B2B customer experience on circular digital platforms

Understanding engagement and challenges in a textile deadstock marketplace

Master's Thesis of Marketing

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The textile and clothing (T&C) industry generates vast amounts of pre-consumer waste, yet the reuse and redistribution of surplus materials remain underdeveloped. Circular digital platforms offer a promising solution for facilitating surplus exchange, but their adoption faces several challenges. This study explored how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the T&C industry. It examined the barriers and enablers to platform adoption, the formation of B2B customer experience within these platforms, and the key experiences that support engagement. Through this investigation the study aims to provide strategic tools for designing services that encourage participation on circular digital platforms.

Using a qualitative case study approach, the research examined the experiences of 12 customer firms using a circular surplus marketplace. The findings reveal that sustainability commitments and economic benefits drive engagement, but firms face significant barriers, including inefficient surplus management systems, limited consumer demand, and challenges in scaling surplus-based products. Additionally, customer contingencies such as market positioning and supply-demand mismatches shape platform engagement.

The study contributes to circular economy, digital platform, and B2B customer experience literature, showing that circular platforms are not purely transactional but relational ecosystems where trust, expertise, and service quality impact participation. The findings offer strategic recommendations for improving platform usability, value-added support, and surplus material marketing to enhance circular platform engagement across industries.

Key words: Circular economy, digital platforms, surplus materials, B2B customer experience, textile and clothing industry

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Tekstiili- ja vaateteollisuus tuottavat merkittäviä määriä jätettä jo tuotantovaiheissa. Sen sijaan, että tuotannosta ylijääneitä tekstiilejä hyödynnettäisiin muussa tarkoituksessa, suurin osa tästä materiaalista päätyy polttojätteeksi tai kaatopaikalle. Digitaaliset kiertotalousalustat tarjoavat tähän lupaavan ratkaisun yhdistämällä ylijäämämateriaalin tuottajat hyödyntäjiin. Näiden palveluiden käyttöönotto ja menestys on kuitenkin ollut rajallista.

Tämän tutkimuksen tarkoituksena oli tarkastella, miten B2B-asiakaskokemus ja sitoutuminen muodostuvat kiertotalouden digitaalisilla alustoilla, jotka edistävät ylijäämämateriaalien kiertoa tekstiili- ja vaateteollisuudessa. Tutkimalla, millaisia ajureita ja esteitä yritykset kohtaavat alustan käyttöönotossa, miten B2B-asiakaskokemus näillä alustoilla muodostuu ja mitkä avainkokemukset vaikuttavat sitoutumiseen, tutkimus pyrkii tarjoamaan strategisia työkaluja kiertotalouspalvelujen suunnitteluun.

Tutkimus toteutettiin kvalitatiivisena tapaustutkimuksena, jossa haastateltiin 12 asiakasyrityksen kokemuksia digitaalisen ylijäämämarkkinapaikan käytöstä. Tulokset osoittavat, että ekologiset arvot ja taloudelliset hyödyt toimivat suurimpina motivaattoreina osallistumisessa. Toisaalta useat esteet, kuten tehottomat varastonhallintajärjestelmät, rajallinen kuluttajakysyntä ja ylijäämäpohjaisten tuotteiden skaalautuvuuden haasteet, vaikeuttavat käyttöönottoa. Lisäksi yritysten markkinapositio ja ylijäämämarkkinapaikan kysyntä-tarjonta-epäsuhta vaikuttavat siihen, miten yritykset kokevat alustan käytön.

Tutkimus laajentaa kiertotalouden, digitaalisten alustojen ja B2B-asiakaskokemuksen kirjallisuutta, osoittaen, että kiertotalousalustat eivät ole vain transaktiopohjaisia kauppapaikkoja, vaan myös vuorovaikutteisia ekosysteemejä, joissa luottamus, tekstiilien asiantuntemus ja palvelun laatu vaikuttavat kokemukseen ja sitoutumiseen. Tulokset tarjoavat konkreettisia suosituksia kiertotalousalustojen kehittämiseen, asiantuntijapalveluiden kohdentamiseen ja ylijäämämateriaalien ja -tuotteiden markkinointiin. Nämä suositukset ovat sovellettavissa tekstiili- ja vaateteollisuuden lisäksi myös muihin toimialoihin, joilla digitaaliset kiertotalousalustat nähdään potentiaalisena ratkaisuna tehokkaampaan resurssikäyttöön.

Avainsanat: Kiertotalous, digitaaliset alustat, ylijäämämateriaalit, B2B-asiakaskokemus, tekstiili- ja vaateteollisuus

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1 Introduction

The global textile waste crisis has reached critical levels, with millions of tonnes of materials discarded annually, posing severe environmental challenges (Leal Filho et al. 2022). While much attention has been given to post-consumer waste, a significant yet often overlooked portion of waste is generated upstream, long before products reach consumers. An estimated 12 percent of all textiles—equivalent to 6 million tonnes annually—are lost during production due to factory offcuts and overstock (McKinsey 2022, 13). Emerging trends like ultra-fast fashion, with its rapid production cycles and increased overproduction, further amplify these inefficiencies (Dzhengiz et al. 2023, 13–14). This underscores the urgent need for solutions that address waste and resource use early in the textile lifecycle, transforming production side streams from liabilities into opportunities.

In response to the urgent need for sustainable development within the textile and clothing (T&C) industry, the circular economy (CE) has gained prominence as a strategic approach to tackling environmental challenges (EMAF 2017; McKinsey 2022; Hora et al. 2023). By prioritising the reduction, reuse, and recycling of materials, the CE aims to minimise waste and maximise resource efficiency. EU countries, including Finland, have embraced this vision, setting ambitious targets to transition towards circular practices and address the inefficiencies of traditional linear production models (European Commission 2022).

Digital platforms have become pivotal in enabling material circulation, revolutionising how resources are shared, traded, and repurposed (Berg & Wilts 2019; Wirtz et al. 2019, 454; Lacy et al. 2020). While online platforms for consumer resale have gained traction, B2B material circulation remains fragmented and underutilized. This gap represents a missed opportunity for businesses to optimize resource use, reduce waste management costs, and enhance supply chain resilience. Despite the emergence of several digital platforms designed for material circulation among business actors, these platforms have not yet achieved the same level of traction as their consumer-focused counterparts (Berg & Wilts 2019). This disparity highlights untapped potential within the B2B sector and underscores the need for a deeper understanding of the factors that drive or hinder businesses from embracing these innovative tools.

Despite the growing interest in circular economy practices, a significant knowledge gap remains in understanding how different actors perceive and experience circular solutions

(Schulz et al. 2019, 6–7; Ta et al. 2022, 2) and the digital platforms that facilitate them (Berg & Wilts 2019; Wirtz et al. 2019, 454; Lacy et al. 2020). This lack of insight is particularly pronounced in the realm of B2B customer experience within circular services, where limited research has explored the motivations, challenges, and expectations of businesses engaging with such platforms. Understanding and improving customer journeys on these platforms is vital, as they directly impact the long-term success of these platforms (Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79). Addressing this gap is crucial for developing effective initiatives that not only encourage participation but also optimise the usability and impact of circular platforms, ultimately driving the transition toward more sustainable practices in the T&C industry.

Building on this identified gap, this study explores how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the T&C industry. Through this investigation the study aims to provide strategic tools for designing services that encourage participation on circular digital platforms. In light of these objectives, the following research questions guide this study:

1. How can circular digital platforms facilitate the reuse of production waste in the T&C industry?

2. What kind of drivers and barriers do businesses face when engaging with circular digital platforms?

3. Which experiences in B2B customer journeys support engagement with circular digital platforms?

To explore these questions, the study employs a qualitative case study approach, focusing on Nextex Oy (a pseudonym), a circular digital marketplace that enables textile companies to trade surplus textiles. Empirical data was gathered through semi-structured interviews with 12 customer firms of Nextex Oy, providing insights into how businesses experience and engage with circular platforms.

The theoretical framework builds on three interconnected areas of academic literature: CE engagement, digital platforms, and B2B customer experience (Figure 1). By integrating these areas, this study bridges the existing knowledge gap (represented by the question mark in Figure 1), where limited research currently exists. The arrows in the

figure indicate established research areas, while the overlap highlights the unexplored intersection that this thesis seeks to address.

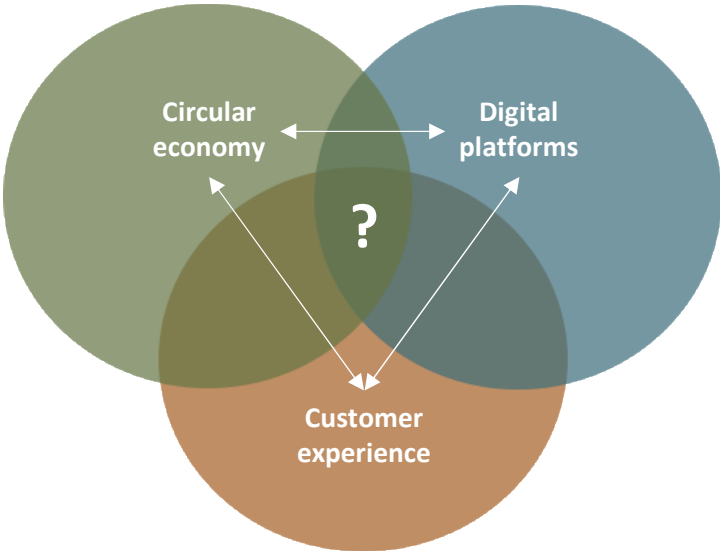


Figure 1 Key research pillars for theoretical framework construction

Beyond the T&C industry, the findings of this research offer valuable insights into fostering CE practices across various sectors. Many industries share similar material flows and surplus management challenges, meaning that digital platforms have the potential to facilitate cross-industry material circulation. The principles and strategies identified in this study can be applied in other sectors, supporting the development of customer-centric circular platforms that drive sustainable practices and resource efficiency across a wide range of industries.

2 Turning waste into value: Circularity in the T&C industry

2.1 The hidden challenge of pre-consumer waste

The global textile and clothing (T&C) industry is frequently identified as one of the most polluting sectors, second to the oil industry, underscoring the pressing need for a sustainable transformation (Diabat et al. 2014, 391). Consuming vast resources and generating substantial waste, the T&C sector is estimated to contribute between 3% and 10% of global CO_2 emissions (McKinsey 2022, 13). While much public and research attention has focused on post-consumer waste, a significant yet underexplored part of the problem lies upstream, in the production phase, before products reach consumers. This pre-consumer textile waste encompasses manufacturing offcuts, end-of-roll leftovers, and overstock fabric rolls. (Dobilaite et al. 2017, 492).

McKinsey (2022, 13) estimates that approximately 12% of all textiles produced globally—equating to about 6 million tonnes annually—are lost during the production phase through factory offcuts and overstock. However, regional studies suggest that the problem may be far greater. For example, Dobilaite et al. (2017, 501) found that 20% to 25% of materials are wasted through offcuts alone in Lithuanian garment factories, excluding other types of production waste. Similarly, research by Aus et al. (2021, 15), conducted in Bangladesh, India, and Estonia, reveals that fabric leftovers during manufacturing can range from 25% to 40% of the total fabric used, depending on the size of the factory. These figures highlight the inefficiencies embedded in traditional manufacturing processes and show the urgent need for more resource-efficient and sustainable practices in the industry.

There are several reasons why fabric loss in the T&C industry is often overlooked. A major factor is the lack of incentives for manufacturers to minimise waste, as waste reduction is typically seen as secondary to meeting production targets. The rapid pace of production, driven by trends like ultra-fast fashion, prioritises speed and volume over resource efficiency, leading to excessive overproduction and material mismanagement (EMAF 2017, 19). Adding to this challenge is the absence of robust systems for tracking and managing deadstock or leftover materials, which are frequently discarded due to limited reuse options (Aus et al. 2021, 2).

Additionally, last-minute changes in market demand or production specifications, such as adjustments to fabric colours or designs, render significant quantities of surplus material

unusable (EMAF 2017, 18). The issue is further exacerbated by the lack of transparent reporting mechanisms and the widespread practice of outsourcing production to regions with lower labour costs. In these facilities, weak accountability for waste management and limited recycling infrastructure perpetuate the problem (Aus et al. 2021, 2).

While some level of surplus generation can be inevitable due to factors like technical challenges, quality defects, or production planning errors (Aus et al. 2021, 6), the sheer volume of textile waste indicates how the “invisible” upstream is systematically overlooked. Addressing pre-consumer waste is crucial not only for reducing resource inefficiencies but also for unlocking new opportunities in sustainable production practices, aligning with the broader goals of the circular economy.

2.2 From linear models to circular solutions

In response to the urgent need for sustainable development within the textile and clothing (T&C) industry, the circular economy (CE) has emerged as a transformative approach to address these environmental concerns (EMAF 2017, 22; McKinsey 2022, 13). The concept of CE, which gained broader recognition in 2002 through William McDonough’s "cradle-to-cradle" philosophy, fundamentally challenges the traditional linear model of "take, make, and dispose." In this conventional model, resources are extracted, transformed into products, and ultimately discarded after a relatively short period of use (Bocken et al. 2016, 308; EMAF 2017, 19).

CE, on the other hand, envisions a regenerative system where materials and resources are kept in circulation for as long as possible. This is achieved by promoting strategies across the entire product lifecycle, such as designing for longevity, repair, reuse, refurbishing, and recycling. The goal is to minimise resource inputs and waste outputs, creating a more resource-efficient and sustainable economy. (Achterberg et al. 2016; Geissdoerfer et al. 2017, 759; Niinimäki 2018, 155.)

The European Union has been a global leader in adopting CE principles, particularly with the 2015 Circular Economy Action Plan, which aims to enhance competitiveness, foster sustainable growth, and generate jobs. In 2022, the EU further emphasised its commitment by introducing the Strategy for Sustainable and Circular Textiles. This strategy, set to take full effect by 2030, outlines measures such as ecological design requirements, minimising microplastic pollution, increasing transparency in textile value

chains, monitoring environmental "green" claims, extending producer responsibility, and *curbing* overproduction and overconsumption. (European Commission 2022.)

Despite the progress made, much of the attention within the T&C industry has centred on managing post-consumer waste (EMAF 2017, 95). While this focus has led to innovations like recycled fibre technologies, second-hand platforms, and take-back programmes, it also reflects a narrow emphasis on the end-of-life phase. Recycling, often considered the lowest level in the waste hierarchy, does not necessarily reduce production rates or ensure that recycled products are inherently sustainable. This approach risks placing responsibility on consumers rather than addressing systemic inefficiencies in production (Mostaghel & Chirumalla 2021, 38, 43.)

To fully embrace the potential of CE, the T&C industry must also focus on pre-consumer waste prevention, a stage often overlooked despite its significant potential for resource efficiency. Research by Aus et al. (2021, 15) highlights that up to 50% of fabric offcuts can be repurposed into new garments, with upcycling potential rising to 80% for larger excess fabrics. Similarly, the Ellen MacArthur Foundation (2017, 113) emphasises the importance of brands collaborating with suppliers to reduce waste, energy use, and water consumption in production. The following figure (2) illustrates the flow of materials within the linear and circular models, highlighting opportunities for intervention in both pre- and post-consumer phases.

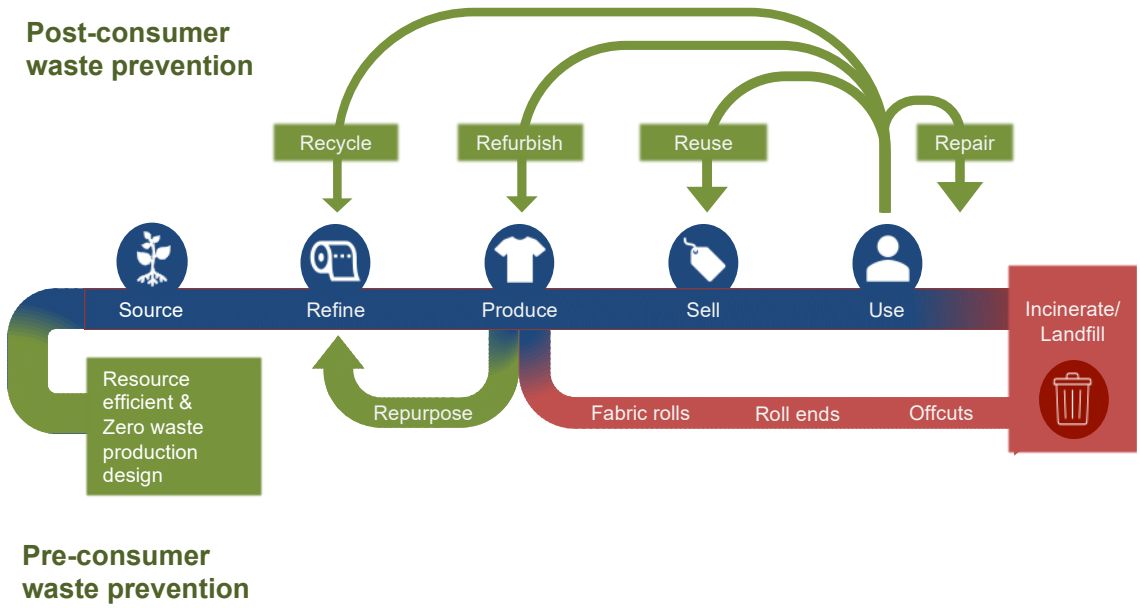


Figure 2 Circular strategies for pre- and post-consumer textile waste prevention

In the traditional linear model, materials flow from sourcing to disposal, with substantial losses occurring during production in the form of fabric rolls, roll ends, and offcuts. The circular model shifts this trajectory, prioritising strategies like zero-waste production design and repurposing excess materials. By integrating these strategies, companies can significantly reduce resource consumption and waste while creating value from materials that would otherwise be discarded.

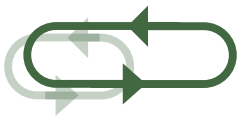
As illustrated in figure 1, the circular model not only addresses post-consumer waste but also integrates pre-consumer strategies, showcasing the potential for material recovery throughout the production process. By shifting focus upstream and adopting circular strategies, the T&C industry can achieve meaningful progress toward a regenerative and sustainable system, demonstrating that a circular economy is not just a theoretical model but a practical pathway to addressing the industry's environmental challenges.

2.3 Strategies for minimizing pre-consumer waste

Addressing the challenges posed by pre-consumer textile waste requires a fundamental shift in how value is created, captured, and delivered within textile production. In the traditional linear economy, value propositions are often supplier-driven, prioritising economic or functional benefits with limited input from customers. By contrast, the circular economy (CE) introduces innovative, market-driven approaches that redefine the role of waste as a resource. Moreover, circular business models actively involve customers and stakeholders, creating new value opportunities while delivering both environmental and socioeconomic benefits. (Bocken et al. 2016, 313; Ranta et al. 2020, 299.)

As the CE offers unique opportunities for value creation, it is essential to identify circular strategies that are most suitable for addressing pre-consumer textile waste. Ranta et al. (2020, 298–299) propose four distinct value creation logics—*optimising*, *resurrecting*, *replacing*, and *sharing*—that are particularly relevant for managing production waste. Each logic contributes to closing, narrowing, or slowing resource loops by reducing waste and enhancing resource efficiency (Table 2) (Bocken et al. 2016, 309–310). In other words, they focus on transforming waste into resources, reducing natural resource consumption, or extending the lifecycle of materials —ultimately lowering the overall environmental impact.

Table 1 Value creation logics for pre-consumer textile waste

Value creation logic	*Resurrect value*	*Optimise value*	***Share value***	*Replace value*
Circular goal	Closing Resource loops	Narrowing Resource loops		Slowing Resource loops
Visual model				
Business model example	Recycling technology for production waste	Technology for designing zero-waste productions	**B2B deadstock marketplace**	Sustainable material alternatives to cotton for textile production

While this thesis focuses on *sharing value* as a key enabler of collaborative material exchange through digital platforms, it is essential to consider all four value creation logics. A holistic understanding of circular strategies enhances the research's transferability, as digital sharing platforms represent only one possible solution to addressing pre-consumer waste. Exploring alternative approaches provides a broader context for industry-wide adaptation. These strategies complement digital solutions and highlight the diverse opportunities available for tackling textile waste at different levels of the value chain.

These value creation logics highlight specific innovation pathways that transform pre-consumer waste into valuable resources, challenging conventional production practices. The following section examines each of these value creation logics, emphasizing the sharing value logic as a key enabler of collaborative material exchange, especially in B2B contexts.

Resurrecting value – Closing resource loops

Resurrecting value focuses on reclaiming resources that would otherwise be discarded, thereby closing resource loops (Bocken et al. 2016, 309; Ranta et al. 2020, 295). In garment production, this often involves recycling fabric offcuts, which are typically difficult to upcycle due to their small size and irregular shapes.

An example of this approach is Pure Waste Textiles, a Finnish company that sources pre-consumer textile waste—such as cutting scraps and roll ends—and transforms these

materials into new yarns and fabrics. By utilising 100% recycled materials, Pure Waste eliminates the need for virgin cotton, significantly reducing water consumption and CO_2 emissions. (Purewaste.com/Production.) This model illustrates how recycling textile waste can simultaneously reduce environmental impact and generate economic value, aligning with CE principles.

Optimizing value – Narrowing resource loops

Optimizing value -logic focuses on minimizing waste through efficient resource use. Strategies such as zero-waste design and optimized pattern-cutting techniques reduce fabric loss at the production stage. These approaches can be seen as narrowing the resource loop, meaning less material is wasted and fewer resources are introduced into the system, thereby reducing the overall environmental burden. (Bocken et al. 2016, 310; Ranta et al. 2020, 298.)

