



Fashion Forward: A business model approach to integrating pre-owned fashion

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Abstract

This master thesis aims to examine how fashion companies execute the transition to circular business models relying on pre-owned apparel. Through a qualitative approach, I conducted a comparative case study on four fashion firms operating in different geographical markets that have or are working towards circularity within their business operations. Using the dynamic capabilities framework with a focus on micro-foundations, the findings suggest that there are common skills, processes, procedures, organizational structures, decision rules and disciplines that are relevant to fashion companies in the successful implementation of pre-owned apparel. Additionally, the different ways in which used fashion can be integrated potentially reveals common and unique challenges and opportunities for the industry.

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Keywords: circular business models, fashion industry, micro-foundations of dynamic capabilities, best practices, dynamic capabilities, sustainable fashion

Abstrato

O presente estudo tem como objetivo analisar as estratégias executadas pela indústria da moda para incentivar a transição para modelos circulares de negócio, utilizando vestuário em segunda mão. Através de uma abordagem qualitativa, um caso de estudo comparativo foi realizado entre quatro empresas de moda situadas globalmente que trabalharam ou estão a trabalhar no sentido da circularidade nas suas operações comerciais. Os resultados sugerem que existem competências, processos, procedimentos, estruturas organizacionais, regras de decisão e disciplinas, comuns entre todas estas empresas e que são relevantes para a implementação bem sucedida de modelos de vestuário em segunda mão. Adicionalmente, as diferentes formas de integração do vestuário em segunda mão revelam potenciais desafios e oportunidades comuns e únicos para a indústria através da adoção de uma abordagem microfundamentada de capacidades dinâmicas.

Título da Dissertação: Moda para a frente: Uma abordagem de modelo empresarial para integrar a moda em segunda mão

Autor: Astrid Almeida

Palavras-chave: modelos de negócio circulares, indústria da moda, microfundações das capacidades dinâmicas, melhores práticas, capacidades dinâmicas, moda sustentável

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1 Introduction

Contributing about 4% of the world's total greenhouse-gas (GHG) emissions in 2018 and no expected change to the 2.1 billion metric tons of GHG emissions into 2030 (McKinsey & Company, 2020), the fashion industry's unsustainable path is desperate for a shift to circularity. "Consumers will increasingly expect—and demand—an emphasis on sustainability from fashion brands. Circular business models won't be optional" (McKinsey & Company, 2020, p 2).

The fashion industry can no longer ignore the importance of purpose and practice in their business operations (Battilana et al., 2022). There is an urgent need to address the fashion industry's disregard for the environment and high resource utilization (Fowler et al., 2022). The traditional and linear approach to fashion is being challenged by society, encouraging industry experts to repurpose waste and reduce, reuse, and recycle resources to limit environmental impact (Manickam & Duraisamy, 2019) which can be achieved through ethical, sustainable, and slow fashion (Henninger et al., 2016). Previous literature argued that current production practices must be investigated with a new lens to encourage circular practices to emerge (Mukendi et al., 2020). However, the transition to circularity is accompanied by its share of opportunities and challenges.

Although sustainability in fashion is a growing commercial trend (Henninger et al., 2016), little academic research has been conducted on the topic. Current research focuses on the consumer aspect (de Lenne and Vandebosch, 2017) of consumption habits and paradoxes. However, beyond the consumer perspective, specific areas of sustainability and circularity within the fashion and apparel industry require further exploration (Tey et al., 2018). Circular practices in fashion could not only promise a reduction in GHG emissions and climate impact, but also can provide economical value. The rent, repair, and resale fashion market could be worth USD 700 billion by 2030, totaling to 23% of the fashion market (Ellen MacArthur Foundation, 2021). The commercial viability of rent, repair and resale fashion and lack of research in management literature highlight a gap in understanding and a need to investigate this field further.

Consequently, I propose the following research question:

How can fashion companies integrate pre-owned apparel into their business model?

I addressed the research question by using dynamic capabilities framework, with a focus on the micro-foundations. This framework is used to assess internal and external firm-specific capabilities (Teece et al., 1997) that are necessary to maintain a competitive advantage in business model innovation (Matricano, 2020). The micro-foundations of dynamic capabilities have been explored in the context of circular business models (Santa-Maria et al., 2022), but there is a lack in understanding the best practices needed for fashion firms to transition towards sustainability.

Given that the phenomenon is understudied in a real business context, this thesis takes a qualitative approach through a multiple case study analysis. Selected cases are fashion firms looking to integrate pre-owned fashion or have already implemented used clothing into their related product offerings. The four cases researched in this study include Sloned, H&M, Thrifty and Nudie Jeans.

The thesis is structured into seven chapters. The following section presents a literature review of the research conducted in the field of sustainable fashion, changing business models, and circularity. This leads into an introduction to dynamic capabilities framework and the purpose it serves in the research. The methodology chapter then showcases how research, data collection, and data analysis was designed and conducted. Subsequently, the empirical setting chapter presents the four cases in the context of their transition to sustainability. Their contributions to the study are revealed in the findings chapter followed by the discussion chapter that looks to explain the findings compared to the research completed in the literature review. Finally, the work is summarized in the concluding chapter, guiding future research.

Over a research period of three months, the research studied in the thesis identified relevant best practices for fashion firms to employ when integrating pre-owned fashion into their business model. These practices were unique to each company, but share some commonalities in their themes and overarching aims. The findings explored, encourage new understandings and different angles for fashion firms in a real and situational context.

2 Literature Review

The literature review shows that fashion is regarded as a complex industry to work in. Despite being environmentally detrimental, fast fashion continues to be the dominant business model and is expected to continually grow. The circular economy is a promising approach to addressing the environmental problems in fashion through pre-worn fashion alternatives such as the rental, repair and resale model. The review also highlights gaps in management literature in understanding circular fashion, implying the need for further research to be conducted in niche areas of sustainable fashion.

The literature review is structured to highlight the environmental impact of fashion companies, the strategies fashion companies are using to become more sustainable, the opportunities and challenges of the circular economy and finally a review of a theoretical framework applied to circular business model innovation.

2.1 Environmental Impact of Fashion Companies

Traditional practices in fashion are environmentally wasteful and exploitative, facets of what is referred to as fast fashion (Henninger et al., 2016). The phenomena of fast fashion can be best described as affordable designs with rapid product turnover usually paired with low-quality materials and high textile waste (Fowler et al., 2022). Fast fashion first gained momentum in the United States in the 1980s because of the practices pioneered by Spanish company, Zara (Zanjirani Farahani et al., 2022), and has grown to be the dominant business model for mainstream fashion companies like Asos, Shein and Topshop. Recognized for its short production and distribution lead times, fast fashion prioritizes trendiness, typically at the cost of product durability and longevity (Zanjirani Farahani et al., 2022). Waste generation is a growing concern as turnover rates for clothes rise, leading to an increase in dumping (Zanjirani Farahani et al., 2022). Despite the growing textile waste problem resulting from the phenomena, fast fashion shows few signs of slowing down with an expected increase of 63% in clothing consumption by 2030 (Zanjirani Farahani et al., 2022).

Differently, the term sustainable fashion first appeared in literature in 2008 (Mukendi et al., 2020), but has not maintained a concrete definition; however, to attribute some substance, the term has recently been fixed as a “fashion item or behaviour could be perceived to be more sustainable, including (but not limited to) environmental, social, slow fashion, reuse, recycling, cruelty-free and anti-consumption and production practices” (Mukendi et al., 2020, p 2). Other terms like ethical fashion, eco-fashion and slow fashion are becoming increasingly popular (Mukendi et al., 2020) as criticism for fast fashion grows (Henninger et al., 2016). Despite the growing conversation surrounding fashion sustainability, the implementation of change is slow (Henninger et al., 2016). The sluggish transition towards sustainability can be attributed to industry norms being stable and difficult to change (Greenwood & Hinings, 1996). Firms are expected to be held to newer standards while still demanding variety and price-conscious designs. By appealing to consumers’ sense of novelty, need for trendiness and everchanging identity, fast fashion’s industry dominance, along with its damaging environmental impact continue to create significant environmental challenges (Fowler et al., 2022). In doing so, there is a clear opposition between consumers’ expectations for fashion producers to uphold high social and environmental standards and consumer purchase habits.

2.2 Fashion Forward Approach to Sustainability

The uncertainty and lack of complete understanding in the sustainable fashion business has not stopped organizations from pursuing more environmentally friendly practices (Henninger et al., 2016). Some organizations see value in evolving their business to adapt to growing sustainability interests and other firms have simply integrated sustainability into the purpose of their organizations (Henninger et al., 2016).

Fashion firms have the opportunity to integrate sustainability through varying means in their business. The trends that encourage sustainable change in fashion firms include the circular economy, corporate social responsibility, sharing economy/collaborative consumption, technological innovation and consumer awareness (Todeschini et al., 2017). These trends however require business model innovation within fashion firms in the form of integrating novel ideas such as recycled fashion and locally sourced fashion (Todeschini et al., 2017). Although there is some

overlap in the trends' coverage of drivers, businesses must decide which trends are suitable for their unique situations and calculate attainability; however, this research is in its infancy (Todeschini et al., 2017).

2.3 Circular Economy Principles as a Solution

The circular economy trend is of high interest to major fashion players (Y., 2021). Circular fashion looks at closing the loop and considers fashion through its lifecycle.

2.3.1 The Circular Economy

The circular economy challenges the linear economic system of production, consumption and disposal (Suzanne et al., 2020), and aims to extend product life cycles through recycling, reusing and recovery efforts (Hettiarachchi et al., 2022). The term circular economy has been increasingly popular since the 2000s because of governmental regulations surrounding sustainability but originated in the 1970s and 1980s from the concept of reverse logistics (Suzanne et al., 2020). Reverse logistics specifically looks at recapturing value in the production process (Suzanne et al., 2020).

Although definitions on the circular economy vary, there is a universal understanding that the concept looks to achieve co-existence between the economy and the environment through a closed loop system (Koszevska, 2018). The circular economy requires sustainable and conscious consumption habit creation by looking at goods through a new perspective (Hettiarachchi et al., 2022). This system requires an investigation of the supply chain and value creation journey to reconceptualize waste production and waste flows to build a purposeful business ecosystem (Hettiarachchi et al., 2022).

A business operating under the circular economy umbrella can consider the use of integrating different business models so that a firm can maximize profits through different avenues (Agrawal et al., 2021). In an exemplar case, a firm may opt to sell new products but also find ways to monetize used products to extend a product life cycle. A study by Agrawal et al. chose to investigate leasing in the durable goods market as circulatory avenue to prevent the product from

being resold by consumers and for the firm to profit off the product as much as possible (Agrawal et al., 2021). However, the main teachings can be replicated by a reselling, rental, and repair model. Adopting two types of models can lead to more favourable outcomes for the firm, if implemented in an appropriate way (Agrawal et al., 2021). Profits are dependent on the quality of used product (Agrawal et al., 2021). Additionally, redirecting a product back into the economy as a used good does not always result in lower environmental impacts (Agrawal et al., 2021). Environmental impact of a dual business model set-up needs to be assessed on an industry or company basis.

