can you describe your business' value proposition? Can you describe what your business offers your customers? How and what do you think your business transition customers to be more sustainable?
		Can you describe your business' value creation and delivery? Can you describe how value for customers is created and delivered? What internal factors do you believe is critical to maintaining your value creation and delivery? What external factors do you believe is critical to maintaining your value creation?
		Can you describe your business' value capture? Can you describe how your revenue and cost streams have given you an advantage as a business?
Intermediary System/Network	"Changing contexts may create conflict between intermediaries taking focus away from their tasks" (Klerkx and Leeuwis, 2009; Kivimaa, 2014).	Who are your competitors?
		What measurements are taken to adjust to market change?
		How do you respond to market change?
Intermediary System/Network	When transition advances, tasks of intermediaries supporting niches may be taken over by regime players, making intermediaries less important (Kanger and Schot, 2016), or transition intermediaries may change their role and become intermediaries institutionalized as part of the new regime (e.g. Berkvist and Söderholm, 2011).	What is your relationship between clothing brands and manufactures?
		What do manufacturing retail companies think about your solution?
	Intermediaries makes up an ecology of actors in a network or system that creates new markets for innovation solutions by pooling knowledge, finance and people while challenge existing market structures. (Kivimaa, 2014).	Who are your biggest competitors?
		How is the relationship with competitors?
		Do you recognize regular retail companies as competitors?
	The multidimensionality, complexity and multi-actor-network orientation of transition processes makes the operation of one intermediary alone often insufficient. (Kivimaa et al., 2019)	What are your most significant dependencies?
		What are your biggest bottlenecks?
	There are, however, questions about the degree of neutrality intermediaries can possess in connection to change agency (cf. Kivimaa, 2014).	
	In predevelopment, systemic intermediaries can articulate societal needs, make options visible and identify possible stakeholders to form an arena for transition. (Kivimaa et al., 2019)	Do you have an inclusive approach towards developing business and the platform together with the users?
	In take-off, systemic intermediaries aim to engage a critical mass of stakeholders for the new system and identify promising niches. (Van Lente et al. 2011)	How are users included in the developing or innovation process?
User Intermediaries	User intermediaries relies on a community that adapts to the use of new solutions. Therefore, it is crucial for user intermediaries to maintain its community or network in order to survive. (Kivimaa et al., 2019)	How do you create value for your user community?
	User intermediaries are peers or user support organizations who connect new technology and practises to citizens. (Kivimaa et al., 2019)	How are users maintained to continue to provide to the circular system?
	Furthermore, user intermediaries work in between niches and the dominant socio-technical system, while collecting their user community's future demand regarding rising sustainable technologies (Kanger and Schot 2016).	Where do you see critical areas throughout the customer journey?
		How is your customer frequency?
		What are the biggest challenges to maintain the user community?