One notable approach is offered by Queen of Raw, an American company that manages the data behind surplus materials. By leveraging tools such as blockchain technology and machine learning, and through partnerships with influential organizations like Launch.org (including NASA, Nike, Ikea, and Dell), Queen of Raw has developed an excess inventory management software called Materia MX. The software has gained considerable traction, with even the ultra-fast fashion company SHEIN partnering with Queen of Raw to source deadstock fabrics. (Queenofraw.com; WWD 12.11.2019.)

In essence, this company is addressing the root problem of pre-consumer textile waste by providing advanced digital tools to optimize inventory management. It encourages businesses to move beyond outdated methods, which often lead to costly inefficiencies and waste. By offering a more precise and transparent system for managing excess inventory, Queen of Raw enables brands to both minimize their environmental footprint and unlock financial value from materials that might otherwise go unused.

Replacing value – Slowing resource loops

The replace value logic involves substituting existing materials with more sustainable and durable alternatives. Unlike resurrecting value, which extends the life of materials through refurbishment, replace value focuses on entirely replacing current materials or products with innovative alternatives. These substitutes enhance durability and usability,

reducing resource consumption and reliance on virgin resources by extending material lifecycles. (Bocken et al. 2016, 309; Ranta et al. 2020, 298.)

For instance, Spinnova has developed a sustainable alternative to cotton for use in textiles. By reducing water and energy consumption compared to traditional cotton production, this innovation helps to slow the resource loop and minimise environmental impact. (Spinnova.com.)

Sharing value – Narrowing resource loops

Sharing value focuses on making underutilized resources accessible to multiple actors, thereby narrowing resource loops and meeting market demand with fewer resources. This approach allows companies to maximize the use of surplus materials by sharing them with other manufacturers or partnering across industries for resource exchange, creating mutual economic and environmental benefits. (Bocken et al. 2016, 310; Ranta et al. 2020, 296.)

In garment production, large production leftovers, such as longer roll ends and full fabric rolls, are among the most common forms of textile waste. Due to their size and quality, these materials are particularly well-suited for producing large quantities of upcycled garments (Aus et al. 2021, 13). Consequently, specialized marketplaces have emerged to facilitate the repurposing of such production leftovers, often referred to as deadstock fabrics.

Platforms like Wasted Fabrics, EVA re-source, and Deadstock Depot by Material Exchange connect manufacturers' surplus materials with new users, including designers, crafters, and businesses. However, each of these deadstock marketplaces operate on minimal functionalities, lacking basic functionalities for buyers and sellers, such as option to list materials on platform, viewing and searching for materials, accessing material information, ordering samples and making purchases. (Wastedfabrics.com; Evaresource.com; Material-exchange.com.)

Positively, incorporating deadstock materials into garments has been trending in the fashion industry. Fashion brands such as Reformation (US) and Christopher Raeburn (UK) exemplify this approach by repurposing deadstock fabrics from previous production cycles, transforming surplus textiles into valuable, high-quality products. This shift aligns

with a broader movement toward conscious material sourcing, as noted by Cecilie Thorsmark, CEO of Copenhagen Fashion Week:

> *More and more brands are becoming increasingly conscious of their material and design choices. As a result, we see a growing number of collections made from existing materials—whether through deadstock fabrics, reuse, or recycling.* (Forbes 13.8.2023)

This rising awareness reflects a broader industry shift toward circular practices, where the use of pre-existing materials not only reduces dependency on virgin resources but also contributes to the creation of distinctive, sustainable products. While the existing deadstock marketplaces highlight the potential of leftover material circulation in the textile and clothing industry, they face several limitations that hinder their potential. These barriers will be explored further in the next chapter.

3 Digital platforms as enablers for B2B material exchange

3.1 Digital platforms facilitating circularity

Digital platforms have emerged as key enablers of circular value creation by facilitating the efficient exchange of products and materials among both consumers and business actors (Berg & Wilts 2019, 2; Wirtz et al. 2019, 454; Lacy et al. 2020, 19; Blackburn et al. 2023, 255). Blackburn et al. (2023, 256) describe digital platforms as *meta-organizations*—networks of individual and organizational actors coordinated by a central orchestrator or hub actor (Figure 3).

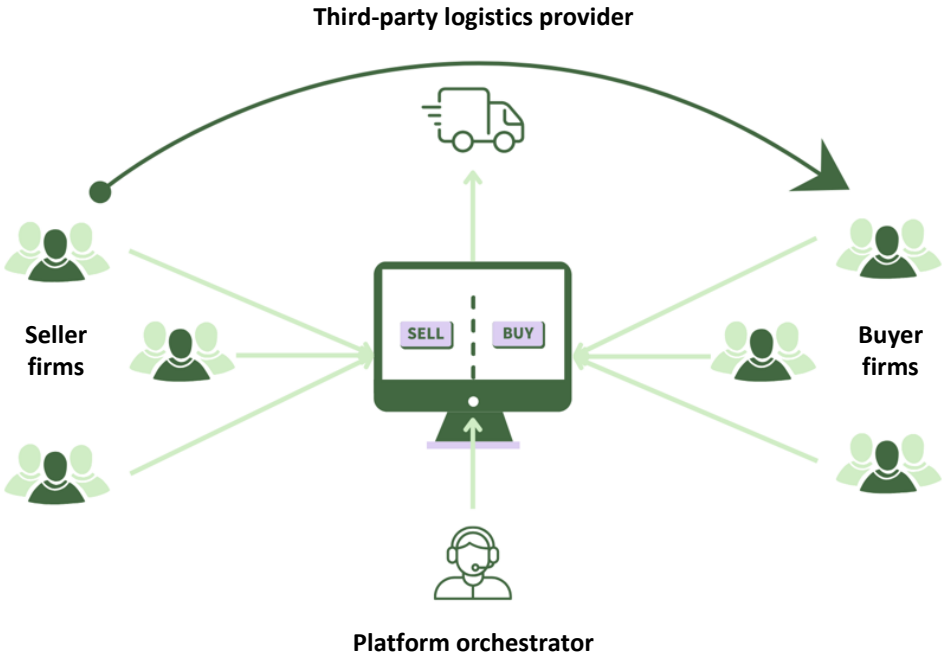


Figure 3 Digital platform model for B2B material exchange

A typical digital platform for material exchange connects sellers and buyers through an intuitive platform interface. The orchestrator, in other words the service provider, ensures smooth interactions and transactions, providing customer service and resolving potential issues. While the platform facilitates the transaction, the physical transfer of products is often handled by third-party logistics providers. Depending on the need for quality inspection or authentication, products may be shipped directly from the seller to the buyer or routed through the orchestrator for additional verification. (Wirtz et al. 2019, 457.)

In consumer markets, numerous digital platforms promoting circularity have achieved significant global success. Examples include international second-hand marketplaces such as *eBay* and *Vestiaire Collective*, as well as locally operating platforms like

Facebook Marketplace and Finland's *Tori.fi*, which facilitate the reuse and resale of clothing and other products. Businesses have also begun leveraging platforms for shared resources, such as phone systems, office spaces, and software-as-a-service (SaaS) solutions, improving efficiency and reducing costs (*Business.com* 1.11.2023). However, while consumer-oriented platforms have excelled in facilitating product exchanges, and their success is anticipated to extend to business markets (Lacy et al. 2020, 24), material sharing between businesses has yet to achieve the same scale or impact (Berg & Wilts, 2019, 3).

3.2 Challenges and opportunities for engagement

The adoption of circular economy (CE) practices through digital platforms in the textile and clothing (T&C) industry is shaped by a complex interplay of drivers and barriers. These factors influence how businesses engage with circular initiatives, particularly in the context of B2B material exchange.

Organisational motivations, behaviours, and culture are critical *internal* factors, while policy frameworks and evolving consumer expectations act as *external* forces shaping decision-making (Sohal & De Vass 2022, 601–603). Understanding these interconnected factors is essential for developing effective circular platforms that support the transition from linear to circular practices. Therefore, this section examines the key drivers and barriers influencing firm participation in circular activities, offering insights into how businesses engage with digital platforms to facilitate surplus material exchange.

3.2.1 Internal barriers: Operational and organizational challenges

Outdated inventory systems remain a significant operational barrier for businesses attempting to identify, track, and redistribute surplus materials (Berg & Wilts 2019, 3–4). Many firms rely on manual tools, such as spreadsheets, which are prone to errors and inefficiencies. This challenge is highlighted by Queen of Raw, a company that has developed a software solution for managing excess inventory (see Chapter 2.3). Stephanie Benedetto, CEO of Queen of Raw, explains:

> "I'm always surprised when we go to our customers — which are some of the biggest brands and retailers in the world — to see a lot of times they're managing their inventory, whether it's pre-raw materials or finished goods, with Excel spreadsheets and departments that have hand-written notes and inevitably there are going to be errors in that. Now there are better ways and tools to deliver real returns that can help save them money and make them

> money. There's no reason to have to still use those Excel spreadsheets." (WWD 12.11.2019)

This highlights how outdated and error-prone systems complicate the tracking of side streams and hinder the effective redistribution of surplus materials. Without modern and user-friendly tools, identifying and selling excess materials remains an inefficient process, limiting the potential for businesses to engage in circular practices.

Compounding this issue is the *lack of standardized data* on material quality, usability, and origin, which creates trust issues between buyers and sellers (Berg & Wilts 2019, 3–4). Uncertainty about material specifications can lead to hesitation among buyers, while sellers often lack the necessary tools to provide sufficient information. These gaps in information flow reduce confidence and, in turn, participation in circular marketplaces.

As for organizational challenges, the novelty of circular solutions means many firms are still unfamiliar with their ecological and economic value. *Misconceptions* about the quality and risks associated with surplus materials further deter engagement (Lozano 2013, 278; Berg & Wilts 2019, 3–4). Buyers may perceive secondary materials as inferior, while sellers may struggle to recognize the potential of their deadstock. This highlights the need for platforms to effectively communicate the value of circular practices and address common concerns.

Another significant barrier is *organizational resistance*. Many companies, particularly large ones, hesitate to deviate from established linear processes unless there is clear evidence of profitability or external pressure. Linear thinking, fear of disruption, and a lack of awareness can all slow the adoption of circular solutions (Lozano 2013, 228, 278; Narayanan & Adams 2017, 361–363). In contrast, SMEs—due to their agility and capacity for innovation—are often better positioned to lead the transition toward circular economy practices (Garcés-Ayerbe et al. 2019, 12).

3.2.2 External barriers: Platform constraints and global uncertainties

Platform constraints

A significant barrier to engagement with circular digital platforms lies in their current limitations. Many deadstock marketplaces lack *dynamic functionalities*, such as real-time listings, which hampers their effectiveness, as discussed earlier (see Chapter 2.3). These static exchanges fail to meet the evolving needs of businesses and limit the platforms'

ability to facilitate surplus material circulation effectively. The fragmented nature of deadstock markets further complicates this issue, making it resource-intensive for firms to locate suitable materials or buyers.

Beyond functionality gaps, businesses also face challenges in *price negotiations* and *finding compatible partners*. These inefficiencies contribute to what Berg and Wilts (2019, 3–4) describe as "market failure". Sellers, in particular, may face challenges in listing or offering surplus materials, especially when platforms do not provide tailored features to support their needs. For circular platforms to become viable solutions, they must evolve beyond these limitations and provide functionalities that streamline interactions and foster dynamic collaboration between users (Wirtz et al. 2019, 466).

Effective collaboration between businesses of all sizes is crucial for advancing circularity in the T&C industry (Berg & Wilts 2019, 7). SMEs, with their agility and innovation capacity, are often well-positioned to adopt CE practices (Garcés-Ayerbe et al. 2019, 12), yet they frequently struggle with financial constraints and limited resources (Rizos et al. 2016, 14). Larger firms, on the other hand, possess the financial capacity and digital readiness to invest in circular solutions. Circular digital platforms rely on this *interdependence*—larger firms generate pre-consumer waste, while smaller businesses repurpose these materials into new products. However, existing platforms have yet to successfully facilitate this collaboration, creating a barrier for firms that could otherwise benefit from engaging in circular practices.

Global uncertainty

The broader global context further exacerbates the barriers to adopting circular practices. The 2020s have been marked by events such as the COVID-19 pandemic, Russia's invasion of Ukraine, the war in Gaza and Israel, and worsening climate change impacts. These crises have disrupted economic stability and hindered sustainable development efforts (Hartley et al. 2024). Halkos et al. (2023) describe this convergence as a "multi-crisis," where rising energy prices, declining economic growth, and geopolitical instability threaten macroeconomic stability and, in some cases, provoke civil unrest.

The COVID-19 pandemic offers a good example: many Finnish small businesses either shut down or struggled to remain operational under economic pressure (*Iltalehti* 6.5.2023). Yet, some companies with domestic production capabilities demonstrated

resilience by maintaining flexibility and developing sustainable, transparent supply chains closer to retail markets (Haukkala et al. 2023, 8–9). This has sparked interest in localized production strategies as a means to build resilience and simultaneously advance circularity goals. However, implementing such strategies remains a challenge in the face of ongoing global uncertainty.

Market dynamics, such as the *rise of ultra-fast fashion*, further challenge the adoption of circular practices. This phenomenon has accelerated overproduction and disposable consumption, undermining circular economy objectives (Dzhengiz et al. 2023, 13–14). Ultra-fast fashion caters to consumer desires for low-cost, trendy clothing, reinforcing traditional linear business models and making it harder for sustainable alternatives to compete. These dynamics also raise critical questions about consumer behavior. Are consumers willing to prioritize sustainable products, or are economic uncertainties driving them toward cheaper, less sustainable options? The interplay between rising consumer interest in sustainability and the financial pressures many face creates a complex landscape for circular initiatives.

Regulatory uncertainty further complicates the transition to circular practices. Many key EU policies aimed at fostering circularity remain pending implementation, creating a lack of immediate clarity for businesses (Garcés-Ayerbe et al. 2019, 13). This uncertainty diminishes companies' willingness to proactively adopt circular measures, as they hesitate to invest in practices that may not align with future regulations.

3.2.3 Internal drivers: Economic and environmental incentives

Businesses of all sizes are increasingly recognizing the *economic benefits* of adopting circular practices. These measures can lead to significant cost savings through resource efficiency, waste reduction, and improved operational processes. Circular initiatives also create opportunities for new revenue streams, such as monetizing surplus materials or developing innovative, sustainable products. By redesigning products and processes, firms can not only reduce costs but also position themselves as industry leaders in sustainability, enhancing their market competitiveness through differentiation and brand reputation. (Sehnem et al. 2019, 791–792, 794.)

For seller firms, circular digital platforms provide a structured way to track and manage pre-consumer waste materials that might otherwise go unused. These platforms enable

sellers to list, manage, and redistribute surplus inventory, turning operational inefficiencies into economic opportunities. Similarly, buyer firms benefit by gaining access to affordable, high-quality surplus materials, which can be used to create new products or replace virgin materials. This mutually beneficial exchange fosters a win-win dynamic for both parties, driving engagement on circular platforms.

Beyond financial incentives, organizations are increasingly driven by a deeper *commitment to sustainability*. Reducing greenhouse gas emissions, minimizing waste, and conserving natural resources are not just environmental imperatives—they are also central to corporate social responsibility strategies. Companies with strong ecological values are motivated to integrate circularity into their operations, ensuring alignment with their brand identity and meeting stakeholder expectations. (Boons & Lüdeke-Freund 2013, 13.)

From a platform perspective, engaging with circular solutions allows firms to signal their commitment to sustainability to both customers and investors. Buyer firms, for instance, can position themselves as environmentally responsible by sourcing materials through circular platforms, while seller firms enhance their brand image by demonstrating resource efficiency and transparency.

3.2.4 External drivers: Market and policy influences

Consumer demand is a significant driver encouraging businesses to adopt circular practices. Sustainability has become a key purchasing criterion for many consumers, who increasingly expect transparency across supply chains. Comprehensive information on material sourcing, production processes, and ethical standards now heavily influences purchasing decisions and fosters brand loyalty (Diabat et al. 2014, 401; Mostaghel & Chirumalla 2021, 43).

Interestingly, D'Adamo and Lupi (2021, 4) identify the emergence of a "circular premium," where consumers are willing to pay higher prices for products made through circular processes, especially those incorporating recycled materials. This finding aligns with Vehmas et al. (2018, 296), who underscore the importance of marketing circular products as luxury or special edition items, to catch the consumer's interest.

However, while the growing consumer interest in sustainability creates opportunities differentiate products through circular initiatives (Diabat et al. 2014, 401; Vehmas et al.

2018, 296), there are also negative trends influencing consumer demand that must be addressed (see Chapter 3.2.2.2).

While pending sustainability regulations were mentioned as a potential barrier to circular initiatives, the European Union (EU) has been instrumental in driving businesses toward circular practices through *regulatory frameworks and incentives*. The Strategy for Sustainable and Circular Textiles, introduced in 2022, integrates CE principles across industries. Measures such as eco-modulation reward companies offering sustainable products with reduced fees, while those continuing unsustainable practices face increased costs. Furthermore, the EU aims to support sustainable businesses with subsidies, tax breaks, and funding opportunities for research, innovation, and investments in circular fashion, including loans and grants. These policies not only establish standards but also create financial incentives that encourage companies to adopt CE practices and invest in innovation. (European Commission 2022.)

Overall, businesses face significant *pressure to transition to circular models* due to heightened scrutiny from consumers, policymakers, and market competitors. Failure to demonstrate tangible progress toward CE goals risks eroding consumer trust and losing market share (Mostaghel & Chirumalla 2021, 43). This accountability acts as both a driver and a challenge, forcing businesses to adopt sustainable practices to remain competitive.

As public awareness of CE solutions grows, so too does the demand for actionable and transparent commitments. Whether it is offering rental services, utilizing surplus textiles, or implementing closed-loop systems, businesses are increasingly expected to take definitive steps toward sustainability (Diabat et al. 2014, 401; Vehmas et al. 2018, 296). This intersection of external pressures underscores the critical role of drivers in accelerating the adoption of circular practices.

This chapter has highlighted how the successful adoption of circular practices and digital platforms in the T&C industry requires addressing key barriers while leveraging critical drivers. Table 2 below summarises factors influencing businesses' participation on circular digital platforms. Internal barriers, such as outdated inventory systems, information gaps, and resistance to change, highlight the need for businesses to invest in technological innovation and foster a culture of adaptability. External challenges, including underdeveloped platform functionalities, difficult partner matching and price negotiations, interdependence between large and smaller firms, as well as global

uncertainties including the rise of unsustainable ultra-fast fashion, underscore the broader systemic issues that must be addressed to enable circular transitions.

Table 2 Barriers and drivers for circular digital platform engagement

Category	*Barriers*	*Drivers*
Internal	Outdated inventory systems	Economic benefits
	Lack of standardized surplus data	Environmental benefits
	Organizational resistance	
External	Underdeveloped platform functionalities	Consumer demand
	Complex partner and price matching	Regulatory incentives
	Interdependence between large enterprises and SMEs	Market pressure
	Global uncertainty and unsustainable trends	

On the other hand, drivers such as cost-saving opportunities, environmental benefits, growing consumer demand, supporting regulations and market pressure, provide a strong foundation for circular platform engagement. By addressing these barriers and harnessing drivers, businesses can not only enhance their operational and financial performance but also contribute to the development of a resilient and sustainable circular economy. Collaboration among businesses of all sizes will also be critical to realizing the full potential of circular practices in the T&C industry.

3.3 Key factors for a successful circular digital platform

Overcoming previously discussed challenges is essential for enabling the adoption and success of circular digital platforms. To address these challenges and unlock the full potential of digital platforms, specific operational, technical, and user-focused requirements must be met. Guided by Berg and Wilts (2019), this section delves into these requirements, offering a roadmap for building effective and scalable circular B2B platforms.

A strong operational and technical foundation is essential for digital B2B platforms to thrive. Achieving a sufficiently large user base is important for generating value, as participants will only join the platform if the benefits outweigh the costs (Johnson 2013,

348; Arica & Oliveira 2019, 708; Berg & Wilts 2019, 5–7.) This phenomenon is also known as *network effects* or *network externalities*, which refers to how the value of a service or platform increases as more users join (Wirtz et al. 2019, 457; Cen & Li 2020, 327).

Providing *high-quality, reliable information* is another cornerstone of effective platforms. Accurate data about material quality, availability, and origin, combined with clear product pictures, reduces information asymmetry, fostering trust and service efficiency. (Johnson 2013, 351–352; Arica & Oliveira 2019, 708.) In the textile and clothing (T&C) industry, automating manual inventory processes is particularly important to streamline operations and ensure consistent information flow.

In addition to standardized information, circular platforms should *offer intuitive, user-friendly interfaces* that accommodate participants needs and expectations (Arica & Oliveira 2019, 706). Functionalities such as real-time listings and dynamic interaction tools, which are still largely absent from existing deadstock marketplaces, can significantly enhance both accessibility and usability. Furthermore, Berg and Wilts (2019, 7) emphasize that platforms must be accessible to "all relevant actors", ensuring a broad adoption. This includes both large firms and SMEs, whose interdependence underpins the success of surplus exchange in the textile industry.

Building trust is fundamental to the success of any digital platform. Strong data protection measures, including encryption and compliance with privacy regulations, are critical to ensuring the security of sensitive information. Intellectual property protection is equally important, encouraging businesses to share material and process data without fear of misuse. (Berg & Wilts 2019, 5–7; Behera & Bala 2023, 26.) Moreover, platforms should ensure *compliance with legal and environmental standards*, aligning their operations with circular economy objectives. Regulatory adherence not only establishes credibility but also helps avoid market distortions that could undermine the platform's purpose (Berg & Wilts, 2019, 7). For instance, a deadstock marketplace should avoid inadvertently encouraging textile companies to over-produce surplus, as this would conflict with the broader goal of sustainability.