It is important to note that circularity is unique to industries and organizations and cannot be applied the same way universally (Sandberg & Hultberg, 2021). Implementing circularity comes with cultural, market, regulatory and technological barriers, impeding on access and usability (Hettiarachchi et al., 2022). This could look like low public awareness, cost of materials, the need for more sustainable supply chain policies, and access to technology. Circular economy research is additionally criticized for possessing inherent assumptions about the linear approach to business (Dzhengiz et al., 2023) as it is not a global fix for all business challenged by sustainability.

2.3.1 The Circular Business Model

When examining the literature on changes within sustainable fashion, there are two types of changes that occur: pragmatic and disruptive. Pragmatic change looks at disruption from inside the retail industry i.e. internal language, marketing programs, etc., and radical change describes the changes that take place outside and challenge the industry i.e. new business models, new practices and ideologies, etc. (Mukendi et al., 2020). The introduction of sustainable business models falls under the radical change category. Here, collaborative consumption in the shape of apparel renting, sharing, swapping, second-hand sales and upcycling is analyzed. Literature on the suitability, social effects, and structure of these business models is limited compared to the research on consumer perceptions of sustainable fashion (Mukendi et al., 2020).

The following sections analyze the sharing-economy and the second-hand economy in the areas of rental, repair and resale. “The second-hand economy involves a permanent transfer of the

ownership of the used goods, while the transfer of ownership is only temporary in the case of sharing economy firms” (Yrjölä et al., 2021, p 4).

Rental

In recent years, consumers are becoming more comfortable with non-ownership, whereby customers temporarily rent an item they are interested in (Pantano & Stylos, 2020). The bulk of research on the sharing economy is on markets like accommodation (Airbnb) and transportation (Uber), but there is also a rise in fashion collaborative consumption (Pantano & Stylos, 2020). In this case, “the consumption experience centers usage rather than ownership of goods” (Pantano & Stylos, 2020, p 741). Clothing-sharing platforms are both economically beneficial to users who may be able to access items that would otherwise be unaffordable and beyond reach, and environmentally beneficial, since collaborative consumption in fashion reduces carbon emissions and wastage (Pantano & Stylos, 2020). This type of fashion purchase phenomenon has existed in North American markets for some time but is only recently introduced to European markets (Pantano & Stylos, 2020).

Repair

Repairing items gives an item a renewed chance of being used, thereby playing a role in the circularity of sustainable consumption. Repaired items can cycle with the same owner or be resold to new owners. Consumers do not consciously think of their fashion items as evolving, but regular use results in wear and tear thereby impacting regular consumption practices (Godfrey et al., 2022). Only when a clothing item fails to meet those regular consumption practices does the consumer actively think about the item’s evolution and their relationship with the item (Godfrey et al., 2022).

“In a growth-oriented, technologically driven consumer society, the predictable capacities of standardized, replaceable commodities are often preferred to the variable, adapted capacities of well-worn objects. As tastes and fashions change, old objects may become incompatible with newly envisioned practices” (Godfrey et al., 2022, p 11).

Resale

Reselling an item is a permanent passing of ownership. Due to the nature of second-hand fashion reselling, transactions can be business-to-business, business-to-consumer, and consumer-to-consumer (Yrjölä et al., 2021). The rise of technology is making it more accessible for consumers to resell their used clothing on their own through digital platforms like eBay, Facebook Marketplace, Varage, etc. (Yrjölä et al., 2021). Individuals who opt to resell independently are labelled as prosumers who prolong their clothing's lifecycle (Yrjölä et al., 2021). This consumer-to-consumer model moves away from the traditional way of conducting business, thereby blurring the lines of supplier and customer relationships and roles (Yrjölä et al., 2021). Thrift stores act as an alternative to prosumers by collecting used items and resell them (Steward, 2017).

Although sustainable fashion is an emerging discussion, there is a lack of management literature and understanding on adopting sustainable and circular fashion business models, highlighting that sustainable fashion research is in its infancy (Todeschini et al., 2017). Effectively integrating pre-owned fashion into a business model is particularly an underexplored area (Yrjölä et al., 2021, p 4).

The limited research exposes a large gap in understanding how firms operating in the fashion industry can improve circularity in their business models through pre-owned fashion. The identified gap in research prompted the following research question:

How can fashion companies integrate pre-owned apparel into their business model?

2.4 Theoretical Framework: Micro-foundations in the Dynamic Capability Framework in a Circular Context

I employed the dynamic capabilities framework by David J. Teece with a focus on micro-foundations in a circular economy context identified by Santa Maria, Vermeulen, and Baumgartner to answer my research question. According to Teece et al., “dynamic capabilities are the firm’s ability to integrate, build, and reconfigure internal and external resources/competencies to address and shape rapidly changing business environments” (Teece et al., 1997, p 516). The dynamic

capabilities framework reveals that there is potential for many types of business model innovations and adaptations to develop a competitive advantage (Matricano, 2020). The framework presents three disaggregated firm-wide dynamic capabilities. Dynamic capabilities assess the internal and external firm-specific capabilities (Teece et al., 1997). Since 1997, dynamic capabilities have undergone evolution, leading them to be separated into three categories, sensing, seizing, and reconfiguring. Sensing looks at a firm's ability to detect new opportunities through scanning or examining the environment; learning or accumulating knowledge about the environment; and interpretation or judging what is perceived in the environment (Teece, 2007). Sensing considers that different firms have access to differing information and that new information creates new opportunities. With a broad search horizon and consistent scanning, firms maintain relevant knowledge. The second dynamic capability, seizing, works as a post-sensing firm-wide capability addressing the opportunities identified through the development of products, processes or services (Teece, 2007). Seizing depends on the firm's capacity to make high-value investments in network externalities, innovation and change. The last firm-wide capability, reconfiguration, aims to sustain the outcomes of seizing by recombining and reconfiguring resources and assets, encouraging organizational transformation (Teece, 2007). Sensing, seizing, and reconfiguring capabilities are internal or external capabilities possessed by an organization, and is unique to each company. This tripod of capabilities supports researchers in understanding why some organizations experience business model innovation success better than others (Bendig et al., 2018).

Teece noted the need to further develop the dynamic capabilities approach, resulting in classes under each of the categories. (Teece, 2007). Accordingly, categories referred to as micro-foundations of dynamic capabilities were created (Bojesson & Fundin, 2020). Micro-foundations are a lower-level phenomena of group (i.e. business teams, etc.) or individual (i.e. business managers, etc.) level phenomena within the organization (Bojesson & Fundin, 2020). The micro-foundations support the development of firm-wide dynamic capabilities (Bendig et al., 2018).

The dynamic capabilities framework is heavily referenced in literature (Di Stefano et al., 2014). Developing and understanding dynamic capabilities in the framework are found to have an impact on product development (Clark & Fujimoto, 1991), technology adoption (Woiceshyn & Dallenbach, 2005) and project potential (Brady & Davies, 2004) amongst other business model

innovations. The framework is largely relied on because of its ability to pinpoint singular factors that encourage systematic change (Teece, 2018). Management literature highlights however that developing capabilities differs across firms therefore requires an organization-specific perspective (Wang & Ahmed, 2007). Additionally, micro-foundations are increasingly examined in management literature in recent years, albeit separated on an individual level or a group level (Bendig et al., 2018). Understanding the interaction between individual level micro-foundations and group level micro-foundations in the context of firm-level dynamic capabilities still requires literature research (Fainshmidt & Frazier, 2017).

As society moves towards sustainable solutions, alternatives sustainability and circular business model innovation becomes increasingly discussed. The intersection of dynamic capabilities and sustainability is a growing area of interest as organizational change is tied to making headway in sustainability related business challenges (Strauss et al., 2017). In literature, there is a need to better understand the operationalization of capabilities (Buzzao & Rizzi, 2021). Moreover, differentiating traditional dynamic capabilities and developing dynamic capabilities in a sustainability context should be researched to learn of its impact on performance (Buzzao & Rizzi, 2021). Beyond the specificity of dynamic capabilities, there is still a wealth of research on sustainability at an organizational level (Strauss et al., 2017). From a micro-foundation's perspective, more research is needed to bridge organizational level to individual and group level approaches in sustainability (Strauss et al., 2017) Circular business model innovation is complex, and understanding how it can support a business' competitive advantage is relatively underexplored in the context of micro-foundations (Santa-Maria et al., 2022).

Exploring the interaction between sustainability, dynamic capabilities and micro-foundations allows for improved comprehension of business capabilities needed to achieve success in a sustainability-oriented ecosystem. Given the dynamic capabilities framework use in identifying organizational factors to achieve a competitive edge, Santa-Maria, Vermeulen and Baumgartner applied the framework in a circular economy context, specifically looking at the micro-foundations (Santa-Maria et al., 2022). Their research investigated ten incumbent firms that successfully implemented circular business model innovation. They identified 12 micro-foundations presented through 26 underlying business practices that incumbents employ in circular

business models innovation. In the case of their research, best practices are task specific actions. . . Their application of the framework seeks to identify the micro-foundations and best practices of circular business model innovation (Santa-Maria et al., 2022). The circular micro-foundations identified are used in this thesis to guide the exploration of different ways in which pre-owned fashion can be integrated into a business model. My findings explained later in the thesis are structured using the micro-foundations identified in their research. The remainder of section 2.4 continues to explain their research further.

In Santa-Maria's work, each dynamic capability category is equipped with its set of relevant circular-minded micro-foundations. Sensing micro-foundations include external sensitivity, adopting holistic perspectives, knowledge creation, and use of sustainability-oriented instruments (Santa-Maria et al., 2022). Each micro-foundation is paired with a set of first-order concepts that identify firm practices. External sensitivity evaluates a firm's ability to sense and capture changes such as understanding stakeholders, acceptance towards outside support, and taking advantage of scientific and technological developments. The adopting holistic perspectives micro-foundation is divided into two sections of having a systems perspective and a lifecycle perspective. The systems perspective aims to zoom out and looks at the business model in the context of its environment. A lifecycle perspective looks at elongating the life of a product or service beyond its perceived end-of-life. Knowledge creation typically takes the shape of firm research and development. Finally, using sustainability-oriented instruments involves looking at a firm's use of sustainable management tools and sustainable frameworks such as sustainability reporting or the use of the UN's Sustainable Development Goals.

Seizing micro-foundations looks to exploit the opportunities found from sensing by delineating sustainable solutions, engaging and collaborating with stakeholders, and maintaining a culture of sustainability (Santa-Maria et al., 2022). Delineating sustainable solutions aims to design the firm and create value while keeping ESG in mind. The following micro-foundation looks at partners that compliment their firm's best practices through shared capabilities, co-developed solutions or multi-disciplinary and cross-functional teams. A sustainability culture allows firms to achieve sustainability from the inside-out by creating clarity and guidance through a unified vision and supporting initiatives.

The final cluster of reconfiguring micro-foundations looks at the continuous alignment of firm assets through co-specialization of assets, flexible organization structures, trust, ecosystem orchestration, and leadership and change management abilities (Santa-Maria et al., 2022). Asset co-specialization looks at the internal firm capabilities to see which projects and activities can be taken on. It considers firm-dependent resources when planning and strategizing for the future. Adaptability and speed of change through hypothesis testing, experiments, and pilot programs require firm flexibility. Should the organization be an incumbent, decentralization is an additional enabler of sustainable innovation. Trust-building communication through transparency and openness is a step to consider once changes are taking place. The following micro-foundation of ecosystem orchestration seeks to assess a firm's ability to identify, manage, and coordinate necessary partners to build a supportive ecosystem. Many of the activities mentioned so far require leadership support, leading to the next micro-foundation of commitment from top-management to accelerate sustainable innovation and implement change. The final micro-foundation is the creation, implementation, communication and monitoring of sustainable KPIs. Sustainable KPIs can help reassure the firm's decisions and suggest changes through concrete results.

In summary, these sustainability-oriented micro-foundations identified best practices to achieve a competitive advantage in the context of circular business model innovation within the dynamic capabilities framework. It is important to note that not all the micro-foundations are of equal importance and are case dependent (Santa-Maria et al., 2022). In addition, the micro-foundations summarized are not industry specific and were created through the research of incumbents (Santa-Maria et al., 2022). The authors identifying the micro-foundations and critics additionally acknowledge that circular business models' innovation research is still in its infancy, creating space for more research (Hofmann & Zu Knyphausen-Aufseß, 2022). The lack of research bridging fashion and sustainable business model innovation is evident by the lack of research in their respective realms, demonstrating a need for a perspective shared in Santa-Maria et al.'s work to be applied in a circular fashion context.

3 Methodology

This chapter presents the methodology I implemented to answer my research question. The upcoming sections will brief the research structure, data collection and data analysis completed to reach the findings.

3.1 Research Design

The thesis takes an exploratory approach to the research question. The limited research completed on circular micro-foundations highlights the need for inquisition in this area (Santa-Maria et al., 2022). In conjunction with the narrow research on pre-loved fashion in management literature, it is clear that further exploration on the adjoining topics is essential to better understanding the growing industry, and thus I opted to use a qualitative approach (Graebner et al. 2012). The context offers an environment whereby real findings relevant to businesses can be identified and defined. A qualitative approach offers a way to openly investigate how companies can use pre-loved fashion to create a more circular business model by looking at raw and rich primary data and its analysis through respondents' experiences (Rynes & Gephart, 2004).

The research question is a “how” question, making the case study research method an appropriate means of designing the research (Yin, 2009). The research question necessitates a research design that can approach a logical problem (Yin, 2009). In the case of this thesis, a case is a unit of single business. Multiple cases, or multiple businesses, can help reveal organizational phenomena that are relevant across the industry. They can also help identify phenomena that are not considered in fashion and therefore not relevant to the circular micro-foundations identified by Santa-Maria.

I selected the cases based on the following criteria. First, each business exists in real time and interacts with other potential cases in the environment (Stake, 2013). Second, each fashion businesses selected works towards sustainability and is looking to integrate pre-owned fashion or have already implemented used clothing into related product offerings. Third, I looked for companies that sell or are looking to sell fashion articles to consumers that featured key terms including “pre-loved”, “circularity”, “sustainability”, and “second-hand clothing” in their online

presence or in-store advertising. This search yielded resulting companies that fit the boundaries of the case. I did not have a size constraint on the fashion businesses studied. By researching firms of various sizes, I wanted the opportunity to reveal the different actions that could be pursued by organizations on a small- and large-scale. After connecting with firms on social media like LinkedIn and Instagram, over email found through company websites, and through networking, I finalized on four fashion companies across Europe and North America. I additionally attended public second-hand clothing markets to connect with store owners as positive responses from my outreach were limited. All companies considered for selection can be found in Table 1. Note that although a company is named once, sometimes multiple people from different areas of the same company were contacted. The unique businesses finalized and that offered interesting cases include H&M, Sloned, Nudie Jeans and an anonymous firm labelled 'Thrifty'. Moving forward, I will be using the name Thrifty to describe the anonymous firm along with fake names to reference the individuals interviewed for confidentiality purposes.

3.2. Data Collection

I collected both primary and secondary data. These sources of information are complementary and work together to create a more complete and concrete understanding of each case (Nicholson, 2008).

In terms of my primary data, I conducted five semi-structured interviews with members from four companies that responded positively to my outreach. The interviews were conducted remotely over Zoom video calling and one interview, Thrifty's, was conducted in-person. The interview structure was designed to address themes from the business model canvas. The business model canvas was selected to structure the interview as it targets all strategic areas of the firm. By starting with the main areas of the business model canvas, interviewees were free to redirect conversations while being encouraged to provide in depth answers that provide a holistic view of the company's business models (Osterwalder & Pigneur, 2010). Respondents were probed with follow-up questions if needed but were not greeted with leading questions to limit bias. All interviews were transcribed and lasted between 45 minutes to one hour.

Each interview offered data unique to the company. The first interview conducted was with Sloned's Co-Founder. The Co-Founder openly shared her reason and purpose for starting the company. Although Sloned is still in the beginning company stages, the interviewee opened up about the challenges when first starting in circular and sustainable fashion which she believes are faced by the industry at large. Her insights exposed a more detailed outline of what new firms should expect. I then had two interviews with H&M. The Sustainability Manager at H&M was able to offer a higher-level view of H&M's initiatives that involve second hand clothing. Her interview allowed me to better understand the intricate details regarding the initiatives and innovations behind pre-owned clothing shared by H&M's Head of Supply Chain and Incubation. Combined, their perspectives and individual experiences with circularity in the business offered a holistic overview of H&M's work, adding to the wealth of research already available on the company, and helped direct further secondary research. I additionally interviewed Nudie Jeans' Circular Product Manager. He offered a comprehensive breakdown of all the opportunities, challenges, and initiatives in circulatory that Nudie Jeans has faced along with a raw explanation of how the company the company progressed over time and the directions it is moving towards. Finally, the Store Manager at Thrifty offered her day-to-day knowledge of the physical activities involved in running a fashion store dedicated to circularity. She was able to highlight the often-overlooked steps necessary to accomplish the company's core strategy. The primary insights collected from the findings create a rounded, real-life context for the research question being studied.

Although I was able to collect invaluable information from the incline interviewees, this primary data does come with its limitations. Sloned and Thrifty are very small companies, and therefore the number of participants that could have been reached for an interviewee were limited. H&M and Nudie Jeans are relatively larger organizations, leaving information scattered amongst employees throughout the organization, making it more difficult to aggregate knowledge. In general, the number or interviewees selected from each firm are limited, thereby reducing the amount of knowledge I can gather.

I also collected secondary data. Secondary sources included company website, company social media, industry and company reports and media articles. In the case of Sloned, access to

internal reporting was granted to support my research. Due to the size and age of Sloned and Thrifty, no secondary data exists for these cases. The data collected is in Appendix 2.

3.3 Data Analysis

To analyse the data, I used the dynamic capabilities theoretical framework described in the literature review. I designed a coding system using the micro-foundations of dynamic capabilities highlighted in Santa-Maria's article as a guide. They identified 12 micro-foundations presented through 26 business practices. The analysis of the data lead me to create two new micro-foundations: "entrepreneurial orientation" and "brand identity". Differently, I did not find any data related to the code "knowledge creation". The label "entrepreneurial orientation" covered more relevant findings in addition to the practice identified by knowledge creation, hence the replacement. "Brand identity" is an entirely new micro-foundation that no practices in the existing framework covered. Finally, the second-order themes lead to aggregate dimensions which are the overarching dynamic capabilities of sensing, seizing, and reconfiguring. Table 2 below visualizes the coding tree in the form of a table. The full table can be found in Appendix 3, Table 14.

Table 2 Coding Table & Quotations Example

Aggregated Dimensions	Second Order Themes	First Order Codes	Quotations
Sensing and shaping opportunities and threats	External sensitivity	Being open for external expert support	<i>"We had consultants last year to support with the recycling techniques and their opportunities and possibilities. Now we've transitioned to an internal team that's driving this on their own."</i>
		Leverage development of exogenous science and technology	<i>"Automation and AI [are key resources]. If I look 1 or 2 years ahead there will be a lot of automation because it's a mass volume business."</i>

4 Empirical Setting

In this chapter, I present the four cases used in my research.

4.1 Sloned

Sloned is a fashion start-up in Germany working to improve the denim customer experience while tackling common sustainability problems in the industry. Founded in 2019 Hamburg, Germany by Lara Klein and Lina John, the firm has yet to launch its first products; however, the Sloned team has been working towards constructing a more sustainable pair of jeans (Interview Co-Founder Sloned).

The organization channels their brand into the key areas of fit and sustainability, while ensuring quality is met in every area of the value chain. The denim industry has standardized fitting, employing two dimensions, waist and length measurements. The founders saw the need to rework the industry standard and introduce a third dimension, hip size. They aim to appeal to women in their 20s and 30s with a higher disposable-income and an interest in sustainability and size-inclusive fashion (Interview Co-Founder Sloned). Recognizing the need for inclusive fittings is only part of their business. Lara and Lina understand the mechanics of the denim industry along with its environmental impact. Labelling denim as one of the “biggest sins in the fashion industry” (Interview Co-Founder Sloned), they are building their brand to champion slow fashion. Sustainability serves as the foundation to each step in their decision-making process, aiming to make their products as environmentally friendly and high quality as possible. Sloned is committed to transparency throughout the value chain (Interview Co-Founder Sloned).

The pair are currently working on product prototypes and testing. They are dedicated to sourcing premium materials and ethical construction of the product (Interview Co-Founder Sloned). At the time of this research, the founders are the only two employees at the firm. They are working with two suppliers for materials from Italy and one button supplier from Poland. They have selected a sewing service and a washing service. They have additionally taken on the responsibility of educating consumers through their online platforms to encourage more conscious consumption.

In spite of being a young start up, the firm maintains an ambitious sustainability agenda. They hope to integrate circularity into business through second-hand offerings; expand into sustainable material development; donate to environmentally supportive initiatives; and product tracking for each item to its origin (Interview Co-Founder Sloned).

4.2 H&M

Founded by Erling Persson in Vasetras, Sweden, H&M Group is a Swedish fashion and design company housing multiple brands under its name including but not limited to H&M, COS, Monkl and Weekday (Annual Report, 2021). The H&M Group creates clothing, accessories, footwear, cosmetics, home textiles and homeware, highlighting price, quality, style and sustainability as their pillars for creating consumer value (Annual Report, 2021). Since its inception in 1947 the company has extended its physical reach to over 80 countries, is present online in 57 markets, maintains over 4,900 stores, earns SEK 199 billion in net sales, has 246,424 shareholders and employs 171,000 staff (Annual Report, 2021).

Started as a women's clothing store called Hennes, H&M gradually branched out globally, partaking in acquisitions and public investment to fuel their growth (Annual Report, 2017). Their first steps into sustainability starts with their H&M Conscious Collection launched in 2010 using organic cotton and recycled polyester. They later introduced the Global Change Award in 2015-2016 encouraging innovative circularity within the fashion industry (Annual Report, 2017).

Today, the parent company integrates sustainability into every aspect of the value chain and continues to advance their sustainability goals and activities. Under the leadership of CEO Helena Helmersson, the H&M Group is awarded the second highest scoring brand in the Fashion Transparency Index 2021 (Annual Report, 2021). The firm participates in first-hand products (new products sourced sustainably); second-hand products (a used product resold); second-life products (recycled textiles to produce new products); and second-chance products (repair services offered at H&M stores). Their sustainability vision aims to lead change, become a circular and climate positive business and be fair and equal. Already using 95% renewable energy, they aim to reach 100% by 2030 (Annual Report, 2021). Additionally, they achieved 80% of their goal to source

100% materials from recycled matter or in a sustainable manner by 2030 (Annual Report, 2021). Merging their annual report and sustainability report underscores their commitment to transforming to their business and industry to be circular and environmentally conscious.