To conclude this chapter, digital platforms are essential for enabling circular practices, yet their effectiveness in B2B contexts, especially in the T&C industry, remains limited. Existing deadstock marketplaces face barriers such as high transaction costs, information

gaps, and limited platform functionalities, which hinder their scalability and adoption. To succeed, these platforms must address key requirements, including technical robustness, user-friendly design, and trust-building measures. By meeting these requirements, digital platforms can play a transformative role in facilitating surplus material exchange, enhancing resource efficiency, and fostering new material flows that contribute to the circular economy on both local and global scales.

4 Understanding B2B customer experience on circular platforms

Building on the discussion of barriers, drivers, and requirements for circular digital platforms, this chapter shifts focus to how businesses engage with and experience these platforms. Gaining insight into these experiences is essential for designing services that effectively meet customers' distinct needs and expectations.

Despite increasing interest in circular economy (CE) solutions, a significant knowledge gap remains in understanding how different actors perceive and interact with these platforms (Schulz et al. 2019, 6–7). While digital platforms play a key role in facilitating circular practices, research on user experiences within these ecosystems is still limited (Wirtz et al. 2019; Berg & Wilts 2019). Understanding the customer perspective is particularly important, as service design alone does not determine value—rather, value is co-created through customer interaction and engagement (Becker & Jaakkola 2020; Grönroos 2008; Vargo & Lusch 2004).

4.1 Mapping the B2B customer journey

Customer journeys in B2B contexts are inherently *dynamic* and *non-linear*. Unlike fixed or predictable paths, these journeys evolve based on the customer's ongoing interactions, previous experiences, and external influences. (Purmonen et al. 2023, 79.) Traditionally, customer journeys have been conceptualized as consisting of three primary stages—prepurchase, purchase, and postpurchase—each shaped by direct touchpoints, which are controlled by the service provider, and indirect touchpoints, which fall outside their influence (Lemon & Verhoef 2016, 75–76; Becker & Jaakkola 2020, 639; De Keyser et al. 2020, 444). However, this framework is often associated with consumer contexts.

In B2B contexts, Purmonen et al. (2023, 79) advocate for a simplified two-stage model, distinguishing between *purchase* and *usage stages*. This distinction reflects the *iterative* and *relational* nature of B2B interactions, where the usage stage often reveals unmet needs or opportunities, triggering new journeys (Lemon & Verhoef 2016, 76). This research adopts the two-stage framework to align with the features of B2B customer experiences in circular digital platforms.

In the context of circular B2B digital platforms, customer journeys take place within a distinct ecosystem driven by collaborative value creation, digital interfaces, and sustainability goals. The stages unfold as follows:

Purchase Stage: The journey begins when a firm identifies a need—such as sourcing surplus materials or offloading production leftovers. For buyers, this might involve researching options for acquiring high-quality, cost-effective deadstock fabrics to meet specific production requirements. For sellers, the process may involve assessing how to maximize the value of surplus materials by listing them on a circular platform. This stage includes exploring and comparing potential solutions, evaluating platform capabilities, and making the decision to onboard (Purmonen et al. 2023,79).

Usage stage: Once a firm selects and engages with a circular platform, the usage stage begins. This process encompasses activities that occur after the transaction or contract, including the deployment, usage, maintenance, and reassessment of the materials or services procured (Purmonen et al. 2023, 79). For sellers, this stage may focus on navigating platform functionalities to list surplus materials, ensuring accurate descriptions. This is followed by post-sale evaluation, that considers the time and effort spent on the service versus the received compensation. Buyers, in turn, integrate purchased surplus materials into their production processes while evaluating their quality and fit to their end-product. Both parties may reassess the platform's overall value and decide whether to continue or deepen their engagement.

In this dynamic process, each touchpoint—whether it is searching for materials, negotiating terms, or receiving support—cumulatively shapes the overall customer experience. As firms increasingly adopt circular practices, understanding these journey stages is critical for designing platforms that foster trust, efficiency, and collaborative value creation.

4.1.1 Core characteristics of the B2B customer journey

According to Purmonen et al. (2023, 79), customer experience in B2B contexts often involves *multiple individual paths* taken by both buyer and user members within the customer firm. These paths are influenced by a combination of shared organizational objectives and individual goals. However, in the context of circular digital platforms, the service remains a niche, often utilized by some large companies, but mainly by small to

medium-sized enterprises (SMEs). In this case, the distinction between buyer and user members becomes less relevant, as these roles are frequently combined within a single individual or a small team. Consequently, instead of focusing on multiple individual paths during the customer journeys, this research focuses on the following characteristics of customer journeys on circular platforms.

Distinct buyer and seller goals

An important consideration, which is not directly addressed in existing literature, is the need to recognize the *dual nature of platform users*: buyers and sellers. These groups have differing needs, expectations, and challenges. For instance, buyers might look for affordable prices, specific material types, and information transparency, while sellers may be driven by ease of use, long-term inventory solution, and fair compensation for participation. Addressing these *distinct customer goals* while facilitating the service for both large and smaller firms is critical for creating a balanced and efficient marketplace that drives the circular economy forward.

Three interactional layers

The customer experience on circular platforms unfolds across three distinct layers of interaction. Unlike consumer-focused circular digital marketplaces, where functionalities are highly developed and minimize the need for interaction with the platform orchestrator, B2B platforms remain in a less mature stage of development. The first layer involves the *digital interface*, which is essential for operational efficiency, enabling tasks such as listing materials, searching for surplus inventory, and managing transactions (Berg & Wilts 2019; Wirtz et al. 2019). The second layer is characterized by *interaction with the platform orchestrator*, where personalized support, trust-building, and guidance—key factors in organizational buying situations (Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79)—play a pivotal role in addressing the complexities of organizational buying and supplying processes.

A unique third layer on circular platforms is the *interaction with the circulated material itself*. For buyer firms, this may include testing material samples, receiving shipments, and incorporating the materials into their production processes. For seller firms this includes experiences with managing their surplus materials and preparing them for the selling process. This tangible engagement with the material directly influences

perceptions of quality, usability, and value, making it a critical touchpoint in shaping the overall customer experience (Ta et al. 2022, 8). Together, these three layers highlight the importance of balancing technological functionality, relational interaction, and material quality to meet the nuanced needs of business customers.

Relational context

Lastly, a core characteristic of B2B journeys is their *relational context*. Unlike one-off transactions in consumer markets, B2B customer journeys often occur within long-term relationships between a limited number of suppliers and customers. These relationships are shaped by cumulative history, trust, and shared routines, which influence both the course and nature of interactions (Panina 2022, 43; Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79). Trust plays a pivotal role in this context. It fosters a stable relational atmosphere, reducing cognitive effort for customers and facilitating smoother interactions (Lemon & Verhoef 2016, 74; Purmonen et al. 2023, 79–80).

Interestingly, the interplay between the relational nature of B2B relationships and the circular digital platform context remains underexplored. Drawing on existing research on relational dynamics, it is plausible that customer firms may prefer interacting with the platform orchestrator over the interface, perceiving human interaction as more trustworthy and reliable. Furthermore, the nature of relationships on circular platforms may differ for sellers and buyers. For instance, a seller firm could establish a long-term relationship with the platform by consistently supplying surplus materials, whereas a buyer firm may not experience the same continuity due to the inconsistent availability of desired materials.

Lundin and Kindström (2023, 8) shed light on this issue by suggesting that the digitalization of customer journeys is a positive development, offering benefits such as streamlined processes, greater control over touchpoints, and more integrated experiences within customer firms, where individual members share access to digital interfaces. However, rather than digitalization entirely replacing human interactions, the researchers argue that *combining digital and human touchpoints can enhance customer journeys* by balancing efficiency with relational depth.

4.1.2 Defining B2B customer journeys on circular digital platforms

Based on this research, B2B customer journeys on circular digital platforms can be defined as dynamic, iterative, multi-layered, and relational processes through which firms engage with circular services to meet their sourcing or surplus management needs. These journeys unfold across two distinct stages—purchase and usage—and involve a combination of digital, human, and material touchpoints, as shown in figure 4.

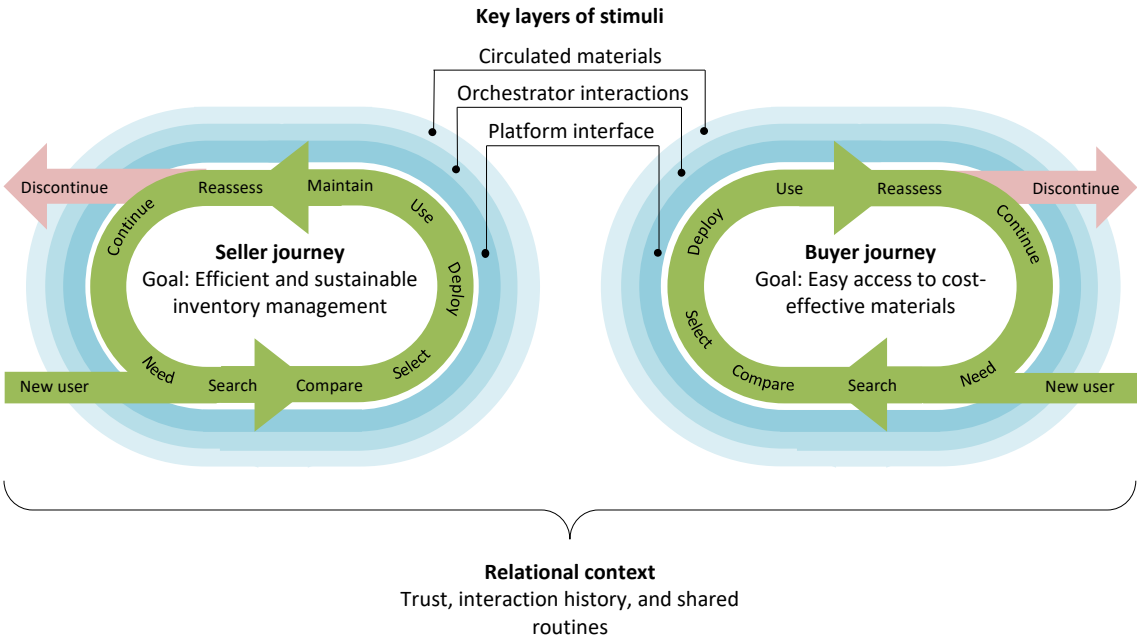


Figure 4 Conceptual framework for B2B customer journey on circular digital platforms

The iterative nature of these journeys ensures that the usage stage often uncovers new needs or opportunities, creating continuous cycles of engagement. The relational context of these journeys further adds complexity, shaped by long-term interactions, trust-building, and the alignment of organizational goals with individual motivations. Additionally, the differing priorities of buyer and seller firms—buyers prioritizing easy access and transparent information, and sellers seeking efficient and long-term solutions—highlight the necessity for platforms to balance operational efficiency with relational depth.

By integrating digital advancements with human interaction and emphasizing the material dimension, circular B2B platforms can foster collaborative value creation. This integrated approach addresses the unique challenges of sustainability-driven markets while promoting trust, transparency, and efficiency in the circular economy.

4.2 Experiencing circular digital platforms

With the structure and dynamics of B2B customer journeys on circular digital platforms established, the focus now shifts to the formation of customer experience. This includes understanding the key responses that constitute customer experience and the factors that influence them. Despite the growing interest in customer experience, research from a B2B perspective remains limited (e.g., McLean 2017; Gounaris and Almoraish 2024). Moreover, existing definitions of B2B customer experience remain narrow, often focusing primarily on functional or transactional aspects. To address this gap, insights from consumer-focused customer experience literature will also be considered.

In addition to the limited focus on B2B contexts, there is another critical research gap in the context of the CE and environmental sustainability. According to Ta et al. (2022, 2), studies on CE and circular products have largely overlooked the customer's perspective, particularly how customers perceive and experience *circularity*. Conversely, existing customer experience research has traditionally focused on linear products and services, with little emphasis on circular offerings. This leaves a significant gap in understanding how customer experiences are formed and expressed in relation to circular products and services.

4.2.1 Dimensionality of B2B customer experience

While the customer journey outlines the stages and touchpoints through which customers engage with the service, the experience occurring during these interactions is triggered by various *stimuli* related to the offering. These stimuli could include the digital interface of a platform, interactions with the orchestrator, the quality of the materials offered or other touchpoints and cues. Customer experience consists of *immediate and spontaneous responses* to these stimuli, which reflect how customers perceive and process their interactions in real-time. (Becker & Jaakkola 2020, 639.)

These responses are shaped by *multiple dimensions*, including *cognitive*, *emotional*, *behavioural*, *sensory*, and *social* aspects (Lemon & Verhoef 2016, 71; Becker & Jaakkola 2020, 638; De Keyser et al. 2020, 443; Ta et al. 2022, 8–11). Depending on the service, these dimensions can play a stronger or weaker role in shaping the overall experience (De Keyser et al. 2020, 443). In the following section, each dimension is explored in detail, along with its implications for the success of circular digital platforms.

Cognitive Dimension

The cognitive dimension captures the logical and rational aspects of how customers process and evaluate their experiences. In a B2B context, this involves how organisations perceive and assess a supplier's offerings and performance. For instance, customers may

- *Assess* the platform's ability to meet their organisational goals, such as successfully buying or selling surplus materials at the agreed price and quality (factual evaluations).
- *Form perceptions* about the platform's usability, responsiveness, or the orchestrator's expertise in managing surplus materials, especially in areas where they lack direct experience or evidence (interpretive or sagacious evaluations). (Pecorari & Lima 2021, 9; Gounaris & Almoraish 2024, 3–4.)

On digital platforms, functional features of the interface play a key role in shaping these cognitive experiences. According to Nielsen (1992, 19–22), website interfaces should provide a user-centred design, that reduces cognitive load by making navigation straightforward and intuitive. Elements such as seamless navigation, effective interaction tools, and accurate material information directly influence how users perceive the service (McLean 2017, 665; Wirtz et al. 2019, 466). Additionally, aesthetic features, including inspiring visuals, enhance both cognitive and emotional experiences for users (Van Nguyen et al. 2022, 10). Together, these elements determine the quality of the digital interface, which significantly impacts the platform's perceived credibility and trustworthiness (McLean 2017, 665).

Circularity introduces additional cognitive complexity. Customers are prompted to rethink their choices, comparing the use of virgin versus circulated materials and reflecting on the environmental impact of their decisions (Ta et al. 2022, 10). For buyers, limited availability of specific materials, colours, or sizes can introduce cognitive friction if expectations are misaligned with platform offerings.

As discussed in Chapter 3.2, barriers and drivers play a significant role in shaping customer experiences within circular digital platforms. Barriers, such as information gaps and outdated systems, can hinder positive cognitive experiences by leaving users uncertain about material quality, platform reliability, or the ability to achieve their goals efficiently. Conversely, drivers such as high-quality information, accurate material

listings, and intuitive platform interfaces, could significantly enhance cognitive experiences. These features foster trust and confidence, enabling customers to navigate the platform more efficiently and achieve their objectives, whether it's sourcing sustainable materials or selling surplus inventory.

Affective dimension

Positive and negative emotions have a direct impact on customers through service processes, motivation and behaviours, even in organizational buying context (Kemp et al. 2018, 25). Consequently, emotions play a vital role in shaping B2B customer experiences. Positive affective experiences include:

- *Pleasure* and *enthusiasm* from participating in ecological practices and contributing to sustainability goals (Ta et al. 2022, 9).
- *Relief* and *contentment* when the platform delivers as promised, offering transparency and reliability in interactions (Gounaris & Almoraish 2024, 10).

Negative emotions, such as frustration from unmet expectations or fear of judgment for not adopting sustainable practices, can detract from the overall experience Kemp et al. 2018, 25). However, in circular services, the emotional satisfaction derived from knowing that no additional resources were consumed (e.g., using deadstock fabrics) often outweighs minor inconveniences (Guyader et al. 2022, 8).

Social dimension

The social dimension emerges from interactions and relationships formed through platform use. In B2B settings, these experiences often include:

- Building *rapport* with the orchestrator or other users (Wirtz et al. 2019, 466; Gounaris & Almoraish 2024, 5–6).
- Strengthening company *reputation* by aligning actions with sustainable values (Sehnem et al. 2019, 791–792, 794).

As highlighted in the customer journey chapter, relational dynamics are integral to B2B interactions. In circular digital platform contexts, this relational aspect is nuanced by the interplay between digital and human touchpoints. Lundin and Kindström (2023, 8) note that while digitalization offers streamlined processes and integrated access within

customer firms, human interactions remain essential for fostering trust and relational depth. This balance may be particularly significant for sellers who engage with platforms over time, forming consistent relationships by regularly supplying surplus materials, while buyers might face more brief interactions due to variable material availability.

Engaging with circular platforms also provides businesses an opportunity to project their sustainability values, enhancing their reputation among stakeholders. For instance, suppliers using deadstock fabrics can communicate their commitment to sustainability, reinforcing their social standing. Additionally, research on circular practices has shown that platforms can foster a sense of community among participants who share ecological values, creating networks that emphasize collaboration and shared responsibility (Pera & Ferrulli 2024, 2939).

Sensory dimension

The sensory dimension pertains to the tactile and visual elements of circular materials (Ta et al. 2022, 8). In the T&C industry, this includes:

- The *feel* of deadstock fabrics, which may vary in texture or quality compared to virgin materials.
- Potential *odours* from long storage or residual chemicals, which can negatively impact perception.

Purchasing materials online can be challenging for buyer firms, as sensory experiences—such as feeling and touching materials—are often crucial before making purchasing decisions. Without this tactile engagement, buyers may face uncertainty about the quality, texture, or appearance of materials. To address this barrier, it is essential that samples are easily accessible and free of defects or unpleasant odours. Providing reliable and high-quality samples can significantly enhance buyer confidence and trust, improving their overall experience with circular digital platforms.

Behavioural dimension

Behavioural experiences involve the actions customers take to adapt their practices to align with the service requirements or with circular principles (Ta et al. 2022, 10–11). For example:

- Buyers *learning* to design products from leftover materials and limited deadstock availability.
- Sellers *adjusting* their processes to list and manage inventory on digital platforms.

For companies deeply rooted in linear business models, such behavioural adaptations can pose significant challenges. These often require not only technical adjustments but also cultural shifts and process redesigns, which may lead to resistance or inertia within organisations (Laughlin 1991, 228).

4.2.2 Contextual factors shaping customer experience

The previously mentioned challenges highlight how customer behaviour and the effort required to engage with circular digital platforms are shaped by broader contextual factors. These contextual factors, or key contingencies, influence how customers perceive and respond to stimuli during their journey. This section delves into these contingencies, categorised into *customer, situational, sociocultural* (Becker & Jaakkola 2020, 640), and *relational contingencies*, which provide a deeper understanding of the variability in customer experiences.

Customer contingencies refer to the characteristics and resources of the customer firm (Becker & Jaakkola 2020, 640). Factors such as organizational goals, past experiences with similar services, expectations for the platform's performance, and the firm's level of expertise in circular economy practices can significantly shape how the customer perceives the service. Additionally, the roles and activities of individual members within the buying or usage centres—such as their motivations, knowledge, and prior engagement with digital platforms—also influence the experience.

Situational contingencies involve the immediate context of the interaction (Becker & Jaakkola 2020, 640). For B2B circular platforms, situational factors could include the nature of the materials being sourced or sold, the urgency of fulfilling organizational needs, and the involvement of other stakeholders, such as third-party logistics providers or platform orchestrators. The complexity of organizational buying and supplying processes further emphasizes the situational variability in B2B customer experiences.

Sociocultural contingencies reflect the broader system in which the customer firm operates, including industry norms, regulatory frameworks, and cultural attitudes toward sustainability (Becker & Jaakkola 2020, 640). For example, societal pressure to adopt

circular economy practices or differing levels of market maturity in implementing circular solutions can affect how firms evaluate and engage with the platform.

Relational contingencies capture the influence of trust, shared routines, and the cumulative history between firms, which are critical in B2B contexts (Purmonen et al. 2023, 79; Gounaris & Almoraish 2024, 14). These relational dynamics mediate interactions, shaping how buyer and seller firms perceive the service's reliability and long-term value. In the context of circular platforms, the trust and relationship with the platform orchestrator, as well as between buyers and sellers, plays a pivotal role in fostering collaborative value creation.

This research introduces relational contingencies as a key category, evolving from the concept of relational context discussed earlier. Unlike other contingencies, relational contingencies focus on the interplay of trust and collaboration, acknowledging the inherently social and long-term nature of B2B interactions. Including relational contingencies ensures a comprehensive understanding of how relationships influence not only customer experiences but also evaluative outcomes.

While contingencies make customer experiences highly context-specific, they are not independent of the broader landscape of drivers and barriers discussed earlier (See Chapter 3.2). Drivers like consumer demand or regulatory incentives create favourable conditions for adopting circular platforms, while barriers such as technological constraints or financial challenges add complexity to the customer experience. These forces indirectly shape contingencies, impacting how stimuli are recognised and how evaluative outcomes are formed (Becker & Jaakkola 2020, 638; Gounaris and Almoraish 2024, 4). By expanding the framework to include relational contingencies, this research offers a more nuanced lens through which to examine customer journeys on circular digital platforms.

4.2.3 Evaluating customer experiences

Ultimately, it is the evaluation process that defines the overall customer experience (Becker & Jaakkola 2020, 640; Gounaris & Almoraish 2024, 4). Through this process, customers assess their interactions across three main levels: the platform's digital interface, orchestrator interactions, and circulated materials. These touchpoints collectively shape how the service is perceived and evaluated.