4.3 Nudie Jeans

Founded in 2001, Nudie Jeans is a Swedish denim brand belonging to parent company Svenska Jeans Holding AB owned by Maria Levin, Joakim Levin, and Palle Strenberg (Nudie Jeans Sustainability Report, 2021). The company primarily produces and sells denim but offers other clothing and accessory product lines. Nudie Jeans is present in over 50 markets and reported sales of SEK 478 million in 2021, a 25% increase from the year before (Nudie Jeans Sustainability Report, 2021). Production takes place in 8 countries including Sweden, Lithuania, Poland, Portugal, Italy, Tunisia, Turkey and India (Nudie Jeans Sustainability Report, 2021).

Nudie Jeans believes “sustainability is not something [they] do, it runs through everything” (Gustavsson, 2021, Nudie Jeans 2021 Sustainability Report – Nudie Jeans 2021). Nudie Jeans maintains a circular business model that does not appear visually circular but operates multiple areas in tandem to construct a holistic sustainable value chain. Nudie Jeans is known for its timeless style, making it appropriate for them to maintain 35 repair shops in 23 cities with 8 repair partners (Nudie Jeans Sustainability Report, 2021). The firm uses certified virgin organic cotton in its products, claiming this material choice possibly reduces carbon emissions by 46% compared to conventional cotton. They currently sell new and used products, including upcycled fashion.

4.4 Thrifty

Thrifty is an independent thrift store in Toronto, Canada. Started in 2021 by two friends, Jacob Sousa and Cole Henderson, who were intrigued by second-hand sales (Interview Manager Thrifty). Today they own one store in the city’s east end selling second-hand apparel and accessories, and occasionally new accessories.

The idea of thrifty started when the friends decided to start selling their personal items on eBay and other online marketplaces to earn additional income (Interview Manager Thrifty). After encountering success selling their own items and learning that a sizeable market existed for second-hand articles, they decided to open Thrifty. Thrifty is a second-hand fashion store with five employees, bringing in an average of around CAD \$900 in sales a day (Interview Manager Thrifty). The store relies on donations, and on occasion, some special finds that the owners come across. Throughout their journey, they have been heavily reliant on their community and currently support multiple non-profits with a portion of their earnings.

The organization's purpose and values are heavily tied to sustainability. Over 96% of sales are from used products, and all the employees champion the same values by maintaining a closet filled with pre-loved clothes (Interview Manager Thrifty). In addition, customers are encouraged to close the loop with fashion through in-store advertising and chats with employees. The company is currently looking into investment options to expand and introduce a new Thrifty location (Interview Manager Thrifty).

5 Findings

Previous literature exposes a gap in understanding circular business models in fashion, particularly in pre-owned fashion, hence the research question ‘how can fashion companies integrate pre-owned fashion into the business models?’. In this section I will answer the research question through the perspective of the dynamic capabilities framework utilizing four cases from the fashion industry. The framework is composed of three capabilities, sensing, seizing and reconfiguring, with each capability being complemented by a set of micro-foundations. The micro-foundations’ structure is largely based on the findings of authors Santa-Maria, Vermeulen and Baumgartner, but applied in the context of pre-owned fashion. This structure is used to identify the best practices for innovating a fashion company to adopt a circular business model through pre-owned fashion. The findings help guide fashion companies looking to transition to a more sustainable future.

This chapter is divided into three main sections using the aggregated dimensions where I analyze the capabilities and micro-foundations that support the transition to circular business models.

5.1 Sensing

From a higher-level perspective, it is important companies find and evaluate opportunities and challenges outside the firm.

5.1.1 External Sensitivity

The results show that all cases had practices to ensure that the firm was externally sensitive.

The cases revealed the importance being in harmony with their external environments and acting in tune with their customers. Businesses understood that customers have specifications when they look to businesses acting in the pre-owned fashion arena. Customers expect transparency from a fashion business, but depending on the business, they are also interested in

price-sensitive products, one-of-a-kind products and convenient shopping. This is expressed in quotations from each company below:

“That’s also part of being sustainable, to be transparent and to tell the customers, ‘hey, we don’t have the money yet to buy the most expensive, most sustainable fabric’, but we definitely want to do it and are looking into it” (Interview Co-Founder Sloned).

“With an influx of immigrants, students and refugees [...] the demand for second hand affordable and quality items has soared” (Interview Manager Thrifty).

“Not all customers are coming in for the voucher. Some are coming in for the convenience ‘I was anyway going to your store, so it’s great that you offer this opportunity, and I don’t have to go to a collection place far away somewhere’” (Interview Sustainability Manager H&M).

“Customers come in for one-of-a-kind items, vintage items and brand names at low costs and huge savings” (Interview Manager Thrifty)

Practicing understanding what the customer needs helps the firm decide which initiatives should be implemented and adapt their business to better suit the customer. In each case, the business is aware of their target audience’s current and future needs and wants.

Technological advancements also exist in the external environment which have the potential to impact a fashion business. The cases reveal small- and large-scale technological advancements that exist to support the processes involved in taking a clothing article from cradle-to-grave and back to cradle. Understanding what technologies are available and which are suited for a business can help businesses plan and strategize. In the case of H&M, they have positioned themselves to be at the cusp of new technological innovations making them an industry innovator. The Head of Supply Chain Incubation explains the following,

“Automation and AI [are key resources]. If I look 1 or 2 years ahead there will be a lot of automation because it’s a mass volume business” (Interview Head of Supply Chain Incubation H&M).

H&M’s consistency with sensing new technologies and capitalizing on them has been a large reason for their success in sustainable fashion (H&M Group Sustainability Disclosure, 2022). In the future, they see these technologies being used in processes like sorting, collection, etc. to improve efficiency in handling used clothes that have been collected in stores through customer drop-offs. Technologies in place to automate processes are also applicable to Thrifty and Nudie Jeans albeit on a different scale due to their differing resource limitations. These three cases

however understood the importance in first gaining exposure to and learning the technology trends and innovations to gain a competitive advantage.

External sensitivity may also require openness to external support as highlighted through select cases. Outside support can push a business past those perceived challenges faster and more efficiently highlighted by Sloned and H&M. This is reflected in a quote from H&M:

"We had consultants last year to support with the recycling techniques and their opportunities and possibilities. Now we've transitioned to an internal team that's driving this on their own" (Interview Head of Supply Chain Incubation H&M).

H&M has the capabilities to sense the need for external support and leverage it to build their internal capabilities. In the case of Sloned, they have a mentor to help them build connections in sustainable fashion aware of the need for expertise beyond their existing team. This dynamic business behaviour lends itself to successful learning and application, to be explained in upcoming aggregated dimensions.

5.1.2 Adopting Holistic Perspectives

The findings show that adopting a holistic perspective requires an approach to fashion that considers cradle-to-grave and a return to cradle. The considerations start far before production, prior to product design. This is reflected in the following quotes from each case:

"We're trying to capture the real value of the garment and to get our customers to cherish that garment and prolong the life of it, establish a long-term relationship to it, but sometimes that that's not possible because we also make mistakes. We're humans" (Interview Circular Product Manager Nudie Jeans).

"In everything that our designers are designing, they have to consider the end of the life of a product" (Interview Sustainability Manager H&M).

"There are so many products out there that are not designed according to circular principles, meaning that there are a lot of products with material mixes, or made in a way that is very hard to recycle the fiber and get it back to the textile supply chain. But this is something that we think is very important, thinking about circularity in a holistic approach, and that we avoid looking only at the recycling perspective. Because it's important that we make sure that the product lifespan can be prolonged, and it's designed for being repaired and maintained, and that you can hand it down for generations..." (Interview Sustainability Manager H&M).

"Because sustainability starts far. It starts earlier than expected. We discovered that the producer sometimes don't even know themselves where they're getting the materials from,

so we can't really trace back where the cotton comes from that we're using" (Interview Co-Founder Sloned).

Pre-production considerations are relevant to Nudie Jeans, H&M, and Sloned as their businesses work in fashion creation. All three cases highlighted that products must be designed with circular principles in mind to prolong product lifespan and encourage garment care. Through these considerations, opportunities are found in material mixes and other areas that impact how an item can re-used in its second life. Overall, creating high quality items is a shared interest.

During the product's life, the findings show that prolonging its use in a customer's hand is equally important. Nudie Jeans can be seen championing this idea through their free repair offerings. Integrating a system that considers the product in use looks at the business in a wider ecosystem, zooming out and considering impact beyond immediate company profits. Nudie Jeans also accepts used clothes for resale, similar to H&M and Thrifty, and uses their scraps in creating entirely new products. Patchwork is another way to profit from useable materials in quality fashion. However, the reselling of used items is a more achievable practice based on company resources and profitability. Although it comes with its challenges, looking to prolong a product's life can be financially beneficial to a company in the long-term.

A clothing article's 'after-life' is an inevitable consideration to be made when looking through a circular lens. This factors in if a pre-loved item does not sell or does not meet quality standards for resale. There is the possibility that an item is sent to a landfill or incineration which is the case for 85% of clothing and textile articles in America (Beall, 2020). For environmentally-forward firms, alternatives are considered. An item may be downcycled and used for other purposes such as furniture production or car seat filling (*Interview Sustainability Manager H&M*). Differently, the end of life may look like a clothing article being taken apart and separated into the materials it was composed. At the moment, recycling is not a mainstream activity as the organization, Green Machine, possessing these capabilities is relatively new and with the only scalable and commercial technology (*Interview Head of Supply Chain Incubation H&M*). Additionally, fabric separation is a resource intense activity, and the infrastructure is not quite developed. Finally, a fashion item may be shipped to another country in the myth of circularity (Obiko et al., 2022). Much of the clothes intended to head to recycling facilities head to under-developed nations like Ghana, which

import used clothing. Part of the local economy is reliant on the shipped textiles, but much of the clothing is considered waste, piling up against the Ghanaian coast (Obiko et al., 2022). A fashion firm understanding the afterlife of a product they produce helps them understand fashion from a holistic perspective, enabling them to find ways to take advantage of areas that are not appropriated by competitors.

5.1.3 Entrepreneurial Orientation (Knowledge Creation)

The findings from the research indicated a need for this new section labelled entrepreneurial orientation, which includes the practice highlighted in Santa-Maria's knowledge creation section. Entrepreneurial orientation can be summarized by the degree a firm exhibits characteristics such as innovation, creativity, and risk-taking through practices like research and development and hiring the right people. The Head of Supply Chain Incubation at H&M explained the following:

"We're trying to consolidate the streams of garment collection, faulty goods, and leftover goods into one feedstock. We've started the Looper Textile business to consolidate this system in Europe, but its different across the globe" (Interview Head of Supply Chain Incubation H&M).

H&M maintains active entrepreneurial initiatives like their joint venture with Looper Textile. Through R&D they can invest in new technologies to fill the gap in the technological space needed in fashion recycling. Admittedly such activities require heavy financial capital thereby restricting major R&D developments to larger fashion organizations. Having entrepreneurial orientation is not limited to the practice of R&D however, and involves baking an innovative mindset into the organization. Thrifty does this by hiring individuals who are sustainably oriented and willingly implement small changes in their store to support environmental values. In general, I observed the individuals interviewed maintained a deep passion for sustainability. The drive for sustainability at an individual level can lay the groundwork for the entire organization.

5.1.4 Use of Sustainability Oriented Instruments

My research found that three of the cases practice sustainable reporting and/or took guidance from sustainability frameworks. Nudie Jeans and H&M post public sustainability

disclosures that ensure environmental accountability and helps narrow in on areas of improvement. This yearly activity lends itself as a moment of self-reflection for companies that help promote their circular initiatives but also puts their activities into perspective alongside other industry leaders. H&M also treats this report as an opportunity to educate stakeholders and the public about circularity in the industry. Sloned maintains an internal reporting system and therefore the report has an internal orientation, meant to guide internal decision making and standards. Nudie Jeans also uses the UN's Sustainable Development Goals whereas H&M uses a circular fashion ecosystem model to employs the Ellen MacArthur Foundation's circular economy definition for additional guidance.

5.2 Seizing

By acting on the opportunities found and shaped in their sensing capabilities, fashion firms can work to drive change with pre-owned fashion.

5.2.1 Delineating Sustainable Solutions and Business Models

Transitioning from linear to circular business model require fashion businesses to reinvent the wheel by looking at the organization's internal structure, but also to look beyond the system. This is reflected in the interviews quoted below:

"Last year we sold around almost 4,000 pairs of second-hand jeans, which is a new record. But we have bigger aims because it's still a very small percentage our sales"(Interview Circular Product Manager Nudie Jeans).

"We need to [refrain from using] virgin materials because we need to consider planetary boundaries. We need to find a way to recycle materials many more times" (Interview Head of Supply Chain Incubation H&M).

"We were driven to [discourage customers from discarding] clothes in the regular waste bin; we wanted to incentivize the customer to bring back the product into a circular loop. To incentivize them, we offer a voucher" (Interview Sustainability Manager H&M).

"We often find that clothes are re-donated and resold fitting into our values of recycling and reusing" (Interview Manager Thrifty).

My findings show that the fashion industry is not currently designed to be conducive for pre-owned clothing circularity on a large-scale. The systematic structure needs redesigning, but this responsibility currently lies on individual companies. Nudie

Jeans recognizes their successes with pre-owned fashion, but also acknowledges the growth that needs to happen. The limited availability of second-hand clothing is also a customer problem that the company is looking solve through circular means (*Interview Circular Product Manager Nudie Jeans*). The growing demand for second-hand clothes means that companies need to improve public accessibility. H&M learnt to consider their business far beyond the boundaries of the fashion ecosystem. Their practices in recycling are internal adjustments; however, they still exercise external influence through their voucher program which encourages consumers to donate used clothes (*Interview Sustainability Manager H&M*). Similarly, Thrifty also encourages consumers to bring back their clothes to promote giving clothing articles more than a second life (*Interview Manager Thrifty*). In Thrifty's case the system is dependent on the selling party and the donating party. Companies are responding to the structural problems by implementing strategies and redesigning business model architectures to encourage internal and systematic circularity.

There are challenges to be faced when working towards systematic changes. A common obstacle found in the research was the issue of scalability. The technology and infrastructure are not yet available to make pre-owned fashion an easy business to operate in. There are many learning curves; however, resource abundance is not an indicator of success (*Interview Sustainability Manager H&M*). It is estimated that 20-25% of clothing collected can't be resold, with circular solutions not being available to all businesses that collect pre-owned clothes (Cernansky, 2022). In addition, more transparent information is needed in order to make better decisions as was highlighted by Sloned (*Interview Co-Founder Sloned*).

5.2.2 Stakeholder engagement and collaboration

Collaborating with partners, can bring new opportunities and accelerate existing strategies. Interviews with Nudie Jeans, H&M and Thrifty highlight the importance of stakeholder engagement and collaboration in the following quotes:

"Here in Sweden, we are scouting the market to set up something similar to our partner in UK, ACS, or to have just have a similar partner, with the same type of agility" (Interview Circular Product Manager Nudie Jeans).

"What we have done is that we are collaborating with different partners, so that we can get the whole infrastructure to work out" (Interview Sustainability Manager H&M).

"Partnering with local charities helps promote our business further and bring more funding for their causes" (Interview Manager Thrifty).

Nudie Jeans and H&M developed partnerships with organizations that had experience in different but complementary areas like clothing repair services, ACS (*Interview Circular Product Manager Nudie Jeans*) and waste management company, Remondis, respectively (*Interview Sustainability Manager H&M*). This practice allowed them to prioritize their existing functions while exploring new and advantageous areas and developing internal knowledge and learnings. Much of the pre-owned fashion space is uncharted; a partner can help develop the space and improve navigation for the company. Thrifty's case features a different type of partnership, a charity collaboration. Here, the partnership works where a portion of Thrifty's sales is donated to local charities in return for promoting Thrifty's business. The partnerships synergistically increase traction and attention through a wider reach in audiences (*Interview Manager Thrifty*). Thrifty benefits in credibility through corporate citizenship while also attracting customers who want deeper purpose in their purchases.

A code I found necessary to add under this micro-foundation is 'institutionalizing changes with government interventions. H&M's interview revealed they are collaborating with the World Economic Forum to make changes regarding European Union regulations (*Interview Head of Supply Chain Incubation H&M*). Thinking beyond systematic limitations can evolve the pre-owned fashion industry in new directions that would impact fashion business alike, such as Nudie Jeans.

A significant co-collaborator in pre-owned fashion is the customers. As the party that pushes used fashion back into the circular loop, they require attention and management. The Sustainability Manager at H&M explains the following:

"We are trying all the time to reach out to the customer in different ways, and it's very challenging knowing when to reach out what message to give. And the best way we see it today is that on our online platform leave it to the customer" (Interview Sustainability Manager H&M).

Since customers contribute the materials needed for short, medium, and long-term pre-owned fashion loops, they can be considered similar to strategic partners and are therefore an essential element to success (Santa-Maria et al., 2022). Practices that involve customer-engagement were perceived as necessary to all cases.

5.2.3 Supporting a sustainability and innovation culture

In each case studied, sustainability was part of the organization's identity, deeply embedded into the culture of the organizations. The H&M Sustainability Manager and Nudie Jeans Circular Product Manager share the following:

"It's really crucial to have sustainability integrated in everything we do. To work in a silo with sustainability doesn't give the impact needed" (Interview Sustainability Manager H&M).

"Sustainability just means everything. That aspect is inherent to every activity that we have ongoing" (Interview Circular Product Manager Nudie Jeans).

They implemented practices that valued slow growth and long-term perspectives. Each case did not limit sustainability to a mantra, but viewed sustainability as part of their existence, understanding that they were in a position to do more to promote circularity and integrate pre-owned fashion further. Exemplified by the other micro-foundations, circularity and pre-owned fashion is considered through a multitude of activities and decision-making and remains a core element to their business.

5.2.4 Developing a sustainable brand identity

This is an additional micro-foundation I found necessary to add based on the cases researched. The micro-foundation on culture identified in Santa-Maria et al.'s work looked inward at the business, whereas there was also a need for an external looking micro-foundation. A strong brand identity based on sustainability and circularity can help attract complementary stakeholders. Fashion firms are better able to differentiate themselves.

Marketing activities can promote pre-owned fashion as an alternative to the normal linear fashion pattern but must stay true to company values. The Co-founder of Sloned explains,

“Greenwashing is still prevalent in the industry [...]” (Interview Co-Founder Sloned).

Through honest marketing, firm’s intertwine real internal values in their company image earning the trust of potential collaborators, customers and institutions. Thrifty promoted their business through local events, selling their products that showcase company values (About Thrifty | Thrifty, n.d.). Secondary research on H&M, Nudie Jeans, and Sloned websites revealed significant marketing efforts towards informing the public on their sustainable and circular initiatives. Such practices develop brand equity and thus can support further circularity in the business and industry at large.

5.3 Reconfiguring

5.3.1 Co-specialization of assets

As seen through the findings, there are many means through which a fashion firm can profit from pre-owned clothing; however, those options are bottlenecked by a business’s limitations and resources. Co-specialization of assets addresses this limitation to ensure projects are prioritized based on company capabilities. The Sustainability Manager explains,

“The problem always when you start with something, it's a small scale. How do you make the availability higher, so that the cost can also go down? But we will get there. The first is always to find a way to do it in a pilot scale, and then we can do it” (Interview Sustainability Manager H&M).

As a major fashion retailer, this quotation highlights limitations exist for even the biggest incumbents. Equipped with vast resources, they are still challenged by financial constraints that would limit pre-owned fashion initiatives. Further, the Head of Supply Chain and Incubation at H&M expressed the following:

“I think [selling directly to consumer with Sellpy] is decided on value. It's a business case. It's profit” (Interview Head of Supply Chain Incubation H&M).

In the case of H&M, they partnered with and took a majority ownership in an external organization to optimize their resources to sell second-hand fashion. They were reliant on the

groundwork and foundation set by a partner firm to reach a bigger scale. In the pre-owned fashion market, scalability is a major challenge as highlighted by Nudie Jeans, H&M and Thrifty due to internal capabilities. Learning which resources to leverage and which to refrain from to achieve projects is a learning matter that requires constant attention and revisiting.

5.3.2 Organizational flexibility

Organizational flexibility refers to the firm's ability to learn and adapt to its environment quickly. The findings highlight that flexibility may take the form of pilots, experiments, spin-offs, etc. These practices were mostly found in Nudie Jeans and in H&M but was not as far developed as other micro-foundations. The Circular Product Manager at Nudie Jeans shares,

“In order to gain volume, we also need to lower the bar for what is accepted as a sellable reuse product. And then you need to put more work into that product, more repairing, more refinement. So that's why we're starting to outsource this and trying a new setup in the reuse segment” (Interview Circular Product Manager Nudie Jeans).

Nudie Jeans is going through a trial-and-error learning process in the pre-loved fashion arena. There is space for flexibility because they foresee changes in their criteria for re-used clothing which is needed for growth. At the same time, they acknowledged that they want to be slow to ensure actions are completed with caution and precision, highlighting that adapting quickly is not necessarily a priority (Sustainability Report, 2021). The process is risky and requires thoughtful and conscious planning. Again, H&M is a larger firm and able to tolerate and accommodate system shocks better than smaller organizations like Sloned and Thrifty which do not have flexible organizational structures or the ability to extensively invest in experiments or pilots.

5.3.3 Working within region specific capabilities

Two cases maintain a cross-continental presence and work within international bounds in spite of their EU foundation. Each region poses different challenges and opportunities which H&M and Nudie Jeans face. This is highlighted in the following:

"We are not present in all our 80 markets yet, but we are getting there. [...] we are a collaborating with different partners, so that we can get the whole infrastructure to work out" (Interview Sustainability Manager H&M).

Although not a micro-foundation identified in Santa-Maria et al.'s micro-foundation research, I felt it was necessary to add this consideration as it applied to the two larger organizations in my research. Working with pre-owned apparel is not a one-size fits all scenario. Practices and functions vary per region and require local understanding. H&M's strategies for pre-owned in Europe are not the same as they are in North America (*Interview Sustainability Manager H&M*). Similarly, Nudie Jeans highlighted their partnership with ACS in the UK, but the need for different partnerships or systems in other countries and regions (*Interview Circular Product Manager Nudie Jeans*). Systems are unique to their region, and working within these systems can result in better success as pre-worn apparel options are introduced to new markets.