The evaluation process is influenced by various *drivers* and *barriers*, as well as *situational contingencies* such as the urgency of the need, material availability, and the customer's familiarity with circular practices. Additionally, the platform's *operational and technical foundations*—such as its functionality, accessibility, and ease of use—play a pivotal role in shaping user perceptions. A platform that offers seamless navigation, real-time features, and reliable information not only enhances the overall experience but also reduces the cognitive and operational effort required from its users. These elements significantly contribute to how customers derive perceived value, satisfaction, and trust from their interactions (McLean 2017, 665; Wirtz et al. 2019, 466; Cen & Li 2020, 327; Gounaris & Almoraish 2024, 4).

- *Perceived value* reflects the economic, environmental, or social benefits derived from platform use.
- *Satisfaction* arises when the platform's performance aligns with user expectations.
- *Trust* develops through consistent and reliable service delivery.

Trust is often a critical precursor to active engagement in online marketplaces (Moriuchi & Takahashi 2022, 86). Both sellers and buyers face elevated risks in surplus markets, highlighting the need to address trust barriers to foster positive interactions. Overcoming these barriers is particularly important in creating a reliable and sustainable marketplace environment.

In the context of circular services, ecological contributions provide an additional layer to perceived value and satisfaction. Research shows that the positive impact of participating in sustainable practices can outweigh minor inconveniences, fostering customer loyalty and strengthening long-term engagement (Guyader et al. 2022, 8). For instance, buyers and sellers may value the environmental benefits of using a deadstock marketplace, even if the process requires extra effort or adaptation.

Importantly, the customer experience extends beyond individual responses to include interactional value, which arises from collaborative exchanges between buyers, sellers, and orchestrators (Ramaswamy & Ozcan 2018, 29). Circular platforms facilitate these interactions by creating *shared value spaces* where participants collectively contribute to and benefit from sustainable practices (Ranta et al. 2020, 296). This collaborative dynamic not only enhances individual customer experiences but also fosters a sense of community and mutual benefit, strengthening the overall ecosystem of circularity.

4.3 Theoretical framework: Connecting circular economy, digital platforms and B2B customer experience

The theoretical framework of this research combines insights from the preceding chapters to provide a holistic understanding of customer journeys and experiences on circular B2B digital platforms. This framework highlights the interplay between the contextual dynamics that influence firms' engagement with circular platforms. Figure 5 visualizes the model, encapsulating key elements such as customer journeys, touchpoints, experiences, and outcomes.

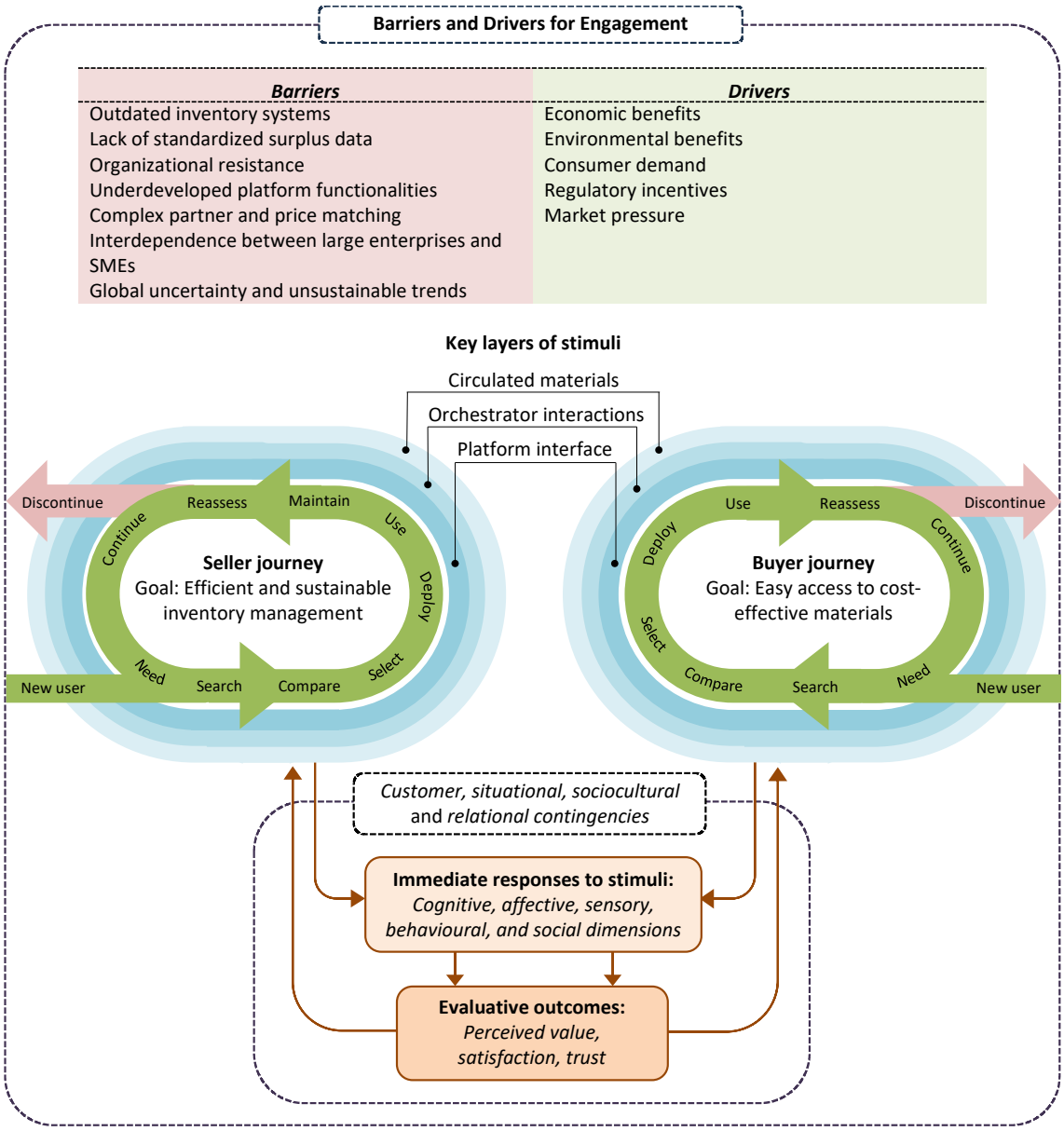


Figure 5 Conceptual framework for B2B customer experience on circular digital platforms

Circular B2B platforms serve as intermediaries connecting buyer and seller firms, enabling the exchange of surplus materials to promote circular economy (CE) practices. The framework recognizes that these customer journeys unfold across *two iterative stages—purchase and usage*—reflecting the distinct needs and interactions of B2B participants. While the purchase stage encompasses need identification, search, and material selection, the usage stage focuses on integrating the acquired materials or services into operations, maintaining relationships, and reassessing the platform's value. (Purmonen et al. 2023,79.)

Critical touchpoints shape the customer experience at every stage. These touchpoints are categorized into three layers: *platform interfaces* that enable operational efficiency (Berg & Wilts 2019; Wirtz et al. 2019), *orchestrator interactions* that build trust and offer personalized support (Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79), and *circulated materials* (Ta et al. 2022, 8), where tangible engagement influences perceptions of quality and value. Together, these layers highlight the importance of balancing technological functionality with relational depth.

The framework further emphasizes the role of *key contingencies*—factors that shape how customers perceive and respond to stimuli during their journey (Becker & Jaakkola 2020, 640). These contingencies are categorized into *customer* (e.g., organizational goals, knowledge), *situational* (e.g., urgency, complexity), *sociocultural* (e.g., industry norms, sustainability attitudes), and *relational* (e.g., trust, history of interactions) dimensions. Introducing relational contingencies acknowledges the long-term, trust-based nature of B2B relationships (Panina 2022, 43; Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79), which are particularly significant in circular platform contexts where collaboration, and support are pivotal.

The iterative process of engaging with circular platforms results in *immediate responses to stimuli*, encompassing *cognitive*, *emotional*, *behavioural*, *sensory*, and *social dimensions* (Lemon & Verhoef 2016, 71; Becker & Jaakkola 2020, 638; De Keyser et al. 2020, 443; Ta et al. 2022, 8–11). These responses are further evaluated as *perceived value, satisfaction, and trust*, which collectively determine the firm's likelihood of continued engagement (McLean 2017, 665; Wirtz et al. 2019, 466; Cen & Li 2020, 327; Gounaris & Almoraish 2024, 4). The inclusion of *drivers and barriers*—both internal (e.g., technological barriers, economic drivers) and external (e.g., platform functionality

barriers, consumer demand drivers)—provides a nuanced understanding of the factors that enable or hinder participation.

This theoretical framework integrates the dynamic, multi-layered, and relational nature of B2B customer experience, offering a foundation for understanding how circular digital platforms can foster sustainable business practices while addressing the unique challenges of the textile and clothing industry. By mapping out these interactions, the framework provides a roadmap for designing platforms that cater to the diverse needs of SMEs and large firms alike, promoting collaborative value creation in the circular economy.

5 Methodology

5.1 Qualitative case study approach

This study explores how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the textile and clothing (T&C) industry. In order to tackle the subjective and multidimensional nature of customer experiences within circular digital platforms, this thesis adopted the established *qualitative research method*. Qualitative research is a method of inquiry that seeks to understand social phenomena within their natural setting. It emphasizes the meanings, experiences, and views of participants, providing rich and detailed insights that are often not accessible through quantitative methods (Gioia et al. 2012, 19–22).

This approach is particularly suitable for this research as it allows for an in-depth exploration of an area that is complex and nuanced. Another reason why this method is appropriate for this study is because it enables the exploration of motivations, hindrances, and service experiences in a way that quantitative methods cannot. The flexible and open-ended nature of qualitative research allows for the discovery of insights that are grounded in the participants' perspectives (Gioia et al. 2012, 19–22), aligning well with the exploratory nature of the research questions in this thesis.

A *case study approach* is particularly advantageous for this research as it allows for the exploration of phenomena within their real-life context, providing a holistic understanding. Dubois and Gadde (2002, 554) highlight that case studies are instrumental in theory development due to their ability to delve deeply into specific contexts and reveal intricate details about the phenomena under study. Halinen and Törnroos (2005, 1287) emphasize that case studies are effective in capturing the dynamics and complexities of business networks specifically.

The primary data collection method for this study is *semi-structured interviews*, which are a common data collection method in qualitative research. This method is chosen because it allows for flexibility in exploring the participants' experiences while ensuring that the research questions are addressed. Semi-structured interviews facilitate a deep understanding of the participants' perspectives, providing the opportunity to probe for more detailed responses and explore new areas of interest that may emerge during the interviews. (Gioia et al. 2012, 19–22.) Given that experiences within circular digital platforms remain an underexplored area, this data collection method allows for

adaptability, enabling the refinement of questions during interviews to ensure valuable insights.

The methodological approach of this study is informed by the concept of *systematic combining*, which is grounded in an abductive logic. Systematic combining involves a continuous interplay between empirical observations and theoretical frameworks, allowing for the simultaneous development of both theory and empirical data. This approach is particularly suitable for case study research aiming at theory development, as it facilitates the matching of theory with reality and the direction and redirection of the study as new insights emerge. (Dubois & Gadde 2002, 554–556.) This research seeks to fill the gap in the literature concerning customer experiences on circular digital platforms. While circular digital platforms have gained popularity, particularly in the consumer sector, there are no existing frameworks addressing experience formation in this context. To address this issue, this thesis aims to develop an understanding and provide tools for circular platform designers.

To ensure rigor in this qualitative study, this thesis will employ the *systematic approach* outlined by Gioia et al. (2012, 19–22). This includes initial coding that utilizes informant-centric terms to capture participants' views (first-order analysis) and a subsequent analysis that distils the initial coding into researcher-centric themes and dimensions (second-order analysis). This process will be supported by a data structure that visually represents the progression from raw data to emerging concepts, ensuring transparency in the data analysis process. Finally, the theory and empirical data results will be combined into a framework that captures the dynamic relationships among the identified concepts and themes, ensuring that the findings are both grounded in the data and theoretically robust.

5.2 Research implementation

5.2.1 Case company selection and overview

The case company selected for this study is Nextex Oy, a Finnish marketplace and consultation service specializing in surplus materials within the T&C industry. Due to the company’s sensitive market position, its name has been anonymized for this study. The selection of Nextex as the single case for this study was guided by the principles of theoretical sampling, rather than aiming for representativeness of a broader population. The purpose of this research is to understand experiences in a service environment, that is novel for both researchers and business actors. Theoretical sampling involves selecting

cases that are especially appropriate for illuminating and extending relationships and logic among constructs (Eisenhardt & Graebner 2007, 27).

Nextex served as the initial inspiration for this study, as it represents an unusually revelatory case within the context of circular digital platforms in the textile industry. This selection enables an in-depth exploration of the dynamics of B2B customer experiences in a circular economy setting, offering insights that are critical for theory development and circular service design. As Yin (1994[1], acc. to Eisenhardt & Graebner 2007, 27) notes, single cases are often selected for their potential to reveal unique phenomena, provide access to rare research opportunities, or serve as extreme exemplars. The case company meets these criteria by providing a rich context through which the intricacies of digital platform utilization in the circular economy can be examined, thereby contributing to the broader understanding and development of theoretical frameworks in this field.

Alongside Nextex's digital marketplace, which enables businesses to list and procure surplus textiles, the company provides consultancy services to textile product manufacturers, offering guidance on production planning and product design with a strong emphasis on sustainability and waste minimization. While the marketplace presents a scalable service model, the consultancy service is knowledge-intensive, relying heavily on specialized expertise in textile production and waste reduction. Given its greater potential for development and growth, this study focuses on the marketplace.

Nextex's business model represents a small yet significant innovation that supports the transition to the CE, challenging businesses in the textile and clothing T&C industry to rethink their approach to material usage and management. Similarly to the digital platform model presented earlier (Figure 3, see Chapter 3.1), Nextex's platform functions as a facilitator for surplus material transactions, while the physical transfer of products is managed by third-party logistics providers. This approach enables Nextex to minimize unnecessary logistics, enhance flow efficiency, and reduce its own risk by avoiding the purchase and storage of materials.

For surplus material producers, Nextex offers a sustainable alternative to traditional waste management, where valuable materials are often discarded at a cost or left unused in storage. Instead, businesses can sell these surplus materials through Nextex, receiving

[1] Yin, R. K. 1994. *Case study research: Design and methods (2nd ed.).* Newbury Park, CA: Sage.

compensation while ensuring that the materials are repurposed rather than wasted. For buyers, Nextex promotes the surplus marketplace as the primary source for sustainable materials, advocating for the use of existing resources before resorting to new production. This approach not only supports more sustainable resource consumption but also provides a cost advantage, as surplus materials are typically priced lower than newly produced ones.

5.2.2 Interview process and data collection

To comprehensively understand service user perspectives on Nextex's circular digital platform, this study originally planned to conduct interviews with 10 business customers of the case company. This number can be seen as sufficient enough to achieve *data saturation*, ensuring that no significant new themes or insights are likely to emerge from additional interviews (Hennink & Kaiser 2022, 9). In fact, data saturation was already noticeable after the first half of the interviews. However, due to high interest in participation, the sample size was extended to 12, evenly divided between the supplier and buyer sides.

To ensure that participants' memories were still fresh, they were required to be current customers or former customers who had concluded the services no more than two years prior to the interview. By including six suppliers and six buyers, the study aimed to gather empirical data that captured the distinct roles and interactions within the platform, providing a holistic view of the customer experience. This approach not only strengthened the robustness of the data but also ensured that the findings were comprehensive and theoretically significant.

Participants were first invited to the interview through Nextex's newsletter, where they could sign up via Google Forms. While a few participants used the form, others were contacted directly via email based on Nextex's engagement data, which identified recipients who had opened the newsletter. This approach helped ensure that only interested or curious customer firms were selected for participation.

The interviews were conducted remotely via Google Meet during July and August 2024. Conducting the interviews online provided an efficient and accessible way for both the participants and the interviewer to engage in the discussion. The remote format did not affect the quality or depth of the interviews. The planned interview duration was 50

minutes, but depending on how smoothly the discussions flowed and how much participants had to share, the actual length varied between 37 and 59 minutes. This time range proved sufficient for gathering valuable insights while allowing flexibility for each participant's level of engagement.

The interview process for this study was designed using a *reflective and iterative approach*, drawing on the principles outlined by Agee (2009, 433) in her discussion on developing qualitative research questions. Agee emphasizes the importance of beginning with broad, provisional questions that evolve throughout the research process, allowing for new insights and directions to emerge. This principle guided the development of interview questions, ensuring they remained flexible and adaptable as the study progressed.

Moreover, Agee (2009, 437) highlights the *value of participant involvement* in refining research questions, particularly in qualitative studies focused on understanding lived experiences. To ensure relevance and resonance with participants, preliminary discussions were held with a Nextex representative and its customer before finalizing the interview structure. These discussions helped tailor the questions to reflect the key motivations, barriers, and experiences of businesses engaging with Nextex's circular digital platform.

The study employed semi-structured interviews to capture the diverse perspectives of 12 Nextex customers. As shown in the operationalization table below (Table 3), each interview followed a structured yet flexible sequence, beginning with an introduction, during which the interviewer explained the purpose of the study and introduced key concepts such as the circular economy. This was followed by background questions, where participants described their role in their firm, their experience with Nextex, and the duration of their company's engagement with the platform.

The discussion then moved to the core themes of the study. First, participants reflected on the role of circular economy principles in their business operations and whether they had implemented any circular models. The conversation then explored the drivers and barriers to engaging with a circular digital platform, delving into motivations such as sustainability values, regulatory incentives, or customer demand, as well as challenges like operational adjustments and economic uncertainty. Finally, participants shared their experiences using Nextex's services, discussing both positive and negative interactions.

They were encouraged to recall their most recent experience and describe factors that contributed to a particularly good or poor outcome. The interviews concluded with a broader reflection on what an ideal surplus textile marketplace would look like.

Table 3 Operationalization of research questions

The purpose of this research is to explore how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the T&C industry.		
Research question	**Themes from the literature**	**Interview questions**
	Background	*What is your current title?* *How long have you been working with organization X?* *When and how long have you been a customer of Nextex?*
How can circular digital platforms facilitate the reuse of production waste in the T&C industry?	Textile & clothing industry Pre-consumer textile waste Circular economy	*What is the role of CE in your firm? Why?* *Have you implemented any circular practices in your processes? What kind?* *Do you have experiences with other circular platforms?*
What kind of drivers and barriers do businesses face when engaging with circular digital platforms?	Circular economy Digital platforms Drivers and barriers for circular transition	*What made you engage with Nextex's service?* *Were there some obstacles? What kind?*
Which experiences in B2B customer journeys support engagement with circular digital platforms?	B2B customer journeys B2B customer experience Digital platform experiences CE experiences	*Could you share more about your experiences with Nextex?* *What made the experience good/ bad? Why?* *Describe what would an ideal deadstock marketplace look like for you?*

While the interview structure was pre-designed, the semi-structured approach allowed for deeper exploration of themes that emerged naturally during the conversations. Depending on the participants' experiences, discussions focused on specific areas outlined in Appendix 1, ensuring that the data collected was both contextually relevant and rich in insight. To facilitate an interactive discussion and allow for adaptation of questions based on participant responses, all interviews were recorded. This not only enabled the interviewer to remain fully engaged in the conversation but also allowed for a more

thorough post-interview analysis, uncovering insights that might have gone unnoticed in real-time.

While a few participants initially showed some nervousness, they quickly became comfortable in the friendly and positive atmosphere established during the conversation. As the data collection progressed, the interviewer also found that fostering open discussions around key themes, rather than rigidly following a question-based format, led to richer insights and more in-depth participant reflections.

The interviewees represent a diverse group of buyers and sellers engaged with Nextex's platform (Table 4). To maintain participant anonymity and ensure honest responses, all company names have been changed. This safeguards the privacy of the firms involved and enhances the reliability of the data collected.

Table 4 Summary of interviewees

Role	***Company name***	***Company size****	***Main product category***	***Market focus***	***Interview length (min.)***	***Interview date***
Buyer	*Feel Well*	Micro	Sports & Wellness	B2B & B2C local	45	25.07.2024
	Power Fitness	Small	Sports & Wellness	B2C local	50	26.07.2024
	Unique Textiles	Micro	Textiles/ Fabric retail	B2C local	43	1.8.2024
	Eco Style	Small	Clothing & Accessories	B2B & B2C local	59	9.8.2024
	Pretty Things	Small	Accessories	B2B & B2C local	37	26.8.2024
	Happy Pets	Micro	Pet accessories	B2C local	58	28.8.2024
Seller	*Furnis*	Large	Furniture	B2B global	56	1.8.2024
	Tech Gear	Medium	Clothing & Accessories	B2B & B2C global	51	15.8.2024
	Elements	Small	Accessories	B2B & B2C local	54	26.8.2024
	Active Wear	Medium	Clothing	B2B local	39	26.8.2024
	Pure Living	Micro	Interior	B2C local	26	29.8.2024
	Urban Citizen	Small	Clothing	B2C local	41	30.8.2024

*Micro enterprise with fewer than 10 employees, small enterprise with 10 to 49 employees, and medium-sized enterprise with 50 to 249 employees.

Among the buyers, companies are primarily micro and small enterprises operating in local B2B and B2C markets. Their main product categories range from sports and wellness products, textiles, and accessories to clothing and pet accessories. These firms typically use Nextex to source surplus materials that align with their sustainability goals while maintaining cost efficiency.