5.3.4 Trust building

All four cases valued transparency in communication with external parties. The Co-Founder of Sloned summarizes the importance of transparency below:

"There's a need to provide information and to be even more transparent with not only where the product originally comes from, but also what happened to it in the first part of the life cycle (first purchase)" (Interview Co-Founder Sloned).

"I hope in being as transparent as possible with the parts that are not sustainable yet. For example, we say that we don't have the most sustainable fabric, but there's other reasons for it and that's to also bring more awareness to the consumers that as a fashion brand [implementing perfect sustainable practices] is not easy" (Interview Co-Founder Sloned).

The findings demonstrate that the need for honest and factual external communication comes from the need to build trust and engagement. It is essential in building long-lasting relationships with stakeholders and increases credibility. In the case of Sloned, they openly share their successes and challenges even though they are early in the design phase. When considering taking pre-owned fashion and converting it to its many possible uses, it's important to circle back to the design phase as highlighted in the sensing dynamic capabilities section. The considerations made in design are felt along the product's many lives. Sloned's early open communication highlights company and industry specific challenges to better educate customers and hopefully

encourage change for the denim industry. In general, trust building is perceived as an important practice to all cases.

5.3.5 Ecosystem orchestration

Demonstrated in the findings, ecosystem orchestration is one of the more complex micro-foundations to integrate, requiring company skills to integrate stakeholders into the wider industry environment. Skills include identifying, managing and coordinating stakeholders in the ecosystem. In the cases worked with, H&M and Nudie Jeans are the only cases to possess these skills to practice ecosystem orchestration. To possess control over an ecosystem again takes resources. The Head of Supply Chain Incubation at H&M explains ecosystem orchestration in their business context below:

“There are many startups now trying to find their way and they need to succeed, but we need to help them succeed... They need to work for us to work” (Interview Head of Supply Chain Incubation H&M).

H&M has mastered ecosystem orchestration by presenting itself as a dominant fashion player. They are recognized as an incumbent and an organization to partner with while also recognizing the need to partner with others (Interview Head of Supply Chain Incubation H&M). They currently possess a growing roster of memberships and collaborations that encourage ESG initiatives and growth (H&M Group, n.d.). Highlighted by the quote, their reach goes far beyond partnering with established organizations but is also in the form of shaping the future of the industry through startup collaborations with businesses with capabilities in automation and sorting (Interview Head of Supply Chain Incubation H&M). H&M has designed an ecosystem that supports circularity with pre-owned fashion in a way that enables them to further grow the market space. These findings are consistent with those of Santa-Maria et al. whereby eight out of their ten studied incumbents maintained a grasp of these skills (Santa-Maria et al., 2022), indicating that these would be skills possessed by the larger organizations in my research.

5.3.6 Leadership and change management capabilities

The final reconfiguring micro-foundation looks to three different areas of support from top management, comfortability with change management and use of related circular KPIs. In all four cases, top management was not only supportive, but determined in implementing circular principles and making pre-owned apparel a key part of their business model. The Head of Supply Chain Incubation at H&M explains,

"The good thing is that we have a CEO that's very, very hard on these goals. You need to have [direction] from the top down. Half the resources need to be as strong as double the revenue. Because if you only have the revenue goal, then these kinds of [innovation] tests will never happen" (Interview Head of Supply Chain Incubation H&M).

Summarized in the quote from H&M, top management is essential for circular values to flow throughout the organization. This can be further viewed in CEO Helena Helmersson's conversations and engagement on the topic of sustainability. In a public interview, she shares her views on sustainability and fashion, challenging the paradox that is typically seen in the industry. Helmersson claims,

"We make sure that we go towards circularity and with circularity I mean for example the fact that you can come to our stores and hand in your used garments when you don't want them anymore. You have different options, but we are one option ..." (H&M, 2021, 0:04:13).

This pattern of leadership commitment was observed in Nudie Jeans, Thrifty and Sloned.

Likely as a result of their size, different types of operations and varying ongoing projects, Nudie Jeans and H&M fit the profile of handling change management. This is reflected in the following quote:

"We needed to learn how to handle this product to let it co-exist with our regular assortments. There were worries of reuse taking up space and taking sales away from new products. But today we approach it with a different kind of perspective. Now we want reuse to take more space in our stores" (Interview Circular Product Manager Nudie Jeans).

Nudie Jeans' shift in perspective emphasizes the benefits of comfortability with change. The findings highlight that preparation, management, and reinforcement are necessary when making a transition towards circularity.

In regard to KPIs, H&M, Sloned, and Thrifty possessed circular KPIs that encourage the integration of pre-owned apparel. In the case of H&M, they took the initiative to contribute to the Circular Economy Indicator Coalition to improve alignment in circular economy KPIs for industries (Circle Economy, n.d.). By engaging in systematic change and shaping the future of KPIs for the industry, H&M directly engages in encouraging their business' circular performance. On a smaller scale, Thrifty can be seen acting on their own KPI system below:

"In store we keep track of how many items are kept out of landfills, how many items are disposed, and how much is recycled" (Interview Manager Thrifty).

Thrifty's KPIs indicate the importance of adjusting indicators to fit the business size and operation type. Company performance evaluation is individual to a company's goals and expectations hence Thrifty's KPIs.

Below is a summary of present micro-foundations in the identified cases.

Table 3: Identified micro-foundations in the cases

Identified Micro-Foundations					
Dynamic Capabilities	Micro-Foundations	Nudie Jeans	Sloned	H&M Group	Thrifty
Sensing and shaping opportunities and threats	External sensitivity	X	X	X	X
	Adopting holistic perspectives	X	X	X	X
	Entrepreneurial orientation	X	X	X	
	Use of sustainability-oriented instruments	X	X	X	

Seizing opportunities	Delineating sustainable solutions and business models	X	X	X	X
	Stakeholder engagement and collaboration	X		X	X
	Supporting a sustainability and innovation culture	X	X	X	X
	Develop a Sustainable Brand Identity	X	X	X	X
Reconfiguring resources and structures	Co-specialization of assets	X	X	X	X
	Organizational flexibility	X		X	
	Trust building	X	X	X	X
	Ecosystem orchestration			X	
	Leadership and change management capabilities	X	X	X	X

6 Discussion

The purpose of this study was to explore the means through which pre-owned apparel could be integrated into fashion company business models. To support circular and sustainable approaches to business, the study was completed in the context of dynamic capabilities and micro-foundations. The findings from the four cases of Nudie Jeans, Sloned, H&M and Thrifty are consistent with literature on circular micro-foundations found in dynamic capabilities with a few deviations.

The case studies addressed the research question by explaining how fashion companies implemented best practices with pre-owned apparel through a circular micro-foundation' lens proposed by Santa-Maria, Vermeulen and Baumgartner (2022) using the dynamic capabilities framework designed by Teece (1997). The research finds that sustainable micro-foundations contribute to a fashion firm's ability to sense, seize and reconfigure their business, encouraging circular business model innovation and thus long-term sustainable development.

Santa-Maria et al.'s research reveals the relevance of specific individual and organizational level capabilities incumbents possess to achieve circular business model innovation. This paper presents evidence of the appearance of identified micro-foundations in the transition to circular fashion, specifically with pre-owned apparel. Moreover, my findings confirm the presence of sustainability in the micro-foundations of dynamic capabilities in management literature discourse (Strauss et al., 2017); however, this thesis addresses the lack of research surrounding "how" micro-foundations can be integrated in fashion firms beyond incumbents.

In their work, Santa-Maria et al. identified the most significant micro-foundations in circular business model innovation as adopting a lifecycle perspective, employing sustainability-oriented instruments, ideating sustainable value propositions, developing a sustainability strategy and culture, and engaging and coordinating stakeholders in the business ecosystem (Santa-Maria et al., 2022). The authors identified the most relevant and specific micro-foundations to propose the micro-foundations as "best practices" (Santa-Maria et al., 2022). Different to the findings in Santa-Maria et al.'s work, I propose the most important micro-foundations of dynamic capabilities for fashion firms integrating pre-owned apparel as the following: external sensitivity, adopting

holistic perspectives, stakeholder engagement and collaboration, trust building, and leadership and change management capabilities. My findings are unique to the industry and to the specific circular business model innovation, whereas Santa-Maria et al.'s research focused on circular business model innovation in the context of incumbents.

Finally, my findings also contribute to the lack of management literature on sustainable and circular fashion. Existing literature exposes the importance of circular fashion to stray from the environmental evils of fast fashion (Mukendi et al., 2020) along with identified end-goals of a transition i.e., rental (Pantano & Stylos, 2020), repair (Godfrey et al., 2022), and resale (Yrjölä et al., 2021). This thesis addresses “how” fashion companies can reach those end goals through internal and external individual and group-level capabilities.

The table below summarizes the primary conclusions reached through my findings thereby answering the research question.

Table 4: Main Findings

Comparison of Findings

	My Findings	Literature Findings	
Sensing and shaping opportunities and threats	External sensitivity	Businesses must understand what current and potential customers look for in a fashion business, while understanding the technological capabilities and external support needed to reach those needs.	
	Adopting holistic perspectives	Fashion firms must consider the product and its materials at all stages of its life to develop a clearer picture of its position in the circular system and in the larger ecosystem.	
	Entrepreneurial orientation	A workforce dedicated to sustainability along with sustainable R&D can allow for creative approaches to pre-owned apparel.	Literature only considered the first-order code to undertake R&D activities, and therefore my findings found the need for a different micro-foundation.
	Use of sustainability-oriented instruments	The use of sustainability frameworks can guide circular innovation through identifying, designing, assessing, and selecting practices to integrate pre-owned fashion.	
Seizing opportunities	Delineating sustainable solutions and business models	Companies are tasked with driving systematic changes to ensure pre-owned and circular options are made accessible to customers in a way that is manageable for the business.	
	Stakeholder engagement and collaboration	Collaboration and engagement with partners, customers and governments can create new opportunities for a fashion business to find different avenues to integrate used fashion.	Literature did not consider the first-order code of the need that businesses may need to institutionalize change by working with partners and governments

	<p>Supporting a sustainability and innovation culture</p> <p>A culture built on the values of sustainability influence organizational performance in reaching circular goals.</p>
	<p>Develop a Sustainable Brand Identity</p> <p>A sustainable brand identity creates an external image which can influence external stakeholders and business credibility as long as greenwashing is avoided.</p> <p>Literature did not consider branding as a micro-foundation.</p>
<p>Reconfiguring resources and structures</p>	<p>Co-specialization of assets</p> <p>Resource fit matched with internal capabilities can help identify which projects should be acted on and which are not suitable for the fashion business to pursue.</p>
	<p>Organizational flexibility</p> <p>Organizational flexibility is not a heavily practiced micro-foundation as it involves accommodating risk which is not necessarily a considered factor in the cases' examined. Nonetheless, being flexible enables improved growth.</p>
	<p>Trust building communication</p> <p>Honest and open communication was found to be a potentially important factor in building long lasting relationships with external stakeholders, and by starting early, fashion firms can generate a positive image faster.</p>
	<p>Ecosystem orchestration</p> <p>Developing the capabilities to control parts of the external environment is a quality fashion firms leverage to support their circular initiatives such as integrating pre-owned apparel.</p>
	<p>Leadership and change management capabilities</p> <p>Challenging the traditional approach to business and following a non-linear path requires the support of strong leaders and internal organizational capabilities to tolerate the challenge and tackle the paradox between fashion firms and sustainability.</p>

7 Conclusion

Understanding how fashion firms can transition towards circularity is relevant more than ever, underscoring the importance of my research question ‘how can fashion firms integrate pre-owned fashion into their existing business models?’ In spite of the push for fashion businesses to sustainably evolve, particularly in the area of circular fashion, sustainable fashion is seldom studied (Ekström and Salomonson, 2014). The minimal fashion sustainability research in management literature is primarily consumer focused (Mukendi et al., 2020), carving the need for further examination on the business model aspect of the industry, particularly the in the niche of pre-owned apparel.