The sellers, in contrast, display a broader range of company sizes, from micro to large businesses, and a wider market reach. While some operate in local B2C markets, others serve global B2B clients. Their product categories include interior products, clothing, and accessories, reflecting the diverse types of surplus materials available on Nextex's platform. Larger sellers, such as those in furniture and apparel industries, often have significant surplus stocks, making them key suppliers within the marketplace.

5.3 Ethical considerations

Ensuring ethical rigor in qualitative research is fundamental to the integrity of the research process and the protection of participants. This study adheres to key ethical principles, including informed consent, confidentiality, the prevention of harm, and professional integrity, as outlined by Eriksson and Kovalainen (2011).

Informed consent is a cornerstone of ethical research. It ensures that participants are fully aware of the research's purpose, procedures, and potential risks before agreeing to take part. This process involves providing comprehensive information to participants, allowing them to make an informed decision about their involvement. (Eriksson & Kovalainen 2011, 12; Orb et al. 2001, 95.) In this study, participants received detailed information about the research objectives, their role in the study, and how their data would be used. The information and consent form can be found in Appendix 2. All participants provided written consent via email. To uphold their right to renegotiate consent, participants were given the option to withdraw at any time before or during the interview.

Maintaining the *confidentiality* and *anonymity* of participants at their request is essential to protect their privacy and ensure the integrity of the research data. This study implemented measures to safeguard personal information by anonymizing data, securely storing all records, and discarding them six months after the completion of the interviews. Eriksson and Kovalainen (2011, 15) highlight the importance of these practices in building trust between researchers and participants, which is crucial for obtaining honest

and reliable data. Participants were assured that their identities will not be disclosed and that their responses will be used solely for the purposes of this research.

Harm prevention is another cornerstone of ethical research. Researchers must take all possible steps to minimize any potential harm to participants (Orb et al. 2001, 95). Eriksson and Kovalainen (2011, 13) stress the importance of anticipating and mitigating any negative consequences that might arise during the research process. Should any participant feel uncomfortable at any point, they will have the right to withdraw from the study without any repercussions. Moreover, Agee (2009, 441) suggests that the researcher goes through a reflective process, ensuring that the interview questions are respectful and sensitive to the participants' contexts and perspectives.

This study took careful measures to ensure that the interview questions were designed to be non-intrusive and that participants felt comfortable and willing to share their experiences. Given that sustainability can be a sensitive topic, particularly depending on a firm's business practices, the interviewer was mindful to create a *non-judgmental atmosphere*. Efforts were made to ensure that participants did not feel evaluated or criticized based on the information they shared. This was especially important when some participants expressed feelings of guilt or discomfort about incinerating surplus materials. Instead of focusing on shortcomings, the interviewer emphasized positive reinforcement, acknowledging participants' transparency and praising their circular efforts, fostering a constructive and open dialogue.

Lastly, *professional integrity* involves conducting research in an honest and transparent manner, respecting the contributions of other researchers, and ensuring the accuracy of reported findings (Eriksson & Kovalainen 2011, 13, 16–17). This study will follow the ethical guidelines for proper citation and acknowledgment of sources, avoiding any form of plagiarism. This practice not only upholds the credibility of the research but also fosters a respectful and ethical research environment.

5.4 Data analysis

This study follows the *systematic data analysis approach* outlined by Gioia et al. (2012, 19–22) to ensure rigor and transparency in qualitative research. The analysis began with a first-order coding process, where interviews were transcribed, and key findings were extracted using informant-centric terms. This was followed by a second-order analysis,

in which individual responses were grouped into researcher-defined themes based on experiential dimensions and key layers of stimuli, such as digital interface interactions, orchestrator-facilitated processes, and the handling of circulated materials.

To further strengthen the analytical foundation, this study also integrates established *case study methodologies*. As Ajanovic and Çizel (2021, 201) highlight, analytical strategies such as pattern matching, categorical aggregation, and case descriptions play a crucial role in systematically analysing qualitative data. These techniques were incorporated by mapping individual customer journeys, categorizing experiences, and identifying recurring themes across participants. An Excel-based data structure was created to visually represent customer journeys, and a joint table was compiled to highlight common experiences and recurring patterns.

Given that this study explores an under-researched area, no direct theoretical framework exists for comparison. To address this, this study integrated B2B customer experience, circular economy, and platform literature to analyse engagement with Nextex's platform. This approach ensures a multi-faceted interpretation of the data, validating insights across distinct but interrelated research domains. By examining customer experiences through the lenses of service interactions, sustainability-driven decision-making, and digital platform dynamics, the study enhances the depth and applicability of its findings. Additionally, the study analysed experiences from both buyers and sellers, allowing for a comparative perspective on how different user groups engaged with the platform. Separate tables for buyers and sellers helped identify unique challenges and motivations, ensuring a nuanced interpretation of engagement patterns.

Beyond this structured analytical approach, the study also embraced *direction and redirection* in its research framework. As Dubois and Gadde (2002, 556) emphasize, qualitative research benefits from an evolving research process, where empirical findings continuously shape and refine theoretical foundations. Throughout this study, both the research framework and research questions evolved significantly as new insights emerged from the data. For instance, contextual contingencies affecting customer experience and evaluations became a critical factor that was not initially anticipated. Before data collection, it was assumed that barriers and drivers alone would sufficiently explain engagement patterns. However, the findings revealed that market positioning, strategic

goals, and prior knowledge strongly influenced how businesses experienced the service, necessitating a deeper integration of contingency factors into the analytical framework.

Finally, to ensure *transparency* in reporting, the structured data categorization follows the principles of analytical generalization (Ajanovic & Çizel 2021, 207). By structuring customer journeys, categorizing key experiences, and visually mapping findings, this study contributes to a deeper theoretical understanding of B2B customer experiences within circular digital platforms, despite the exploratory nature of the research.

5.5 Assessing research quality

Ensuring research quality is a critical aspect of qualitative studies, where findings must be assessed for their trustworthiness, applicability, and methodological rigor (Lincoln & Guba 1985; Dubois and Gadde 2002; Zeithaml et al. 2020). This study follows the evaluation criteria outlined by Lincoln and Guba (1985) and Zeithaml et al. (2020), which include *credibility*, *transferability*, *dependability*, and *confirmability* (Figure 6). By applying these criteria, this chapter evaluates the robustness of the research process and findings.

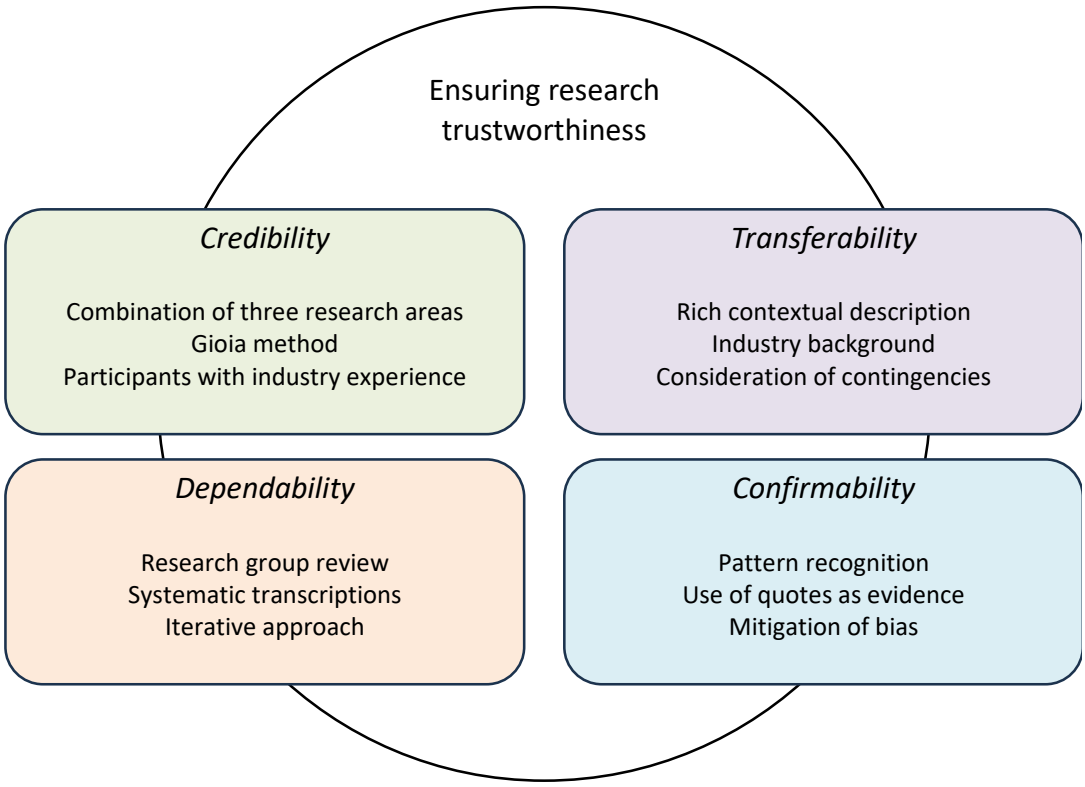


Figure 6 Ensuring research trustworthiness based on Lincoln and Guba (1985) and Zeithaml et al. (2020)

By implementing these strategies, this study ensures that the research process is methodologically sound, and its findings are reliable and applicable. These trustworthiness criteria play a vital role in qualitative research, allowing the study to provide meaningful insights into B2B engagement with circular digital platforms while maintaining research integrity.

Credibility is a key criterion of trustworthiness in research, ensuring that findings accurately represent the experiences of the participants (Lincoln & Guba 1985, 328–329). To enhance credibility, this study applied three research areas, incorporating perspectives from both buyers and sellers to validate findings across multiple informants. Additionally, the Gioia et al. (2012, 19–22) methodology was used to *systematically structure the data*, ensuring a logical interpretation of findings.

The research also ensured *depth and relevance* by selecting participants that had direct experience in using Nextex's platform and interest joining the study. The study also reached data saturation with 12 interviews. Given their industry expertise, participants were able to provide valuable insights into the B2B customer journey. Furthermore, to maintain *interpretative rigor*, links between the findings and relevant literature were established, ensuring that conclusions were theoretically grounded.

Transferability refers to the extent to which the findings can be applied to other contexts beyond this specific study (Lincoln & Guba 1985, 316; Zeithaml et al. 2020, 44). Unlike quantitative research, where generalizability is measured statistically, qualitative research emphasizes rich contextual descriptions that allow readers to assess the relevance of findings in different settings.

In this study, a *detailed research context* was provided to enhance transferability. This includes an exploration of the global pre-consumer waste problem in the textile and clothing industry, potential strategies for addressing this challenge (with digital sharing platforms being just one possible solution), a deep examination of drivers and barriers for circular platform engagement, an analysis of the nature of circular digital platforms, and participant profiles.

While the findings are specific to a circular digital platform in the textile and clothing industry, they may also be relevant to other B2B digital marketplaces that facilitate material exchange and sustainability practices. Additionally, the study highlights

contextual contingencies—such as market positioning, strategic goals, and industry knowledge—which influence customer experiences and evaluations. These factors could similarly shape engagement dynamics in different industries or geographic markets, allowing for broader applicability of the study's insights.

Dependability relates to the consistency and transparency of the research process, ensuring that the study is well-documented and traceable (Lincoln & Guba 1985, 318–316; Zeithaml et al. 2020, 44). A *clear and structured research design* was followed, with detailed documentation of data collection and analysis to allow for replication or evaluation by other researchers.

This empirical data was collected for a research group at Turku School of Economics, requiring precise transcription and systematic data extraction into Excel sheets that were also reviewed by other researchers. This ensured accuracy and reinforced the reliability of key findings.

To further enhance process transparency, the study followed an *iterative research approach* (Dubois & Gadde 2002, 556), allowing the framework to evolve based on empirical findings. This was particularly relevant in identifying the role of contextual contingencies, which were initially underestimated but later emerged as key factors shaping customer experiences. By openly documenting these adjustments, the study acknowledges the fluid nature of qualitative research while ensuring its conclusions are logically grounded in the data.

Confirmability assesses whether the study's findings are rooted in the data rather than the researcher's biases (Lincoln & Guba 1985, 323; Zeithaml et al. 2020, 44). To establish confirmability, this study maintains a *clear chain of evidence* by linking interpretations to raw data, interview transcripts, and theoretical foundations. The inclusion of direct participant quotes supports transparency, allowing readers to assess how interpretations were formed. Additionally, the findings were not based on isolated observations but rather emerged through *pattern recognition* across twelve interviews. Using the Gioia et al. (2012, 19–22) method, data was systematically categorized into *first-order concepts*, *second-order themes*, and *aggregate dimensions*, ensuring that insights were grounded in empirical evidence.

It is important to acknowledge that the researcher was familiar with the case company and its owner prior to the study. While this provided deeper contextual understanding, it also required careful attention to objectivity in data analysis. To mitigate potential bias, the incorporated insights from customer experience, circular economy, and platform literature. This approach ensured that findings were interpreted through multiple theoretical lenses, strengthening their validity beyond a single case.

Moreover, the decision to focus on strategic recommendations rather than highlighting limitations is influenced by the nature of the business model itself. As a new and developing circular platform, Nextex is still refining its functionalities, making it unreasonable to expect a fully optimized service model at this stage. The study acknowledges that early-stage platforms inherently face operational challenges and limitations, which would be evaluated differently in a larger, more established company. Instead of centring the discussion on shortcomings, this research aims to provide constructive insights for platform developers, service designers, and entrepreneurs to help advance circular business models.

By framing the conclusions as forward-looking and solution-oriented, the study ensures that its findings contribute not only to academic discussions but also to practical improvements on circular digital platforms.

6 Findings

6.1 Drivers and barriers for platform engagement

The adoption of circular digital platforms is influenced by a dynamic interplay of drivers and barriers. To explore this issue, the theoretical framework of this thesis examined these factors both internally—focusing on organisational practices and values—and externally, encompassing influences such as policies and consumer behaviour. Together, these elements shape how businesses engage with and perceive circular initiatives. The qualitative interview research uncovered several internal and external drivers and barriers that organisations encounter when utilising circular digital platforms.

6.1.1 Internal and external drivers

Internal drivers

Ecological values: Ecological values were a primary driver for firms, reflecting a deep commitment to environmental responsibility. Consistent with the theoretical framework, which highlights ecological values as drivers for sustainability-oriented innovations (Boons & Lüdeke-Freund 2013, 13), all participating firms cited ecological values as a key motivation for using Nextex's service.

> *We strive in every possible way to take (the circular economy) into account. It feels really good if we can make use of surplus materials, giving them the opportunity to find the person who wants them... Because far too many new things are being made in this world.* (Buyer *Unique Textiles*)

> *We didn't want to produce more stuff in the world, as it goes against our values. The foundation was that if we create something new, it must be made from material that already exists, so no new fabric is made for us…* (Buyer *Happy Pets*)

> *We are extremely green, but we are modest because we are Finnish, so we don't shout about it much. Our cornerstone of being green is based on two things: first, our products truly last. We are absolutely not about fast fashion or junk, but we want our products to last from one generation to the next… The second cornerstone is that we use materials as efficiently as possible, aiming to produce as little waste as we can. We make smart design, and in production we use methods that minimize waste from the outset. But of course, some waste is inevitable.* (Seller *Tech Gear*)

All sellers expressed a strong motivation to prevent their surplus materials from going to waste, which was a key reason they chose to use the service. Similarly, nearly all buyers mentioned that avoiding the creation of new materials was a major factor in their decision

to procure surplus materials for their products. This ecological commitment aligns with findings by Garcés-Ayerbe et al. (2019, 12) and Sohal and De Vass (2022, 601–603), who observed that SMEs, in particular, often embed sustainable values at the core of their operations. As the literature suggests, the passion for sustainability drives CE efforts in SMEs, fostering a culture of innovation and problem-solving. This study further confirms that sustainability efforts are thus not just compliance-driven but can also be an expression of a company's core values, as discussed by Boons and Lüdeke-Freund (2013, 13).

Another notable aspect from the interviews was the enthusiasm many participants showed when discussing this topic. Rather than being sceptical of the questions or hesitant to share details about their processes, most interviewees spoke with pleasure and passion. It was evident that they cared deeply about minimizing their environmental impact and were open to exploring new solutions to achieve that goal.

*Proactivity drivers***:** All firms, including large companies and SMEs, demonstrated a proactive stance in their circular efforts. The participants saw Nextex's service as a means to implement CE measures voluntarily rather than in response to external pressures. In fact, half of the firms had already incorporated some circular behaviours before using the service. For example, Seller *Tech Gear* minimized production waste by optimizing cutting patterns, while Seller *Elements* and Buyer *Eco Style* consistently used surplus fabric as their primary product material. Seller *Active Wear* had their own assigned surplus manager.

> *Yes, we've always had someone responsible for our side streams. It doesn't work if it's not on someone's task list because then no one takes care of it. Previously, when the previous person left (the job), no one managed the waste issues for a while, and as a result, the waste accumulated quite a bit.* (Seller *Active Wear*)

This emphasis on assigning responsibility for production waste further shows how environmentally conscious and advanced many Finnish companies are compared to the international textile industry, where the waste problem is still vastly overlooked (Diabat et al. 2014, 391; Dobilaite et al. 2017, 492; McKinsey 2022, 13).

*Economic benefits***:** While ecological values and proactivity were the primary motivators, economic benefits also emerged as significant drivers. This aligns with the theoretical understanding that CE practices can deliver financial advantages through cost reductions and improved resource efficiency (Sehnem et al. 2019, 791–792, 794). The interviews

revealed that buyers often linked cost savings to purchasing surplus materials rather than virgin ones, whereas sellers anticipated financial returns from monetising their leftover materials. For some buyers, the opportunity to lower material costs combined with production consultancy from Nextex opened new possibilities for manufacturing products locally. This, in turn, supported their goals of enhancing supply chain transparency and fostering local production.

> *We wanted to try this approach. And in a way, local production for our products has been challenging in terms of cost. So we thought that if the material itself were surplus, it might not cost as much, offering an economic perspective as well. In that case, we could potentially bring production closer. We wanted to test if this would work.* (Buyer *Pretty Things*)

*Operational drivers***:** Lastly, the sellers had emotional and practical motivations for using the service. Some of them reported that surplus fabrics were regularly incinerated due to a lack of storage capacity for such large quantities. They felt bad for having to throw new materials away.

> *For us, it's definitely a value that the material goes somewhere other than incineration. But it does get incinerated on our end if there's no other channel available at the time. We don't want to burn it—that's the last resort.* (Seller *Tech Gear*)

Others, unwilling to discard their surplus, opted to store the materials. However, limited storage space often led to an accumulation of fabrics, occupying valuable room needed for other storage purposes. This finding highlights the lack of established practises and solutions for pre-consumer waste and shows that even in Finland, a country known for its commitment to circular economy, valuable textiles are incinerated due to lack of viable solutions. Consequently, Nextex offered sellers an appealing solution, enabling firms to free up storage while preserving the value of their materials, thereby further motivating their participation.

External drivers

*Possible customer demand***:** External drivers, such as customer demand, were less prominent compared to internal motivations for engaging with the circular platform. Contrary to the literature (Vehmas et al. 2018, 296; Mostaghel & Chirumalla 2021, 43), customer demand was not identified as a significant driver for most firms. Only a few buyer firms, whose core business relied on products made from recycled materials, reported consumer demand as a motivating factor to use the service. In contrast, buyers

with no prior experience using surplus materials were uncertain about the level of customer demand for circular products before engaging with Nextex's platform. Especially in male-dominated sports and fitness industries, sustainability was not a strong purchasing driver, making some firms hesitant to adopt circular practices.

Platform locality and perceived reliability: Prior research emphasizes that trust is essential for participation on digital platforms, particularly in markets where product quality and authenticity concerns exist (Berg & Wilts 2019, 3–4; Wirtz et al. 2019, 466; Behera & Bala 2023, 26). This study found that businesses preferred Nextex's platform over informal surplus trading methods because it offered structure, reliability, and material quality assurances. Moreover, Finnish businesses favoured a domestic platform due to shared cultural and regulatory expectations, reinforcing credibility.

Regulatory drivers: Regulatory influence appeared minimal in participants' responses, despite EU initiatives like the *Strategy for Sustainable and Circular Textiles* aimed at promoting circular practices (European Commission 2022). However, one participant highlighted the crucial role of government funding, which enabled their efforts to increase circularity in their products. This underscores the importance of financial support from governments in facilitating sustainable initiatives.

6.1.2 Internal and external barriers

Internal barriers

Lack of time and resources: Many participants cited a lack of time and resources as a significant barrier to engage with the platform. Both buyers and sellers expressed that they struggled to allocate sufficient time to incorporate Nextex's services into their workflows. This aligns with literature indicating that financial constraints and limited resources are common barriers to adopting circular measures, especially for SMEs (Rizos et al. 2016, 14). However, the findings also point to the high search costs and effort required to effectively use the platform. This aspect will be further elaborated on in subsequent sections.

Direct buying/selling channels: Some participants reported that buying and selling surplus materials directly, without using a circular platform, was often more financially viable. Some firms had established contacts for trading surplus materials independently, which reduced costs, and made the platform less appealing.

> *Yeah, we buy the surplus directly from the producer. It's been a real lifesaver because we have that direct connection. It's been the best option for us. Having platforms in between naturally raises the prices. On the platform, there are small batches that work well for us too, but mostly for one-off projects.* (Buyer *Eco Style*)

For these businesses, the platform represented an additional transactional cost rather than a value-adding service, unless the platform offered solutions that the direct channels could not.

External barriers

Limited material availability: As for external barriers, the restricted variety of surplus materials on the platform hindered buyer engagement. While buyers often sought materials aligned with current trends, the platform's offerings did not always meet their criteria. As a result, buyer firms frequently relied on virgin materials or recycled textiles (from recycled fibres) that better matched consumer demand and market trends.

Lack of customer interest and awareness: While the study found that customer demand can act as a driver for engaging with Nextex's platform, there were also significant findings suggesting a lack of customer interest. Participants who were uncertain about their customers' receptiveness to their circular efforts raised concerns about the rise of ultra-fast fashion and unsustainable consumer behaviours. They noted that such trends promote a culture of rapid consumption, which detracts from the appeal of circular alternatives. This observation aligns with Dzhengiz et al. (2023, 13–14), who highlight ultra-fast fashion as a significant threat to sustainable development.

One participant, *Eco Style*, shared their experience of transitioning from creating unique products using surplus materials to working with recycled fibres. This shift was driven by the scalability of recycled fibres and their alignment with prevailing fashion trends at the time. This highlights the challenge of slower-growing demand for surplus-based products compared to other sustainable alternatives. It underscores the need for industry leaders and policymakers to play an active role in educating consumers and raising awareness about the benefits of circular practices.

Additionally, some seller firms noted that while customers showed general interest in ecological practices, this interest rarely extended to pre-consumer production waste management. This finding emphasises the limited awareness among consumers about the

wasteful processes that occur during production, highlighting another area where education and advocacy are needed.

Economic uncertainty and policy delays: The external environment presented several barriers to circular platform adoption. While the EU's circular economy initiatives were recognised, their pending implementation created additional uncertainty for firms. Furthermore, participants expressed concerns about the fragile global economic climate, with several firms admitting they were going through "difficult times." In the context of what Halkos et al. (2023) describe as a "multi-crisis" economy, adopting circular practices is often perceived as risky or unattainable for many businesses.

The findings reveal that firms' engagement with Nextex's platform was driven primarily by strong ecological values, proactivity, and practical and economic considerations (Table 5). Many firms were motivated by a deep commitment to sustainability, with several already implementing CE practices prior to using the platform. Additionally, operational constraints, such as limited storage for surplus materials, encouraged sellers to participate. While financial benefits were a secondary driver, some firms recognized cost savings in using surplus materials instead of virgin ones.

Table 5 Drivers and barriers influencing circular digital platform engagement

Category	*Drivers*	*Barriers*
Internal factors	**Ecological values**: Firms were strongly motivated by sustainability and minimizing waste. Buyers wanted to avoid creating new materials, and sellers sought to ensure surplus was used rather than discarded.	**Lack of time and resources**: Firms struggled to allocate time and effort to engage with the platform due to high search costs and integration challenges.
	Proactivity: Many firms had already implemented circular practices and saw Nextex as a way to enhance their sustainability efforts voluntarily.	**Direct buying/selling channels**: Some firms preferred direct surplus transactions, avoiding extra costs associated with platform use.
	Economic benefits: Buyers saw potential cost savings in using surplus materials, and sellers sought financial returns by monetizing surplus.	
	Operational drivers: Sellers lacked storage space, making Nextex an appealing solution for managing surplus efficiently.	
External factors	**Customer demand (for some firms)**: Certain buyers relied on consumer interest in sustainable products, making surplus materials attractive.	**Limited material availability**: The platform's offering often did not align with buyers' needs, pushing them towards virgin materials or recycled textiles.
	Platform locality: Local accountability of domestic platform reinforced trust in the service.	**Lack of customer interest and awareness**: Consumers had limited knowledge of surplus materials and production waste, affecting demand
	Regulatory drivers: Some firms benefited from public financial support for circular initiatives.	**Economic uncertainty and policy delays**: The lack of clarity in circular economy policies and broader economic instability made firms hesitant to commit to new sustainability practices.

Despite these motivating factors, several internal and external barriers hindered wider adoption. Internally, time constraints, resource limitations, and the availability of direct buying and selling channels made platform engagement less attractive for some firms. Externally, the limited availability of suitable surplus materials and uncertainty about customer demand for surplus-based products posed challenges. Furthermore, economic instability and policy delays contributed to firms' hesitancy in committing to CE practices.

6.2 Experiences with buying and selling surplus materials

6.2.1 Overview of buyer and seller experiences

The study revealed that participants experienced distinct buyer and seller journeys with Nextex's services, reflecting the platform's role as an intermediary for circular textile practices. Despite differences in their roles, participants shared a sense of excitement about Nextex's innovative approach to surplus material management. They approached the service with open-mindedness and enthusiasm, even though the unfamiliarity of circular practices posed behavioural and operational challenges.

Participants demonstrated considerable empathy toward Nextex, recognising its start-up status and the complexities of refining its service. This empathy often mitigated the impact of challenges, such as labour-intensive processes or limited immediate benefits. Efficiency emerged as a critical expectation across both journeys, with participants emphasising the need for streamlined workflows, quick transactions, and proactive project management to maintain operational momentum.

A shared community dynamic was evident, as buyers and sellers expressed mutual support for Nextex's mission to advance circularity. This collaborative spirit aligned with theoretical insights on value co-creation and the social dimension of customer experience, which emphasize how circular platforms foster trust, rapport, and shared sustainability goals (Ramaswamy & Ozcan 2018, 29; Pera & Ferrulli 2024, 2939).

Participants also appreciated Nextex's complementary services, such as material consultancy and active sourcing, which addressed gaps in their own capabilities. However, challenges such as insufficient inventory systems, limited buyer demand, and labour-intensive surplus management highlighted the need for ongoing improvements.

These findings illustrate the potential of circular digital platforms to create collaborative value spaces that support both ecological and economic goals. The following sections provide a detailed analysis of the buyer and seller journeys, offering insights into their distinct experiences and needs.

6.2.2 Buyer journey: Sourcing and using surplus materials

The buyer journey on Nextex's circular platform follows a structured process, reflecting the distinct stages outlined in the theoretical framework. Based on the interviews, the

journey typically began with Nextex proactively reaching out to potential buyers. This initial contact included an online meeting where Nextex's representative introduced the platform's services and highlighted the benefits of utilising ecological surplus materials.

After gaining an understanding of the buyer's specific needs, Nextex recommended suitable materials and provided samples for the customer to review. Once the samples were assessed, the buyer decided whether to proceed with a purchase and communicated their decision via email. Upon order confirmation, Nextex facilitated the transaction by issuing an invoice, coordinating logistics, and ensuring the surplus materials were delivered directly from the seller's warehouse to the buyer through a third-party logistics provider. The buyers then integrated these materials into their production processes to manufacture their respective products.

This process spans several key stages, as visualised in the theoretical framework. These include:

- *Need identification* and *search*: Buyers identified their requirements for surplus materials, guided by Nextex's recommendations and material offerings.
- *Comparison* and *ordering*: Buyers reviewed and evaluated material samples to ensure alignment with their quality and production needs before placing orders.
- *Deployment/production*: After ordering, buyers incorporated the surplus materials into their manufacturing processes, adapting them to meet production requirements.
- *Selling* and *reassessment*: Once production was completed, buyers evaluated the overall experience, including material quality, platform efficiency, and logistical ease, to decide on future engagement.

These journey stages differ slightly from Purmonen et al.'s (2023, 79) B2B journey stages (need, search, compare, select, deploy, use, and reassess). The term "select" was replaced with "order" to more accurately describe the point of physical transaction. "Produce" was added to "deploy" to better reflect the role of surplus fabric in manufacturing, as most buyers used these materials for product creation. Additionally, "use" was changed to "sell" to clarify that the products were not utilized by the buyer firms but rather sold.

Need identification and search

The buyer journey often began with Nextex proactively reaching out to potential customers. This was particularly impactful, as many buyers were unfamiliar with sourcing surplus materials. Nextex's *tailored approach*, including online meetings, was highly valued. These sessions introduced buyers to the concept of sustainable procurement and demonstrated how surplus materials could meet their specific needs, fostering adaptability and innovation in their sourcing strategies.

Although buyers had the option to browse materials independently on the platform, many appreciated the personal consultancy provided by Nextex representatives. This highlights the relational context of the B2B customer journey, where trust, tailored guidance, and interpersonal interactions often hold more value than purely digital touchpoints (Lundin & Kindström 2023, 8). Nextex's ability to personalise its service and address buyer-specific concerns reinforced engagement and trust in the platform.

The extent to which buyers engaged with Nextex's digital platform varied based on their experience. Experienced textile buyers navigated the platform independently, while those with less expertise relied on Nextex representatives for recommendations, often provided via email. For these buyers, *personalized guidance* was crucial in helping them navigate the platform efficiently and identify suitable materials. The following table (6) summarizes these findings.

Table 6 Buyer journey: Need identification and search

Key challenges
• Buyers varied in their **familiarity with surplus material sourcing**, requiring differing levels of guidance. • Some buyers lacked the **expertise to assess surplus materials** independently, relying on Nextex for recommendations.
Positive touchpoints
• Nextex's **proactive outreach** and **personal consultancy** were highly valued, particularly by less experienced buyers. • **Tailored material suggestions** and **online meetings** helped businesses understand surplus material potential.

Comparison and ordering

Receiving *physical material samples* emerged as a critical touchpoint in this stage. Buyers unanimously agreed that seeing and feeling the materials was essential to assess attributes

such as colour, texture, weight, and overall quality—details that cannot be reliably judged from online images. One participant emphasised the importance of odour-free materials, noting that lingering smells from storage or fabric softeners could add extra time and resource burdens. This finding aligns with Ta et al. (2022, 8), who emphasise that odours in circular offerings can be off-putting, negatively influencing the perception of both the material and the overall service.

One of the most significant challenges reported by buyers was the issue of *minimum order quantities*. Nextex typically offered textile rolls ranging from 50 to 300 meters, which posed difficulties for smaller firms testing new products or those requiring smaller amounts of material. For these businesses, the inability to purchase in smaller quantities created a barrier to engaging fully with the platform.

> *Because nothing is more frustrating than when I need 20 meters of fabric, find a suitable material, and then see that the minimum order is 1000 meters. It quickly backfires, making it feel like I can never find anything on the marketplace.* (Buyer *Happy Pets*)

This mismatch between buyers' needs and the platform's offerings underscores the importance of flexibility in catering to diverse customer requirements. However, selling smaller quantities of surplus often conflicts with the operational preferences of seller firms, who favour larger orders to optimise efficiency. This tension reflects a broader structural challenge on circular platforms, where balancing the needs of buyers and sellers requires innovative solutions that address these conflicting interests.

Another challenge related to pricing. While several participants acknowledged that Nextex's surplus materials were generally more affordable than virgin alternatives, some felt that the intermediary role of the platform increased costs compared to buying directly from producers. On the other hand, participants who lacked direct access to surplus material suppliers generally found Nextex's pricing satisfactory. This disparity underscores how *prior industry connections* significantly influence buyers' perceptions of value.

Despite these challenges, Nextex's complementary services emerged as a major strength, enhancing the overall buyer experience and addressing some of the limitations. For example, *fabric customisation* was highly valued. Buyer *Feel Well* described how receiving pre-cut fabrics saved time and allowed for immediate production.

> *It was amazing... I just took it out of the box and started sewing.* (Buyer *Feel Well*)

Beyond customisation, Nextex's role in *product development assistance* was particularly impactful. Buyer *Happy Pets* highlighted how Nextex helped them design a new product, create patterns, and connect with a production partner, effectively streamlining the production process.

> *It brought so many things together for us—sewing, pattern-making expertise... we wouldn't have known how to find as a standalone service.* (Buyer *Happy Pets*)

Additionally, Nextex provided crucial *relocation support* for buyers seeking to move production closer to home. Buyer *Pretty Things*, for instance, successfully sourced affordable surplus materials and found a European production partner through Nextex, which aligned with their goal of reducing costs and producing locally.

> *We wanted to try this approach because local production for our products has been financially challenging. So, we thought that if the material itself was surplus and therefore less expensive, it could also offer an economic advantage. This way, we might be able to bring production closer. That's what we wanted to test—to see if it could work this way.* (Buyer *Pretty Things*)

While challenges such as minimum order sizes and pricing concerns created barriers for some buyers, Nextex's tailored services demonstrated the platform's potential to add significant value. By addressing specific customer needs through personal consultancy, fabric customisation, and production support, Nextex fostered a relational dimension in the B2B customer journey. This approach aligns with research highlighting the importance of trust, personalised support, and value co-creation in enhancing customer satisfaction and engagement (Wirtz et al. 2019, 466; Becker & Jaakkola 2020, 640). The following table (7) summarizes these findings.

Table 7 Buyer journey: Comparison and ordering

Key challenges
• **Minimum order quantities** were a barrier for smaller buyers who could not commit to large fabric rolls. • Some buyers felt that **pricing was less competitive** than purchasing directly from producers.
Positive touchpoints
• **Material samples** played a critical role in facilitating informed decision-making. • Nextex's **complementary services** streamlined the production process and added value for customers. • Nextex's **production consultancy** was highly valued, particularly for businesses shifting to local production.

Deployment / production

As buyers moved forward in their journey, the focus shifted from evaluating and selecting materials to integrating them into their production processes. Most participants expressed *satisfaction with the delivery process*, highlighting its speed and reliability. In cases where materials slightly differed from the order, buyers responded with *compassion*, recognising the challenges Nextex faced as a growing service provider. This relational understanding, strengthened by the personal connection with Nextex's representative and shared cultural familiarity, helped maintain trust and positive engagement.

However, adapting surplus materials for production introduced its own complexities. *Variations in material size or cuts* sometimes required additional time for pattern-making. While buyers appreciated the clean, ready-to-use nature of Nextex's materials, they also emphasised the importance of wrinkle-free fabrics to streamline sewing processes. Additionally, Buyer *Pretty Things* observed that the surplus producer responsible for their finished product appeared unmotivated, emphasising the need for proper incentives across all stakeholders in the supply chain:

> *...in an ideal scenario, the process would be smoother, and the partners would be more committed, so it wouldn't feel like dragging a heavy load. The partners should also be willing to work together to improve the process. For that to happen, there need to be incentives for everyone involved. If there's a material producer who doesn't benefit from selling or handing over surplus, their motivation will start to fade. So, essentially, everyone in the process needs to be motivated.* (Buyer *Pretty Things*)

Despite these challenges, many buyers expressed empathy toward Nextex. They appreciated the *proactive communication* and *personal connection* with Nextex's representative, which fostered trust and understanding. *The shared cultural familiarity*—as both the provider and buyers were Finnish—added a layer of comfort and security, further reinforcing positive engagement. This reflects the affective dimension of customer experience, where emotions like empathy can outweigh dissatisfaction with operational challenges (Kemp et al. 2018, 25).

The product launch phase brought additional considerations, particularly around marketing and sales channels. Many participants expressed concerns about how to effectively market products made from surplus materials. Unlike recycled materials, surplus-based products lacked *consumer familiarity*, posing unique marketing challenges.

Despite these concerns, all buyers emphasised the use of surplus materials in their marketing strategies, leveraging this feature as a *unique selling point*. To support buyers, Nextex introduced a *sustainability tag*, which highlighted the environmental benefits of using surplus fabrics. Buyers highly valued this addition, as it aligned with their marketing goals and added credibility to their products:

> *Yeah, I feel that the tag adds value to our product. It clearly communicates to the end buyer what the product is about. It sticks in their mind more easily—when you buy a product with a tag like that, it's clearly stated that this material already existed and was repurposed… It gives Nextex visibility and gives us a different kind of credibility. It shows that it's been done properly and with a plan.* (Buyer *Happy Pets*)

Buyer *Feel Well* noted that the tag also resonated with customers, with some specifically choosing products because of it:

> It was a really great addition to the service—I wouldn't have thought to ask for it myself. Customers also liked it… Many customers even ended up choosing the product specifically because it had this tag. (Buyer *Feel Well*)

However, *launching surplus-based products online* presented unique challenges. Buyer *Eco Style* highlighted the difficulty of managing variations in surplus materials, such as differences in colour or texture. These inconsistencies made it time-consuming to photograph and upload each unique product. Alternatively, listing a single product with a disclaimer about potential variations often led to customer dissatisfaction and product returns.

> *If the product isn't exactly like the image, people return it. But if they saw it in person, they'd fall in love because it's unique and beautiful. People would buy into the idea of each piece being individual and special. But as an online customer, they see the product photo, order it, receive it, and feel disappointed if it isn't exactly the same.* (Buyer *Eco Style*)

This challenge underscores the inherent difficulty of scaling surplus-based products. Beyond the challenge of sourcing a continuous supply of surplus materials, marketing these products in an e-commerce environment poses additional hurdles. The unique, one-of-a-kind nature of surplus products, while valuable in physical retail, often clashes with online customers' expectations of uniformity, complicating efforts to grow demand in digital marketplaces. The following table (8) presents a summary of these findings.

Table 8 Buyer journey: Deployment/production

Key challenges
• Integrating surplus materials required adaptation, particularly in **patternmaking and workflow adjustments.** • The **motivation of suppliers** (e.g., willingness to support circular efforts) influenced the ease of production process. • Some buyers struggled with **marketing surplus-based products**, citing a lack of consumer awareness • **Selling surplus-based products online** was difficult due to product variations and consumers' expectations of uniformity
Positive touchpoints
• **Fast and reliable delivery** contributed to an overall smooth transition into production. • The **shared sustainability commitment** and **cultural familiarity** between Nextex and buyers fostered trust and positive engagement. • The **sustainability tag** added value by supporting eco-marketing efforts.

Selling and reassessment

The post-launch of the product marked a reflective period where buyers evaluated their overall experience with Nextex. Many participants expressed satisfaction with their decision to use surplus materials, emphasising that it aligned with their ecological values and sustainability goals. For several buyers, choosing surplus materials over virgin ones felt like a *meaningful step toward more sustainable business practices*. This highlights the importance of affective experiences in circular services.

While more experienced surplus buyers described the process as *straightforward* and *well-aligned* with their existing material sourcing methods, others faced more challenges.

Buyers new to sourcing surplus materials found the experience particularly difficult, as it required *significant adjustments* to procurement practices traditionally designed for virgin materials.

However, even experienced buyers, such as Buyer *Eco Style*, acknowledged that working with surplus materials was not without its challenges. Despite their familiarity with the process, they described it as *time-intensive* and *unpredictable* due to high search costs and irregular material availability:

> *Then we're always hunting for them (surplus materials), and we never know who might have surplus or defective batches... The availability of materials is unpredictable, so it's this endless hunt…* (Buyer *Eco Style*)

This finding highlights that familiarity does not eliminate the systemic challenges of surplus sourcing, such as inconsistent supply and high manual effort. These issues persist, requiring ongoing time and resources, which limits the efficiency of the process.

Another major challenge with integrating surplus materials into operations was the lack of *reliability in material availability*. Without long-term contracts or guarantees, buyers struggled to plan production and sales strategies, creating uncertainty—especially for larger firms or those scaling their operations, which depend on predictable supply chains.

> *...the barrier (to buying surplus) is usually that there's no guarantee that we can plan or sell products, because I don't know if we'll be able to produce them if the material is no longer available in the future.* (Buyer *Eco Style*)

Due to this inconsistency, surplus materials were more viable for small firms or limited collections. In contrast, larger businesses, prioritizing predictability, viewed surplus sourcing as a challenge. This lack of reliable availability ultimately hindered broader engagement, particularly from firms requiring scalable and standardized material streams.

> *With a special batch (*one-off collection*), the advantage is that it works the other way around: 'Oh! We got our hands on this material, so now we'll make a batch out of it.' But that doesn't work in a business where you're trying to secure sales in advance.* (Buyer *Eco Style)*

These challenges highlight a fundamental *misalignment* between surplus sourcing and the expectations of B2B customer journeys. Businesses value long-term, stable relationships that reduce cognitive and operational effort (Lemon & Verhoef 2016, 74; Purmonen et al. 2023, 79–80). However, the unpredictability and lack of guarantees in surplus sourcing make it difficult for firms to fully integrate surplus materials into their operations. This

tension underscores the need for platforms like Nextex to address systemic barriers and improve the reliability of their offerings to meet the needs of both small and large firms.

As for sales, several participants faced challenges in marketing surplus-based products, particularly due to consumer perceptions and market demand. Buyers noted *underwhelming sales*, attributing this to factors such as high product prices and limited consumer awareness of surplus materials.

> *The things that feel like amazing innovations to us... don't seem to interest anyone. Nobody wants them. It feels like those small details, like 'How great that we managed to use all this waste in a smart way,' just don't sell. People like them, but they don't buy.* (Buyer *Eco Style*)

This finding contradicts research suggesting that a growing number of consumers are willing to pay a "circular premium" for sustainable products (D'Adamo & Lupi 2021, 4). Instead, participants found that their customers were often unwilling to pay higher prices for surplus-based products, especially in *price-sensitive retail environments*.

> *The price point for such a basic product doesn't align with our existing channels. It might work in specialty stores, but we don't currently have customers like that.* (Buyer *Pretty Things*)

This finding aligns with Vehmas et al. (2018, 296), who underscore the importance of marketing circular products as luxury or special edition items, to catch the consumer's interest. Additionally, eco-themed marketing on social media received limited engagement. Buyers noted that while sustainability efforts were appreciated in theory, they did not translate into strong purchasing behaviour.

Participants also reflected on their experiences and future engagements with Nextex's service. While some buyers valued Nextex's efforts and considered re-engaging if specific needs arose, others were hesitant due to challenges they faced. Buyer *Power Fitness*, for instance, expressed frustration after utilising Nextex's material search service, which involved actively searching for surplus materials not yet listed on the platform. Despite Nextex's extensive efforts, they were unable to find a suitable material for *Power Fitness's* product. The buyer felt that the time and resources invested in the process had not yielded meaningful outcomes.