My research adopted a qualitative approach to answer the research question, placing a micro-scope on four companies working towards sustainable business model innovation through pre-owned apparel. Using the dynamic capabilities framework with a spotlight on micro-foundations, I identified lower-level phenomena (i.e., individual, group, organizational practices) critical to fashion businesses interested in integrating pre-owned fashion to their product offering catalogue. My findings found the following micro-foundations to be relevant to all cases, emphasizing that they are important regardless of business size, geographical location, resource availability and organization tenure: external sensitivity, adopting holistic perspectives, delineating sustainable solutions and business models, developing a sustainability and innovation culture, developing a sustainable brand identity, co-specialization of assets, trust building, and leadership and change management capabilities. In addition to the aforementioned micro-foundations, stakeholder engagement and collaboration was also found to be particularly valuable to the companies that possessed the micro-foundation highlighted in the interview process.

The findings are subject to limitations. First, the findings are derived from a finite number of cases from different geographies, sizes and longevity, impacting generalizability. Second, the narrow number of cases and interviews were bounded by time and the research criteria. Finally, interviewees were in high-ranking positions in respect to their organization, implying partiality in perspectives.

Future research is encouraged to explore the findings on a larger scale in the context of geography, number of cases and number of interviews. Alternative frameworks and models may also be of interest to reveal different perspectives not explored in the dynamic capabilities framework. Further, research in other areas of circularity in the fashion industry can be conducted to reveal necessary practices that would encourage industry change.

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9 Appendices

Appendix 1 Companies Contacted for Potential Study

Table 1: Cases Contacted

Company Name	Positive Response	Negative Response	No Response
H&M	X		
Lululemon		X	
Canada Goose		X	
Nudie Jeans	X		
Thrifty	X		
Stragglers Club		X	
Legacy Toronto		X	
YYZ Clothing			X
Surplus Market			X
Sloned	X		
Upcycled Jacks			X
Aster & Luna			X
Fresh Kids			X
Uniqlo			X
Savers		X	
Greige			X
Hudson's Bay Canada		X	
The Clarendon Trading Company			X
Plato's Closet			X

Appendix 2 Primary and Secondary Data Collected

Table 5: Primary Data H&M Group

H&M Group

Type of Data	Name	Organization	Position	Date	Length
Interview	Anna Palmqvist	H&M Group	Sustainability Manager - H&M Group Global Expansion	24-Mar-23	50 minutes
Interview	Anders Bannstrand	H&M Group	Head of Supply Chain Incubation	04-Apr-23	1 hour

Table 6: Secondary Data H&M Group

H&M Group

Document Type	Document Title	Author Name	Organization	Date
Report	H&M Group Sustainability Disclosure 2021	H&M Group	H&M Group	2022
Report	H&M Group Sustainability Disclosure 2022	H&M Group	H&M Group	2023
Report	Sustainability Performance Report	H&M Group	H&M Group	2021
Video	Lee x H&M The conversations: Zinnia Kumar & Helena Helmersson H&M	H&M Group	H&M Group	22-Jan-21
News Article	H&M Leans Into Sustainability; Builds Circular Business With Help From ThredUP	Sharon Edelson	Forbes	14-Mar-23
News Article	H&M Group and Remondis create joint venture to collect, sort and sell used and unwanted garments and textiles	H&M Group	H&M Group	15-Feb-23
Article	Collect, recirculate and recycle	H&M Group	H&M Group	21-Sep-22
Article	How Ethical Is H&M?	Lara Robertson	Good On You	02-Feb-22
Website	H&M Re:Wear	H&M Group	H&M Group	N/A
Letter	Letter from our Head of Sustainability	Leyla Ertur	H&M Group	31-Mar-23

Article	H&M achieves Cradle to Cradle Certified Gold — again!	H&M Group	H&M Group	30-Mar-23
Website	Circularity	H&M Group	H&M Group	16-Dec-22
News Article	H&M Drives Innovation In Sustainability With 2021 Style	Joseph DeAcetis	Forbes	06-May-21
Report	The State of Fashion 2023: Holding onto growth as global clouds gather	Berg, A., Brantberg, L., Hedrich, S., & Ahmed, I.	McKinsey	29-Nov-22
News Article	H&M Forms Venture to Sort Textile Waste, Recycle Used Garments	Clara Lizarraga	Bloomberg	15-Feb-23
News Article	H&M move into textile-sorting could be huge boost for circular economy	Mark Faithfull	Forbes	16-Feb-23
Report	Annual report 2017- Our History	H&M Group	H&M Group	10-Jul-05
Website	Circulator	H&M Group	H&M Group	N/A

Table 7: Primary Data Thrifty

Thrifty

Type of Data	Name	Organization	Position	Date	Length
Interview	Shamila Castro	Thrifty	Manager	21-Apr-23	45 minutes

Table 8: Secondary Data Thrifty

Thrifty

Document Type	Document Title	Author Name	Organization	Date
Website	About Us	Thrifty	Thrifty	N/A
Website	Sustainability	Thrifty	Thrifty	N/A

Table 9: Primary Data Nudie Jeans

Nudie Jeans

Type of Data	Name	Organization	Position	Date	Length
Interview	Kevin Gelsi	Nudie Jeans	Circular Product Manager	04-Apr-23	1 hour

Table 10: Secondary Data Nudie Jeans

Nudie Jeans				
Document Type	Document Title	Author Name	Organization	Date
Report	Nudie Jeans Sustainability Report 2021	Nudie Jeans	Nudie Jeans	2021
News Article	Nudie secures first 'official circular partner'	Angela Velasquez	Sourcing Journal	07-Feb-23
Website	We want your clothes back!	Nudie Jeans	Nudie Jeans	N/A
News Article	Nudie Jeans launches new re-use collection	Angela Velasquez	Sourcing Journal	30-Apr-19
Website	Climate	Nudie Jeans	Nudie Jeans	N/A
Website	The Sustainable Product	Nudie Jeans	Nudie Jeans	N/A
Website	Repairs & re-use highlights made last year	Nudie Jeans	Nudie Jeans	2023
Website	Sustainability - Transparency	Nudie Jeans	Nudie Jeans	N/A
News Article	Thinking outside the shop: Reinforcing the repairs with ACS	Nudie Jeans	Nudie Jeans	02-Mar-23
News Article	ACS Named Nudie Jeans U.K. Circularity Partner	L Owen	ACS	02-Feb-23
News Article	How Nudie Jeans is getting customers to repair their clothing, instead of tossing it	Melissa Daniels	Modern Retail	27-Feb-23
News Article	Everything you need to know about: Nudie Jeans	Press Club	Fashion United	03-Apr-23
News Article	Nudie Jeans Commits to More Responsible Fibers, Fewer Emissions in 2021	Liz Warren	Sourcing Journal	10-May-21
Website	Nudie Jeans - Sustainability Rating	Good On You	Good On You	13-Jul-05
Website	Sustainability - Sustainable Products Re-Use.	Nudie Jeans	Nudie Jeans	N/A

Table 11: Primary Data Sloned

Sloned					
Type of Data	Name	Organization	Position	Date	Length

Interview Lara Kleine Sloned Co-Founder 14-Mar-23 50 minutes

Table 12: Secondary Data Sloned

Sloned

Document Type	Document Title	Author Name	Organization	Date
Website	About	Sloned	Sloned	N/A
Website	Sustainability	Sloned	Sloned	N/A
Report	Sloned Impact Assessment	Sloned	Sloned	N/A
Report	Contact List	Sloned	Sloned	N/A

Appendix 3 Coding

Table 13: Coding Tree & Identified Micro-Foundations within Studied Cases

Aggregated Dimensions	Second Order Themes	First Order Codes	Nudie Jeans	Sloned	H&M Group	Thrifty
Sensing and shaping opportunities and threats	External sensitivity	Understanding the needs of customer and key stakeholders	X	X	X	X
		Being open for external expert support		X	X	
		Leverage development of exogenous science and technology	X		X	
	Adopting holistic perspectives	Adopting a lifecycle perspective	X	X	X	X
		Adopting a systematic perspective	X	X	X	X
	Entrepreneurial orientation	Undertaking R&D activities	X		X	
		Hiring innovators	X	X	X	
	Use of sustainability oriented instruments	Implementing environmental management tools (LCA, Sustainability Reporting)	X	X	X	
		Guidance for sustainability frameworks (SGDs, C2C)	X		X	
	Seizing opportunities	Delineating sustainable solutions and business models	Ideating and developing value propositions with environmental and/or social impact	X	X	X
Designing and implementing the (sustainable/circular) business order			X	X	X	X
Generating business model architectures that can transform socio-technical systems			X		X	X
Engaging strategic partners in			X		X	X

	Stakeholder engagement and collaboration	collaboration and co-creation				
		Engaging customers early in innovation process	X		X	
		Engaging interdisciplinary team to participate in the innovation process	X		X	X
		Institutionalizing changes with government interventions			X	
	Supporting a sustainability and innovation culture	Articulating a clear and ambitious sustainability vision	X		X	
		Developing a sustainability strategy and culture	X	X	X	X
		Educating workers in sustainability and empowering them to propose innovations	X		X	
Develop a Sustainable Brand Identity	External marketing and education	X	X	X	X	
Reconfiguring resources and structures	Co-specialization of assets	Prioritizing projects that fit existing organizational capabilities and resources	X	X	X	X
	Organizational flexibility	Implementing experiments/pilots to validate, learn and adapt quickly	X		X	
		Build decentralized (sustainability-oriented) innovation teams and allow flexible organizational structures	X			
		Working with region-specific capabilities	X		X	

	Trust building	Having a fact-based consistent transparent external communication	X	X	X	X
	Ecosystem orchestration	Skills to integrate stakeholders and coordinate partners in the business ecosystem			X	
	Leadership and change management capabilities	Commitment and support from top management (key role of leadership)	X	X	X	X
		Proficiency at organizational change management	X		X	
		Implementing specific sustainable and circular KPI's	X		X	X

Table 14: Coding Table & Quotations

First Order Codes	Quotations
Understanding the needs of customers and key stakeholders	<p><i>"When a customer brings a piece back to the store, they receive a 20% voucher.... And now the voucher is also applicable to reuse garments, so that will be our second-hand assortment."</i></p> <p><i>"Nudie "We still live in a world where people change in size, or they lose interest in a garment. "</i></p> <p><i>"It is very costly to have these services on go, but we've also gained a new traction."</i></p> <p><i>"I think we will constantly adapt. It's a supply and demand business, right? So, when the demand increases for some types of material, then we need to shift to sort for that demand."</i></p> <p><i>"Not all customers are coming in for the voucher. Some are coming in for the convenience 'I was anyway going to your store, so it's great that you offer this opportunity, and I don't have to go to a collection place far away somewhere'."</i></p>
Being open for external expert support	<p><i>"We had consultants last year to support with the recycling techniques and their opportunities and possibilities. Now we've transitioned to an internal team that's driving this on their own."</i></p> <p><i>"We have been working with iCollect, and they are the ones helping us to sort the textile into different fractions. So, of course, first looking at what products still have a value that can be sold in second-hand stores, or donated to charity, then starting to sort it according to different materials."</i></p>

Leverage development
of exogenous science
and technology

"Automation and AI [are key resources]. If I look 1 or 2 years ahead there will be a lot of automation because it's a mass volume business."