> *We were left thinking, okay, what exactly came out of this? We didn't find the material, and we didn't get anything else out of it, like a market overview or some kind of data.* (Buyer *Power Fitness)*

To address such dissatisfaction, the participant suggested Nextex could provide *more comprehensive insights and feedback* at the end of each project. For example, sharing market data or highlighting indirect benefits gained through the process could leave buyers with a more positive impression, even if the project did not achieve its primary goal. This finding underscores the critical role of effective project management and outcome communication in shaping customer satisfaction. By providing comprehensive feedback, circular platforms can enhance customer's evaluation outcomes, even when primary goals are not fully achieved.

Despite these challenges, some participants saw opportunities for Nextex to *foster collaboration among businesses* using surplus materials. Buyer *Happy Pets* proposed the idea of small businesses joining forces to attend trade fairs or events together, leveraging collective marketing and resources to increase visibility:

> *I think there's strength in getting industry players who utilise surplus textiles together. If there were five operators united by the use of surplus materials, we could make targeted efforts at events and take advantage of joint marketing.* (Buyer *Happy Pets*)

This suggests that beyond transactions, circular platforms could play a pivotal role in fostering collaboration and building a networked community of businesses united by shared sustainability goals. The following table (9) presents a summary of these findings.

Table 9 Buyer journey: Selling and reassessment

Key challenges
• The **time-intensive search and integration of surplus materials** made buyers hesitant to continue using the platform. • **Uncertainty in long-term material availability** made surplus materials difficult to integrate into scalable production models. • Buyers reported **underwhelming sales** due to high product prices and limited consumer awareness, especially in price-sensitive retail environments. • Buyers highlighted **the importance of receiving comprehensive insights and feedback** after service, especially when the buyers' goals are not fully achieved.
Positive touchpoints
• Many buyers felt that **using surplus materials reinforced their sustainability values and brand mission**. • Buyers **saw potential in collaborating with one another** through joint marketing efforts

6.2.3 Seller journey: Managing and listing surplus inventory

The seller journey on Nextex's platform followed a structured process designed to help sellers manage and monetize their surplus materials. Similar to buyers, the journey typically began with Nextex initiating contact. During an initial online meeting, Nextex representatives introduced the service and explained the benefits of selling excess fabrics through the platform. After agreeing to proceed, sellers had the option to list material information directly through the platform. However, many opted to use the Excel sheet provided by Nextex to log details about their surplus inventory, including material specifications and quantities. Sellers always cut fabric samples to provide Nextex with a physical reference for potential buyers.

Once Nextex received the fabric sample, they photographed it and uploaded both the image and material details to the marketplace. From there, Nextex managed buyer inquiries, facilitated transactions, and coordinated logistics. Sellers were responsible for preparing the materials for shipment, which were then collected and delivered to buyers by a third-party delivery service. Finally, Nextex compensated the sellers based on the agreed terms.

The seller journey is structured into three main stages, aligned with key touchpoints in the process:

- *Need identification*, *search* and *selection*: Sellers identified the need to offload surplus materials, searched and selected Nextex, and familiarized themselves with the process

- *Preparing inventory and material information*: Sellers organized and documented their materials, delivered the information to Nextex, and answered additional buyer inquiries, once the materials were listed on the platform

- *Shipping materials, payment* and *reassessment*: Sellers prepared materials for shipment, received payment for the materials sold and reflected on their experience, assessing satisfaction with the platform and service outcomes. From there, they would decide whether to continue using the service or not.

As with the buyer journey, these stages differ slightly from Purmonen et al.'s (2023, 79) B2B journey framework (need, search, compare, select, deploy, use, and reassess). The compare stage was omitted, as sellers did not actively compare alternatives in their

journey. Deploy was replaced with preparing inventory, which more accurately reflects the seller's role in organizing and documenting surplus materials rather than implementing them in a process. Similarly, the use stage was changed to shipping, since sellers do not use the materials themselves but rather facilitate their transfer to buyers. Additionally, a payment stage was introduced to highlight the financial transaction aspect, as sellers receive compensation only after materials are sold and shipped.

Need identification, search, and selection

The seller journey on Nextex's platform began with proactive outreach, as Nextex aimed to identify potential sellers within the textile community. For most participants, this was their first time working with an intermediary platform to sell surplus materials, as they had previously relied on direct channels or had no experience selling surplus at all. Nextex's *online meetings* were a pivotal initial step, allowing sellers to explore the potential of selling surplus fabrics and gain a clear understanding of the platform's processes. In some cases, Nextex representatives *visited sellers' manufacturing or storage facilities* to assess surplus fabrics in person. These visits were highly appreciated, as they provided hands-on guidance and helped sellers identify suitable materials for listing based on market demand. This aligns with the theoretical emphasis on orchestrator interactions as critical touchpoints in building trust and fostering engagement (Purmonen et al. 2023, 79–80; Gounaris & Almoraish 2024, 14).

Participants' approaches to surplus management varied significantly depending on their company size and production type. Larger firms like *Furnis* and *Tech Gear* reported generating *substantial surpluses from large-scale productions*, often involving technical or interior textiles. Despite efforts to minimise waste, surplus materials accumulated and were typically incinerated due to a *lack of storage space or alternative disposal methods*. These findings resonate with theoretical insights on inefficient surplus management practices, a global issue that hinders the effective redistribution of materials (Dobilaite et al. 2017, 501; Berg & Wilts 2019, 3–4; Aus et al. 2021, 15; McKinsey 2022, 13).

> *Practically speaking, materials that have been sitting in storage for a long time take up physical space and require working hours during inventory checks… At a certain point, we have to acknowledge that the material needs to be discarded.* (Seller *Furnis*)

In contrast, smaller companies like Elements, Active Wear, and Pure Living preferred to store surplus fabrics until a suitable buyer was found. However, Urban Citizen, which had a substantial volume of surplus in storage, struggled to organise and manage it effectively, highlighting challenges unique to firms dealing with large quantities of surplus.

> *There is definitely a willingness to get rid of the surplus, but since we've accumulated quite a lot of it over time—enough to fill a rather large hall—it's not something that can be resolved quickly. It's there, waiting for the right opportunity … always lingering in the background, so to speak.* (Seller *Urban Citizen*)

While most participants recognised the ecological value of selling surplus, they also noted the significant labour involved in preparing materials for sale, which reinforced their perception of the materials' inherent worth. This reflects a mix of experiential dimensions—cognitive, emotional, and behavioural dimensions at play. Participants grappled with the *emotional discomfort* of discarding valuable materials, balanced against the *cognitive evaluation of ecological and economic benefits* and the *behavioural effort required* to engage with the platform. The following table (10) provides a summary of these findings.

Table 10 Seller journey: Need identification, search and selection

Key challenges
• Sellers with **large volumes of surplus** struggled with organising and documenting available materials. • Some sellers **regularly disposed of their materials** due to a lack of storage space.
Positive touchpoints
• Nextex's proactive guidance, including **in-person visits**, was highly valued in simplifying the onboarding process. • Sellers appreciated Nextex's ability to **assess surplus quality and suggest marketable materials**.

Preparing inventory and material information

After initial onboarding, sellers were tasked with providing detailed information about their surplus materials using a formatted Excel sheet provided by Nextex. This included attributes such as material composition, dimensions, and weight. Sellers were also required to cut and send fabric samples for Nextex to distribute to potential buyers. Sellers

with well-organised inventory systems, such as Furnis, described the process as *manageable but time-intensive*:

> *It did take some time, but we already had most of this (surplus) information on hand. During our inventory, we also mapped the materials and cut fabric samples, which helped Nextex better understand the quality.* (Seller *Furnis*)

For others, particularly those without detailed surplus records, the process was far more *labour-intensive*. Sellers faced challenges due to outdated or insufficient inventory systems, often requiring manual work such as unrolling fabric rolls, measuring lengths, and verifying details. This highlights technological constraints and information gaps, key internal barriers identified in the theory (Berg & Wilts 2019, 3–4).

> *We have a storage management system that helps locate materials, but it doesn't include detailed information like colours or the number of meters. We do have another system where that information is available, but it's not directly integrated. So yeah, it's quite a manual process.* (Seller *Active Wear*)

> *We have all the information in the system, but there's also some older data that hasn't necessarily been updated in the system. So, it can sometimes be a bit of a manual process—taking folders off the shelf and sifting through shipping lists to find out the details… It involves a bit of digging around, especially if the record-keeping hasn't been very precise…* (Seller *Urban Citizen*)

> *The challenge was that when our fabric rolls had been used for production, the quantities were no longer marked… So, we had to weigh and calculate everything, which was both labour-intensive and time-consuming.* (Seller *Elements*)

The manual effort required to provide accurate material information underscores the behavioural dimension of customer experience, as sellers had to adapt their practices to meet the platform's requirements (Ta et al. 2022, 10 –11).

The inadequacy of inventory systems for tracking surplus materials was a recurring challenge across participants. Many sellers noted that their *systems were not designed to capture detailed information about surplus flows*, as surplus sales were not a core part of their business operations. Some, like *Urban Style*, used their experience with Nextex to begin adapting their internal practices, while others, like *Furnis*, viewed such changes as financially unfeasible due to the minimal profit generated from surplus sales.

> *We have now been working to change our internal practices so that whenever anything is ordered into the company, the information is fully recorded in the*

> *system. This way, it will be easy to utilize that data in the future as well.* (Seller *Urban Citizen*)

> *Since surplus sales are not our primary business, it doesn't make sense for us to maintain all that detailed information in our system… At this stage, it's not worthwhile to start modifying the systems.* (Seller *Furnis*)

These findings align with theoretical discussions on economic feasibility as a driver for engagement (Sehnem et al. 2019, 791–792, 794), while also exposing gaps in the theory's focus on seller-specific barriers. The labour-intensive nature of surplus management highlights the need for platforms to actively reduce seller-side effort, for instance, by integrating surplus management tools or offering hands-on support during onboarding.

Once surplus materials were listed on the Nextex platform, sellers often encountered *additional questions from buyers* about material quality, origin, or minimum order sizes. As the sellers' identities remained anonymous, Nextex acted as an intermediary, forwarding buyer inquiries to the sellers via email. Participants *expressed frustration* with this process, citing the additional time and effort required to address questions as burdensome, particularly when the inquiries involved small or inconsistent orders.

A recurring source of dissatisfaction involved buyers requesting smaller quantities than the stated minimum order amounts. While the minimum orders were clearly listed, Nextex relayed these requests to sellers, resulting in *time-consuming back-and-forth communication*. Sellers unanimously rejected such requests, emphasizing that cutting fabric for smaller orders was too labour-intensive and financially unviable.

> *When we've determined that we don't have any use for a certain material, we'd prefer to get rid of it all at once to free up space in our storage… Smaller orders feel impractical and just add more work.* (Seller *Active Wear*)

These findings align with theoretical insights on platform inefficiencies as a barrier, where the lack of streamlined functionalities—such as automated communication tools or pre-negotiated terms—creates additional workload for users (Berg & Wilts 2019, 3–4).

Participants highlighted that the effort involved in using Nextex's platform was only worthwhile when buyers *purchased larger volumes of surplus materials*. For smaller orders, the manual work required—such as measuring, cutting samples, responding to inquiries, and negotiating—often outweighed the financial benefits. This tension

underscores a fundamental issue in the platform's design: balancing the needs of small buyers with the operational efficiencies required by sellers.

Interestingly, some sellers suggested *outsourcing surplus inventory management* to Nextex to alleviate the workload. While this would likely incur higher costs, participants expressed willingness to pay for a service package that streamlined the selling process and reduced their own manual involvement.

> *Perhaps the inventorying or sorting of the materials could somehow be outsourced. It does require resources to go through fabric rolls and figure out what we actually have… But from our perspective, the process should be made very easy.* (Seller *Urban Citizen*)

Additionally, participants expressed a desire for the platform to accommodate a *broader range of surplus items*, including smaller components like buttons or zippers. As one seller noted:

> *From our perspective, the more diverse range of supplementary textile supplies—like buttons, fasteners, and so on—that could be listed, the better it would serve us.* (Seller *Urban Citizen*)

However, Nextex often declined requests to list smaller items due to the effort required on their end, such as photographing, uploading, and coordinating logistics. This issue highlights a shared challenge between sellers and Nextex in managing the resource demands of small-scale surplus transactions.

This resonates with the theoretical emphasis on user-friendly design and trust-building measures as critical to platform success (Berg & Wilts 2019, 3–4; Wirtz et al. 2019, 466). By simplifying resource-intensive tasks and introducing additional services to address seller needs—such as outsourcing inventory management or expanding the range of surplus items supported—circular platforms can significantly enhance their perceived value, foster greater trust, and encourage long-term engagement. The following table (11) summarises these findings.

Table 11 Seller journey: Preparing inventory and material information

Key challenges
• The process of **delivering material information was labour intensive**, as inventory systems often lacked surplus information. • **Responding to buyer inquiries** added additional workload, particularly when buyers requested small quantities. • The **effort involved in preparing inventory was not worthwhile** unless buyers purchased larger volumes of materials.
Positive touchpoints
• Some sellers **started developing their own surplus management processes** to streamline the selling process in the future. • Sellers suggested **outsourcing surplus inventory management to Nextex** to alleviate the workload and reduce manual effort. • In addition to textiles, **sellers were also interested in listing other supporting supplies**, such as leftover buttons and zippers.

Shipping materials, payment, and reassessment

Participants expressed a strong preference for selling fabrics quickly after they were listed, primarily to free up storage space and efficiently complete the task. However, demand for surplus materials was described as *infrequent and irregular*, with fabrics often remaining unsold for extended periods. Materials with high versatility—such as cotton or linen—sold quickly, while technical textiles or highly specialized materials saw little demand. This highlights market challenges tied to the niche nature of certain surplus materials; a barrier identified in the literature as "market failure" in circular economies (Berg & Wilts 2019, 3–4).

Despite these challenges, participants were *satisfied with the delivery process* when an order was placed. Nextex provided clear instructions, including order details and logistics arrangements. Sellers appreciated the simplicity of their tasks at this stage, which involved packing the fabric rolls and coordinating with the logistics provider for pick-up. This streamlined process contrasted with earlier stages of the journey, which participants found more demanding.

As for the sales, participants expressed varied sentiments. Sellers whose surplus materials sold quickly reported overall satisfaction with the process, describing it as smooth and functional. However, sellers who experienced little to no demand for their materials expressed disappointment. While some were frustrated with the lack of sales, they

clarified that the service itself was not to blame. Instead, their dismay stemmed from having to discard usable materials due to the absence of buyers.

> *I thought it (the service process) was functional and smooth overall. There wasn't anything wrong with it. Of course, we're always so busy that any extra tasks naturally add a bit of extra work. But I don't see it as a problem. I think it's a great idea, adding value by ensuring that materials move, find a new purpose, and actually get used.* (Seller *Urban Citizen*)

> *I don't know if the end result was a disappointment, but of course, there was some hope that we could have moved some materials through Nextex. It's always upsetting when you have to throw away completely unused fabric. That's definitely the most frustrating part.* (Seller *Furnis*)

These findings resonate with theoretical insights that evaluative outcomes, such as satisfaction and perceived value, are influenced by the alignment of service performance with user expectations (Becker & Jaakkola 2020, 640; Gounaris & Almoraish 2024, 4). For sellers whose materials were sold, the *ecological satisfaction* of finding new uses for surplus materials contributed positively to their experience, even if sales volumes were low. However, for those who were unable to secure sales, the unmet expectations *diminished the perceived value* of the service.

Opinions on sales compensation were similarly divided. Some sellers were satisfied with the established prices, while others felt the compensation fell short of expectations. For example, participants argued that since their materials were unused, they should ideally sell at or near their *original purchase price*. However, even when sellers managed to sell at a fair price, the *significant labour involved* in preparing materials for sale—such as cutting samples, listing items, and responding to buyer inquiries—often outweighed the financial benefits.

> *We consider it important to pass on surplus fabrics and have them used for their original purpose… Even having larger purchase volumes would already make the sales process easier. But still, it's very labour-intensive at every stage. It's not an easy thing to solve.* (Seller *Active Wear*)

This reflects the cognitive and behavioural dimensions of the seller experience, where sellers assess the trade-off between effort invested and the perceived value of participation.

Some sellers proposed alternative models to address these challenges. For instance, they suggested that Nextex could *purchase surplus materials directly* and maintain its own

inventory rather than facilitating direct transactions between buyers and sellers. This model, participants argued, would reduce the workload for sellers by eliminating the need to manage buyer inquiries, process orders, or handle logistics.

> *From our point of view, it would be better if Nextex bought the material, stored it themselves, and then found the customer that way… Having the material sit in our storage while waiting for a customer takes up our storage space, as well as resources and management efforts.* (Seller *Elements*)

Again, these findings highlight how sellers *prefer to avoid manual work* on their side and are willing to pay for a "full service", even if it might be more expensive. By simplifying resource-intensive tasks and offering comprehensive service packages, circular platforms can foster long-term relationships with users and improve satisfaction.

When asked if they would use Nextex's service again, many participants hesitated. Some indicated they were unlikely to continue due to poor sales performance, while others stated they currently had no surplus to sell. However, sellers expressed their support for Nextex and optimism about the platform's potential to grow and address the broader challenges of surplus textile management.

> *Yes, it's absolutely vital to get materials circulating and put them to the best possible use… While textile recycling at the fibre level is advancing, we're still in the early stages… We need more entrepreneurs in Finland who dare to challenge existing structures and come up with new ideas.* (Seller *Elements*)

These reflections align with the relational dimension of customer experience, which emphasizes the importance of trust, shared values, and long-term engagement in B2B contexts (Panina 2022, 43; Gounaris & Almoraish 2024, 14; Purmonen et al. 2023, 79). This reflection also highlights a *community dynamic* that was evident with all seller participants. This collaborative spirit reflected a shared commitment to advancing circularity. Sellers appreciated Nextex's role in challenging existing structures and fostering innovation in surplus material management. Sellers valued Nextex's mission to promote circularity and viewed their participation as a step toward broader sustainability goals, even if immediate benefits were limited. The following table (12) summarises these findings.

Table 12 Seller journey: Shipping materials, payment, and reassessment

Key challenges
• While sellers preferred selling materials quickly, **demand was infrequent and irregular, with fabrics often remaining unsold** for extended periods. • While popular materials saw demand, more **technical materials remained unsold, leading to sellers' disappointment.** • Even if sellers managed the sell surplus at a fair price, **the labour involved often outweighed financial benefits**.
Positive touchpoints
• Sellers were **satisfied with the shipping process**, as it was straightforward and required little effort. • Sellers **appreciated the environmental impact** of surplus reuse, even if sales volumes were low. • Sellers **showed interest in paying for a "full service"**, where Nextex would purchase all surplus materials directly from them, reducing manual effort to minimum. • Many expressed continued support for Nextex's mission and **saw potential for the platform's growth.** • The shared commitment to advancing circularity showed **a community dynamic between the sellers and Nextex**.

6.3 Experiences with the platform interface

Following an exploration of the buyer and seller journeys, this chapter focuses on the experiences of participants with Nextex's digital platform interface. As the central enabler of surplus material circulation, digital platforms play a pivotal role in the circular economy (Berg & Wilts 2019, 2; Lacy et al. 2020, 19; Ranta et al. 2020, 296; Blackburn et al. 2023, 255). While participants recognized the platform's importance in creating a space for surplus materials to reach new users, they also highlighted areas for improvement. The chapter examines participants' perceptions of the platform interface's usability, functionality, and potential enhancements.

6.3.1 Searching and assessing materials

Material search and user interactivity

Participants highlighted the need for a *more efficient and intuitive search experience* on the platform, which could enable smoother and more proactive engagement with surplus materials. They emphasized the importance of *filtering tools* to refine search results based on resource type, quantity, or price. Advanced filters would reduce manual search time and help users navigate surplus material offerings more effectively. Additionally, *email*

notifications for new material drops were suggested as a feature to keep users engaged and informed about available materials.

Some participants proposed integrating *direct communication between buyers and sellers* into the platform. By enabling questions to be answered without intermediary delays, this approach mirrors successful consumer-to-consumer second-hand platforms like Tori.fi. However, as seen in the seller journey, sellers expressed concerns about handling direct inquiries, citing the additional workload this could create.

> *If someone wants to ask about a material and Nextex doesn't know the answer, they have to ask the seller and then relay the answer to the buyer. That takes time. Alternatively, the sellers could answer questions directly... Kind of like Tori.fi. The seller's name wouldn't even need to be visible.* (Buyer *Feel Well*)

Additionally, participants suggested the addition of a *two-sided functionality*, allowing users not only to offer materials but also to post specific requests for materials they need. This feature could align supply and demand more effectively, revealing previously untapped market opportunities and motivating sellers to list materials they might not have considered valuable.

> *Could the platform be two-sided, allowing users to both search for and offer materials? For example, a listing saying, 'I want to find material of this size.' This makes sense for us sellers, because sometimes we might think, 'Oh, I have this 10x10 meter piece—nobody probably needs this.' But how would I know? Maybe someone does need exactly that.* (Seller *Pure Living*)

These findings align with theories emphasizing user-centred design and network efficiencies. Advanced search tools and proactive engagement features, such as alerts, reflect Nielsen's (1992, 20–22) principles of reducing cognitive load and creating familiar, intuitive user experiences. Similarly, dual-sided functionality fosters value co-creation by aligning supply and demand, a key aspect of circular platforms (Berg & Wilts 2019, 7; Wirtz et al. 2019, 466). However, the tension between buyer preferences for direct interaction and seller concerns about workload highlights the need for a balanced approach that supports interactivity without overburdening users.