"We're trying to capture the real value of the garment and to get our customers to cherish that garment and prolong the life of it, establish a long-term relationship to it, but sometimes that that's not possible because we also make mistakes. We're humans."

"It's actually an intuitive process. When you start, you have one way of sorting anything. You aim to get the highest value of the second-hand goods, and then there are the different parts of reuse or down cycling like selling to furniture makers or filling in car seats. So, we have different kind of down cycling schemes. The circularity is all the way."

"In everything that our designers are designing, they have to consider the end of the life of a product."

Adopting a lifecycle
perspective

"There are so many products out there that are not designed according to circular principles, meaning that there are a lot of products with material mixes, or made in a way that is very hard to recycle the fiber and get it back to the textile supply chain. But this is something that we think is very important, thinking about circularity in a holistic approach, and that we avoid looking only at the recycling perspective. Because it's important that we make sure that the product lifespan can be prolonged, and it's designed for being repaired and maintained, and that you can hand it down for generations..."

"Because we want to focus on the concept of circularity, let's say the jeans don't fit you anymore, it can fit someone else. And if the quality is good, it can still be used, so I think that's a very important step."

"A shift of mindset is needed so we don't have to throw away things, we can repair them, or we can sell them."

"There is a coupon programme in place whereby customers are rewarded for their donations prompting them to continue bringing in used items that would otherwise be discarded by them".

Adopting a systematic perspective

"It's up to us to curate our sustainable offerings according to our capacity and our fingertip, feel, and competence. I think that includes optimizing these circular streams as well."

"Ideally, we would have a closed loop systems of post consumer down in flows, like one production set up for the Scandinavian market, one for the Central European market, one for UK."

"The garment collection program was started 10 years ago. It's kind of old in that sense. Now, in this space we're doing a retake of that. How can we do that even smarter even better, more clear to the customers? So, we're doing a lot around that, because we see that as a good one connection to our customers where we own it".

"I think the whole industry has to look beyond textiles to consider whatever resources we are consuming."

"Because we tried to create more transparency to not only say we are using a more sustainable indigo or using less energy but to see who's involved in the supply chain? Because sustainability starts far. It starts earlier than expected. We discovered that the producer sometimes doesn't even know themselves where they're getting the materials from, so we can't really trace back where the cotton comes from that we're using."

"We try our best to limit the amount of waste created and environmental impact. If a material is in bad shape, we will try to use it for store cleaning".

Implementing environmental management tools (LCA, Sustainability Reporting)

"We started working on an impact assessment."

Ideating and developing value propositions with environmental and/or social impact

"We have started to work with small tailoring workshops in collaboration with an organization called Companion, who are working with social enterprises for new arrivals or newly arrived refugees to make them find you know their place into the Swedish working community."

"We need to [refrain from using] virgin materials because we need to consider planetary boundaries. We need to find a way to recycle materials many more times."

"We were driven to [discourage customers from discarding] clothes in the regular waste bin; we wanted to incentivize the customer to bring back the product into a circular loop. To incentivize them, we offer a voucher."

"Creating a product that is timeless and classic, and that you can wear has a very high quality that you can wear for years. So that was our approach of slow fashion to really- produce a high-quality product."

"We often find that clothes are re-donated and resold fitting int our values of recycling and reusing."

Designing and implementing the (sustainable/circular) business order

"Last year we sold around almost 4,000 pairs of second-hand jeans, which is a new record. But we have bigger aims because it's still a very small percentage our sales."

"But as we test recycling techniques, if we see that one technique seems very promising, we want to direct the feedstock to that technique and see. We ask ourselves what kind of material do we then get out that, what value? [...] It's where you actually can sustain this business right now. That's where the value come from in the business case."

"We've had to look at our business as a whole, and over time changes have taken place [...] little things like organizing drop off more systematically help the overall system work better."

Generating business model architectures that can transform socio-technical systems

"We want to change to a circle of flow. I think that's the main challenge, because the linear model today wins in every case; the whole global system is set up for a linear business model [...]. The incentives and the regulations need to change in order for this to work. There were discussions to go on the global level, I think we had the World Economic Forum there [...]. What happens if we change the regulations in the EU, for instance?"

"Donating keeps items off the land fills, saves on water used in manufacturing process and energy usage."

Engaging strategic partners in collaboration and co-creation

"Here in Sweden, we are scouting the market to set up something similar to our partner in UK, ACS, or to have just have a similar partner, with the same type of agility."

"We see in last 2 years that the recycling techniques and partner's innovations are really improving. And of course, that is a great opportunity for us as a as a retail company to get that loop working. That means that we can meet our targets." "I think the smart move we did that last year was actually partnering with a waste management company because they have the resource of the knowledge that we don't have. And we have the knowledge of fast fashion and garments. They have the knowledge of how to sort in the best possible way to make that that work. I think that was a really good step for us to helping make it work because otherwise as a fashion brand your expertise is in fashion and garments, but you don't know how to take care of the recycling component."

"What we have done is that we are a collaborating with different partners, so that we can get the whole infrastructure to work out."

"Partnering with local charities helps promote our business further and bring more funding for their causes."

Engaging customers early in innovation process

"We have our take back scheme within our repair shops. So, we have pretty decent flows of post consumer denim coming into our hands and that's something we strive to expand, taking more responsibility of the products that we once sold."

"We are trying all the time to reach out to the to the customer in different ways, and it's very challenging knowing when to reach out what message to give. And the best way we see it today is that on our online platform leave it to the customer."

Engaging interdisciplinary team to participate in the innovation process	<i>"I believe you need to reach a big scale, and you also need to automate how you're cleaning your clothes, sorting it, displaying it, packing it and all of that."</i>
* Institutionalizing changes with government interventions	<i>"There are no clear guidelines for what a company can say and not say [...]. We who have tried our best and with our best intentions, have gotten punished that we might have said too much while there have not been any rules on this. [...] Now there are a lot of new laws coming into power [...] and I think what is coming up will support us."</i>
Articulating a clear and ambitious sustainability vision	<i>"As long as we optimize the potential for reuse, it will also be an integral part of achieving our climate goals."</i>
Developing a sustainability strategy and culture	<i>"Sustainability just means everything. That aspect is inherent to every activity that we have ongoing." "Our way of adapting best practices doesn't put tomorrow at risk. It's slow development, slow growth with a long-term perspective." "It's really crucial to have sustainability integrated in everything we do. To work in a silo with sustainability doesn't give the impact needed."</i>
Educating workers in sustainability and empowering them to propose innovations	<i>"We sell around 600,000 pairs of jeans. For second-hand denim that's around 4,000 up to date. So, it's a very, very small percentage, and it's very in integrated in the operations of the store."</i>
External marketing and education	<i>"Greenwashing is still prevalent in the industry [...]."</i>
Prioritizing projects that fit existing organizational capabilities and resources	<i>"I think [selling directly to consumer of B2B with Selppy] is decided on value. It's a business case. It's profit." "The problem always when you start with something, it's a small scale. How do you make the availability higher, so that the cost can also go down? But we will get there. The first is always to find a way to do it in a pilot scale, and then we can do it." "[...] But we have a lot of areas to improve as we can't afford to always go for the most sustainable option." "I think mainly it's a logistical challenge like people need to be able to send back the stuff, then you need to assess it if it's still good or if there any marks, and then you need to take photos and I think it's very time consuming because it's not standardized and you don't know what you get and what sizes will be available."</i>
Implementing experiments/pilots to validate, learn and adapt quickly	<i>"In order to gain volume, we also need to lower the bar for what is accepted as a sellable reuse product. And then you need to put more work into that product, more repairing, more refinement. So that's why we're starting to outsource this and trying a new setup in the reuse segment."</i>

Build decentralized (sustainability-oriented) innovation teams and allow flexible organizational structures	<p><i>"You could say that we are a partly sustainable brand, but we are not 100% there yet."</i></p> <p><i>"And how do we sort it in the best way? So, we. We're constantly learning now when we scale sorting for the best value."</i></p> <p><i>"The Looper launched only recently. We started to sort around November with the first test batches. We have 2 facilities open and have learned so many things that it's difficult to explain. The learning is constant. There are new learnings on a weekly basis, making it an intricate process."</i></p>
*Working with region-specific capabilities	<p><i>"We are not present in all our 80 markets yet, but we are getting there. [...] we are collaborating with different partners, so that we can get the whole infrastructure to work out."</i></p>
Having a fact-based consistent transparent external communication	<p><i>"There's a need to provide information and to be even more transparent with not only where the product originally comes from, but also what happened to it in the first part of the life cycle (first purchase)."</i></p> <p><i>"I hope in being as transparent as possible with the parts that are not sustainable yet. For example, we say that we don't have the most sustainable fabric, but there's another reasons for it and that's to also bring more awareness to the consumers that as a fashion brand [implementing perfect sustainable practices] is not easy."</i></p>
Skills to integrate stakeholders and coordinate partners in the business ecosystem	<p><i>"I [see automation being used] in the sorting process, and gradually integrated into every step of the way with collection and sorting. We need more and more efficient processes. [...] There are many startups now trying to find their way and they need to succeed, but we need to help them succeed... They need to work for us to work." "We've been collaborating with the Hong Kong Research Institute for Textile and Apparel. They're really leading when it comes to innovations in the textile fashion industry, and we've done various things with them. But one thing connected to this is that they have been working and researching how to find a chemical way to recycle mixed fibers [...]. But the mixed fibers have been a nightmare. There hasn't been technology out there. And here we've worked with the Hong Kong Research Institute to find ways, and we have together launched something that's called the Green Machine."</i></p>
Commitment and support from top management (key role of leadership)	<p><i>"The good thing is that we have a CEO that's very, very hard on these goals. You need to have [direction] from the top down. Half the resources need to be as strong as double the revenue. Because if you only have the revenue goal, then these kind of [innovation] tests will never happen."</i></p> <p><i>"Employees are encouraged to become leaders, and make sure values of the circular economy are conveyed to the customers and donors."</i></p>

Proficiency at
organizational change
management

"We needed to learn how to handle this product to let it co-exist with our regular assortments. There were worries of reuse taking up space and taking sales away from new products. But today we approach it with a different kind of perspective. Now we want reuse to take more space in our stores."

"Our own internal operation is now a key stakeholder in shifting the mindset of the internal organization to actually show them that there is value in these changes. It's not only adding on costs, it's adding value to the business to achieve the 2030 goals. This this could be a way forward."

"I think everything is hard when you try to change a linear model to a circular model. The linear model wins profit-wise revealing a struggle and that's where you need to really the top management commitment."

Implementing specific
sustainable and
circular KPI's

"In store we keep track of how many items are kept out of landfills, how many items are disposed, and how much is recycled."