Material assessment and visual representation

Participants emphasized the importance of *detailed and accurate material information* on the website in facilitating informed decision-making. Buyers identified basic details, such

as dimensions, weight, and country of origin, as critical for evaluating surplus materials online. This aligns with Berg and Wilts' (2019, 3–4) findings, which stress that overcoming "information failures" in circular marketplaces requires the availability of clear, precise data on material quality and specifications.

Furthermore, *visual representation* emerged as a crucial factor for buyers, particularly in reducing uncertainties associated with online purchasing. Participants highlighted the need for *high-resolution photos* that effectively depict colour, texture, and thickness. Some suggested *photos of materials in finished products* to inspire potential uses or demonstrate practical applications. Beyond static images, participants proposed incorporating *short videos* to showcase material movement, texture, and light interaction. This approach could significantly enhance sensory understanding, especially for tactile elements such as fabric thickness or flexibility. These findings align with theories on website quality and the positive impact of aesthetic and inspiring visuals (McLean 2017, 665; Van Nguyen et al. 2022, 10). By addressing these sensory and informational needs, circular platforms can enhance user satisfaction and confidence, ultimately driving engagement and sales.

6.3.2 Platform's usability and critical userbase

Platform usability, support, and trust

Participants had varying preferences regarding the platform's balance between automated features and personalized service. For sellers, Nextex's *hands-on approach* stood out as a key advantage compared to self-service platforms. The direct assistance provided by Nextex simplified the process of listing materials, reducing the burden on sellers and encouraging their engagement. For buyers, especially with less expertise in textiles, Nextex provided crucial support in selecting suitable materials. This highlights how platforms can balance automation with personalized service to cater to different user needs.

> *With Nextex, the contact was more personal. In contrast, with other platforms, you're expected to input all the information into their system yourself. There's probably nothing wrong with that approach, but in our case, it was quite good that we were contacted directly… There was more service involved in the process.* (Seller *Urban Citizen*)

Both buyers and sellers valued the ability to access expert guidance through the platform. Many participants highlighted the importance of having consulting services integrated into the platform, particularly for areas like waste mapping, material selection, or product design. This could be implemented through a dedicated "I need help" section, offering tailored solutions for different buyer and seller needs.

> *I see it this way: if there's a platform where materials change ownership between companies, it's incredibly important that textile expertise is also available there... The platform can function effectively only when it includes more expertise than just raw material brokerage.* (Buyer *Happy Pets*)

By offering a balance of automation and accessible expertise, circular platforms like Nextex could cater to the diverse needs of their users, improving usability. This dual approach aligns with theories emphasizing the importance of combining efficient digital tools with human interaction to enhance B2B customer experiences (Lundin & Kindström 2023, 8).

Moreover, trust emerged as a critical factor influencing participant engagement with Nextex's platform. Participants expressed a *preference for using a domestic platform* like Nextex, citing shared cultural familiarity, local accountability, and alignment with Finnish standards and values. These aspects helped reinforce a sense of *reliability* and *transparency*, which were perceived as particularly important in deadstock markets. These findings align with Moriuchi and Takahashi (2022, 86), who highlight that trust is a key precursor to engagement in online marketplaces, particularly in markets where risks and uncertainties are heightened.

User base expansion

Another recurring theme was the *necessity of expanding Nextex's user base*. Participants emphasized that for the platform to become truly effective, it needs to attract more sellers and buyers to diversify the materials available and ensure sufficient demand. Buyers noted that limited options made material sourcing difficult, while sellers felt that a larger user base would increase the likelihood of their surplus materials being sold.

> *The problem with these (deadstock marketplaces) has been that… Tori.fi—everyone knows it. But these platforms—nobody really knows about them in the vast world of the internet… It would really require significant effort in advertising and marketing to let people know, 'Hey, this platform exists, use it.'* (Seller *Tech Gear*)

These insights align with the literature, which emphasizes the importance of reaching critical mass on circular platforms to ensure their success (Johnson 2013, 348; Arica & Oliveira 2019, 708; Berg & Wilts 2019, 5–7). The concept of network effects—where the value of the platform increases as more users join (Wirtz et al. 2019, 457; Cen & Li 2020, 327) —is particularly relevant for circular platforms like Nextex. Expanding the user base would not only enhance material availability and diversity but also stimulate demand, creating a more dynamic, efficient, and sustainable marketplace. The table (13) below presents a summary of experiences with Nextex's platform interface.

Table 13 Key experiences with digital platform interface

Key development areas
• **Limited search functionality**: Participants found the search experience inefficient and requested better filtering tools (e.g., material type, quantity, price) and email notifications for new materials. • **Lack of direct buyer-seller communication**: While some users wanted direct interaction, sellers worried about increased workload from buyer inquiries, highlighting a trade-off between efficiency and usability. • **Matching supply with demand**: Participants proposed a two-sided functionality where sellers can list materials and buyers can post specific material requests. • **Enhancing material assessment online**: Participants suggested detailed material descriptions and visual representation including high-resolution photos of the material, photos of materials in finished products, and short videos to showcase material movement. • **Balancing automation with personalised service**: While participants saw automation opportunities on the platform, they highlighted the importance of having access to support and expertise. • **User base expansion**: Participants found expanding the platform's user base crucial for enhancing material availability and demand, as a larger network would also increase their likelihood of continued use.
Positive touchpoints
• **Trust in a local provider**: Participants preferred using a domestic platform like Nextex due to cultural familiarity and alignment with Finnish sustainability standards, reinforcing trust and reliability.

7 Conclusions

This study explored how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the textile and clothing (T&C) industry. By conducting qualitative research with 12 business customers of a circular digital marketplace, this study generated insights into the formation of customer experience and challenges associated with B2B surplus material exchange. The following subchapters address the study's three guiding research questions:

1. How can circular digital platforms facilitate the reuse of production waste in the T&C industry?
2. What kind of drivers and barriers do businesses face when engaging with circular digital platforms?
3. Which experiences in B2B customer journeys support engagement with circular digital platforms?

This study contributes to the theoretical understanding of the second and third research questions. Specifically, it introduces two new frameworks. The first offers a comprehensive perspective on how B2B customer experience develops within circular digital platforms. The second outlines key experiences that foster engagement while providing strategic recommendations for platform development. Finally, the study discusses its limitations and suggests directions for future research.

7.1 Unlocking the potential of surplus material circulation

The T&C industry is among the most resource-intensive and polluting sectors, yet pre-consumer waste—production offcuts, overstock fabrics, and roll ends—remains largely overlooked. Estimates suggest that up to 25% of materials are wasted during production, exacerbated by overproduction, last-minute order changes, and outdated inventory systems (Dobilaite et al. 2017, 501; Berg & Wilts 2019, 3–4). This study found that some seller firms generate continuous textile waste streams, yet in the absence of viable reuse options, surplus materials are often incinerated or discarded. This highlights the critical need for structured redistribution channels that can facilitate the reuse of production waste within the circular economy (CE).

CE principles—reuse, recycling, and waste minimization—provide a systemic alternative to the traditional linear "take-make-dispose" model (Bocken et al. 2016, 308; EMAF 2017, 19). While post-consumer textile recycling has gained traction, pre-consumer waste strategies remain underdeveloped (Mostaghel & Chirumalla 2021, 38, 43). Circular approaches to managing textile waste include *resurrecting value* by recycling materials, *optimizing value* through zero-waste design, *replacing value* with sustainable material alternatives, and *sharing value* by redistributing surplus materials between businesses. (Bocken et al. 2016, 309–310; Ranta et al. 2020, 298–299.)

Among these, *sharing value* is central to circular digital platforms, as it enables businesses to exchange surplus materials efficiently rather than discarding them. Large production leftovers, such as fabric roll ends, defective batches, and excess stock, can be repurposed into new garments, accessories, or upcycled products (Aus et al. 2021, 13). Digital surplus platforms, often referred to as deadstock marketplaces, facilitate this exchange by connecting sellers with surplus textiles to buyers seeking sustainable inputs.

Sharing value emphasizes making underutilized resources accessible to multiple actors, enabling businesses to maximize the use of surplus materials (Ranta et al. 2020, 296). Large production leftovers, such as fabric roll ends, are ideal for repurposing into new garments or other products (Aus et al. 2021, 13). Digital surplus platforms, often referred to as deadstock marketplaces, facilitate this exchange by connecting sellers with surplus materials to buyers seeking sustainable inputs.

However, due to underdevelopment, these platforms have achieved only limited success to date, underscoring the need for innovative solutions to enhance material sharing efficiency and customer engagement (Berg & Wilts 2019, 3). By gaining a deeper understanding of why and how business customers engage with these platforms, new opportunities can be unlocked for pre-consumer material circulation and drive progress toward a circular economy.

7.2 Barriers and drivers influencing platform engagement

This study revealed new insights into why businesses engage with or avoid circular digital platforms. While some anticipated drivers and barriers were confirmed, others proved more significant than expected, shaping engagement in both expected and unexpected ways.

7.2.1 Internal influences on platform engagement

This research confirms that the decision to engage with circular digital platforms is shaped by both internal and external factors, aligning with the dual perspective of organizational sustainability adoption (Sohal & De Vass 2022, 601–603). A strong commitment to *ecological values* was a primary internal driver. Many participating firms had *proactive approach* to minimizing waste and avoiding creating new materials, aligning with prior research on sustainability-driven innovation (Boons & Lüdeke-Freund 2013, 13). Sellers, in particular, prioritized ensuring their surplus materials were repurposed rather than discarded, reinforcing findings that SMEs often embed sustainability at the core of their operations (Garcés-Ayerbe et al. 2019, 12). This extends prior research by demonstrating that sustainability-oriented firms are not merely responding to regulations but proactively seeking solutions that align with their principles.

Beyond sustainability, *economic benefits* strongly influenced engagement. Many buyers saw surplus materials as a cost-effective alternative to virgin textiles, while sellers aimed to monetize their excess inventory instead of resorting to incineration or disposal. These findings align with prior research on the financial incentives of circular economy adoption (Sehnem et al. 2019, 791–792, 794). From an operational perspective, *surplus storage limitations* were a major driver for seller firms. Many lacked the capacity to store excess materials long-term, making surplus resale an attractive solution for freeing up valuable space without throwing fabrics to waste. Additionally, some buyer firms saw surplus sourcing as an *opportunity to lower production costs* and *relocate manufacturing closer to home*, improving supply chain resilience by reducing reliance on long-distance sourcing. This finding expands the current understanding of possibilities with material circulation (Ranta et al. 2020, 296).

However, a key internal barrier that discouraged seller firms from engaging with circular platforms was the *inefficiency of their surplus management systems*. Many firms relied on outdated, fragmented, or entirely manual tracking methods, making it labour-intensive and time-consuming to document, categorize, and list surplus materials. Instead of seamlessly integrating with platform services, sellers faced an additional burden of manually identifying available stock, often requiring substantial effort. This barrier aligns with previous research and cases on production inefficiencies in circular material

exchanges (Berg & Wilts 2019, 3–4; WWD 12.11.2019), which highlight how inadequate surplus tracking and inventory systems create significant friction in surplus redistribution.

7.2.2 External influences on platform engagement

Externally, *trust* and *platform reliability* emerged as critical determinants of engagement. While previous research has emphasized the role of trust in digital platform adoption (Berg & Wilts 2019, 5–7; Behera & Bala 2023, 26), this study adds nuance by showing that firms preferred *local platforms* due to shared regulatory and cultural expectations. This highlights the importance of geographical and institutional trust in B2B circular platform adoption, an aspect underexplored in the literature.

The findings also challenge the assumption that *consumer demand* is a key driver of circular business adoption (Diabat et al. 2014, 401; Vehmas et al. 2018, 296; Mostaghel & Chirumalla 2021, 43). While D'Adamo and Lupi (2021, 4) suggest that a "circular premium" exists, where consumers are willing to pay more for circular products, this research found that many businesses perceived consumer demand as *uncertain or even lacking*. The dominance of ultra-fast fashion and cost-driven consumer behaviour complicates the marketability of surplus-based products, indicating that customer demand alone may not be sufficient to drive widespread circular adoption. This aligns with recent warnings about the unsustainable phenomena and its threat to circular economy objectives (Dzhengiz et al. 2023, 13–14).

Additionally, while customers valued sustainability in firms' operations, they did not *actively inquire about or show interest in surplus management efforts*. Sellers observed that their customers rarely questioned how excess materials were handled, meaning that surplus management did not generate a competitive advantage or influence purchasing decisions. As a result, firms lacked external pressure to develop structured surplus tracking systems or improve internal efficiency. This absence of consumer-driven accountability contributed to the persistence of surplus management inefficiencies, as sellers had little external motivation to prioritize resale over disposal.

The *lack of regulatory incentives* and clear policies slowed the adoption of circular solutions. Many firms hesitated to invest in surplus exchanges without stronger legislative support or financial incentives to make circular practices competitive. With key EU policies still pending and the global economy facing a "multi-crisis", businesses lacked

clarity on future commitments. However, *financial incentives* proved essential, making otherwise costly circular initiatives viable. This underscores the need for clear policies and public support to drive circular economy adoption (European Commission 2022).

Another major external barrier identified in this study relates to the *scalability of surplus-based products*, particularly for buyer firms. Companies that prioritized long-term procurement strategies and pre-planned production schedules found it difficult to rely on surplus materials due to inconsistent availability and unpredictable supply flows. Unlike traditional sourcing models, where firms can order specific materials as needed, surplus materials appear in fluctuating quantities, colours, and qualities, making it difficult for businesses to plan production and forecast sales reliably. This issue was particularly problematic for businesses that require stable supply chains to scale production or secure advance sales.

In addition, *e-commerce platforms* presented challenges for selling surplus-based products. Unlike standard retail products, surplus materials often vary in colour, texture, or availability, making it challenging to present them in a uniform and consistent way online. Consumers expect product consistency, and any differences between what is displayed online and what they receive can lead to dissatisfaction and product returns. These challenges compound the difficulty of marketing surplus-based products in digital retail environments, making them less attractive to businesses that primarily sell online. While these findings highlight significant barriers to buyer participation, they also expose a gap in existing research. Prior literature on circular business models has largely focused on the viability of recycling and post-consumer reuse (Bocken et al. 2016; Ranta et al. 2020) but has not sufficiently explored how surplus-based products fit into existing e-commerce structures or how firms can manage inconsistent material availability within digital sales channels.

The adoption of circular digital platforms is influenced by a balance of drivers and barriers, which are summarized in table 14. Overcoming these barriers while leveraging key drivers is essential for fostering platform adoption and advancing the circular economy.

Table 14 Key barriers and drivers for circular platform engagement

Barriers	*Drivers*
Buyers	
Scalability and marketability issues with surplus	Potential to localise production
Sellers	
Surplus management inefficiencies	
Shared	
Uncertain customer interest	Environmental benefits
Pending regulations and global uncertainty	Economic benefits
	Local service provider
	Financial incentives

However, some challenges that were initially perceived as barriers were found to be highly context-specific and have instead been categorized as contingencies. Factors such as surplus material availability and industry-specific market expectations influence firms' experiences on these platforms, rather than acting as universal barriers to adoption. Recognizing these contingencies is essential for platform development, as they highlight the need for tailored solutions rather than one-size-fits-all approaches.

7.3 Customer experience formation on circular digital platforms

7.3.1 Contextual factors influencing customer experience

Understanding B2B customer experience on circular digital platforms requires distinguishing between the factors influencing participation and the factors shaping service experiences. While barriers and drivers explain why firms choose to participate—or hesitate—on surplus material platforms, contingencies explain how different firms experience the service based on their organizational characteristics, market environment, and relational context.

Despite the growing interest in circular economy platforms (Berg & Wilts 2019; Wirtz et al. 2019; Ranta et al. 2020; Moriuchi & Takahashi 2022), limited research has explored the experiential realities of businesses engaging with these digital ecosystems—a critical gap addressed in this study. By examining how firms navigate and evaluate circular platform services, this research provides deeper insights into the practical challenges, interactions, and decision-making processes that shape engagement.

This study identified four key contingencies that influenced firms' experiences with circular digital platforms: customer, situational, sociocultural contingencies, and relational contingencies. Each of these factors played a crucial role in shaping firms' experiences and evaluations with the platform.

Customer Contingencies

Customer contingencies refer to firm-specific characteristics, resources, and strategic priorities that shape engagement with circular platforms (Becker & Jaakkola 2020, 640). This study found that *market positioning* heavily influenced firms' ability to integrate surplus materials. While some research suggests a "circular premium" (D'Adamo & Lupi 2021, 4), this study indicates that circular products struggle in low-cost retail markets due to higher production costs and market misalignment. Instead, they are better suited for high-end or niche markets, where consumers value sustainability, craftsmanship, and uniqueness over price. Thus, firms positioned in high-value segments were more likely to re-engage with the platform. This aligns with Vehmas et al. (2018, 296), who argue that circular products perform better when positioned as luxury or limited-edition items.

These insights highlight a key strategic consideration for businesses: effective circular business models may depend not only on cost efficiencies but also on aligning with consumer perceptions of value. Future research should further examine how branding, storytelling, and premium positioning strategies can enhance the marketability of circular products, particularly in industries where sustainability narratives influence purchasing behaviour.

Situational contingencies

Situational contingencies refer to context-specific factors that affect engagement at the time of interaction (Becker & Jaakkola 2020, 640). One of the most influential situational factors in this study was *material availability* for buyers. Buyers often struggled to find materials that aligned with their specific needs in terms of fabric type, quantity, and consistency, making surplus integration unpredictable. These findings connect to the widely discussed network effects, where the success of the digital platform is dependent on a critical mass of users and in this case, material supply (Wirtz et al. 2019, 457; Cen & Li 2020, 327).

For seller firms, the challenge was not the availability of surplus itself but aligning their offerings with buyer demand. Niche or highly specialized fabrics often remained unsold for extended periods, while demand for more common or “trendy” materials frequently outpaced supply. This *supply-demand mismatch* underscores a structural limitation of current surplus marketplaces, which lack predictive tools, demand aggregation mechanisms, and efficient material-matching systems to optimize transactions between buyers and sellers. Additionally, by providing clearer examples of how surplus fabrics can be repurposed into garments or other products, platforms could increase buyer confidence and expand market potential for underutilized materials.

Despite the importance of situational contingencies in shaping B2B engagement with circular digital platforms, this factor remains largely unexplored in existing literature. Future research should examine how predictive analytics, improved matchmaking algorithms, and targeted marketing strategies can enhance material circulation.

Sociocultural contingencies

Sociocultural contingencies encompass industry norms, market expectations, and consumer perceptions that shape how firms approach circular sourcing (Becker & Jaakkola 2020, 640). This study found that *consumer preferences* and *industry norms* significantly influenced business decisions regarding surplus-based products.

In male-dominated sports and fitness industries, sustainability was not a strong purchasing driver, making firms hesitant to adopt circular practices. Customers in these sectors prioritized performance, and product consistency, limiting the perceived value of surplus-based materials. Same applied to price-sensitive retail markets, where cost was prioritised. Conversely, in industries where sustainability branding holds greater consumer appeal, such as fashion, design, and eco-conscious consumer markets, circular products aligned with evolving trends, strengthening firms' brand positioning and market differentiation. This highlights how industry expectations shape the commercial viability of circular offerings, influencing whether businesses perceive them as risks or competitive advantages.

These findings emphasize the need for industry-specific approaches to circular economy adoption. Notably, existing literature has yet to explore how sociocultural factors impact

firm engagement with B2B circular platforms, presenting an important area for future research.

Relational contingencies

This study extends Becker and Jaakkola's (2020) contingencies in customer experience, which was originally applied to B2C contexts, to the B2B environment, where relational dynamics play a critical role. Unlike one-time transactions in consumer markets, B2B relationships are built on accumulated trust, shared routines, and established expectations (Gounaris & Almoraish 2024, 14). In this context, trust, prior experience, and ongoing collaboration are key factors shaping engagement with digital platforms (Purmonen et al. 2023, 79).

The findings indicate that *human interaction* and *guidance* were central to the platform experience, particularly in relation to *expertise levels*. For seller firms, this meant knowing how to manage surplus materials and provide necessary information, while for buyer firms, it involved expertise in textiles, design, and production. Firms with less experience in these areas relied heavily on support and additional services to navigate the platform effectively.

Notably, the study found that firms assessed their relationship with Nextex not through the platform interface itself, but through the *quality of human interactions* with the service provider. Personalized support, proactive communication, and tailored services were instrumental in strengthening trust and fostering long-term engagement. These interactions helped firms view Nextex as a collaborative partner invested in their success, rather than just a transactional service provider.

This underscores the importance of integrating human-centric elements into platform development especially if the interface functionalities are not yet fully optimised. For firms with limited expertise or resources, strong relational support reduces uncertainty, ensures smoother platform use, and promotes sustained engagement. Lundin and Kindström (2023, 8) reinforce this by arguing that digitalization does not diminish the value of human interactions; instead, combining digital and human touchpoints enhances customer journeys by balancing efficiency with relational depth.

Ultimately, fostering strong relational ties through service provider interactions is essential for building trust, enhancing customer satisfaction, and encouraging long-term

participation on circular digital platforms. Despite its significance, the role of relational contingencies in B2B circular platform engagement remains underexplored in existing literature, highlighting a key area for future research.

This chapter has so far explored the key factors influencing B2B engagement, experiences, and evaluative outcomes on circular digital platforms, as summarized in figure 7. The findings distinguish between barriers and drivers, which explain *why* firms engage with circular platforms, and contingencies, which shape *how* different firms experience and evaluate these platforms based on their organizational characteristics, market environment, and relational dynamics.

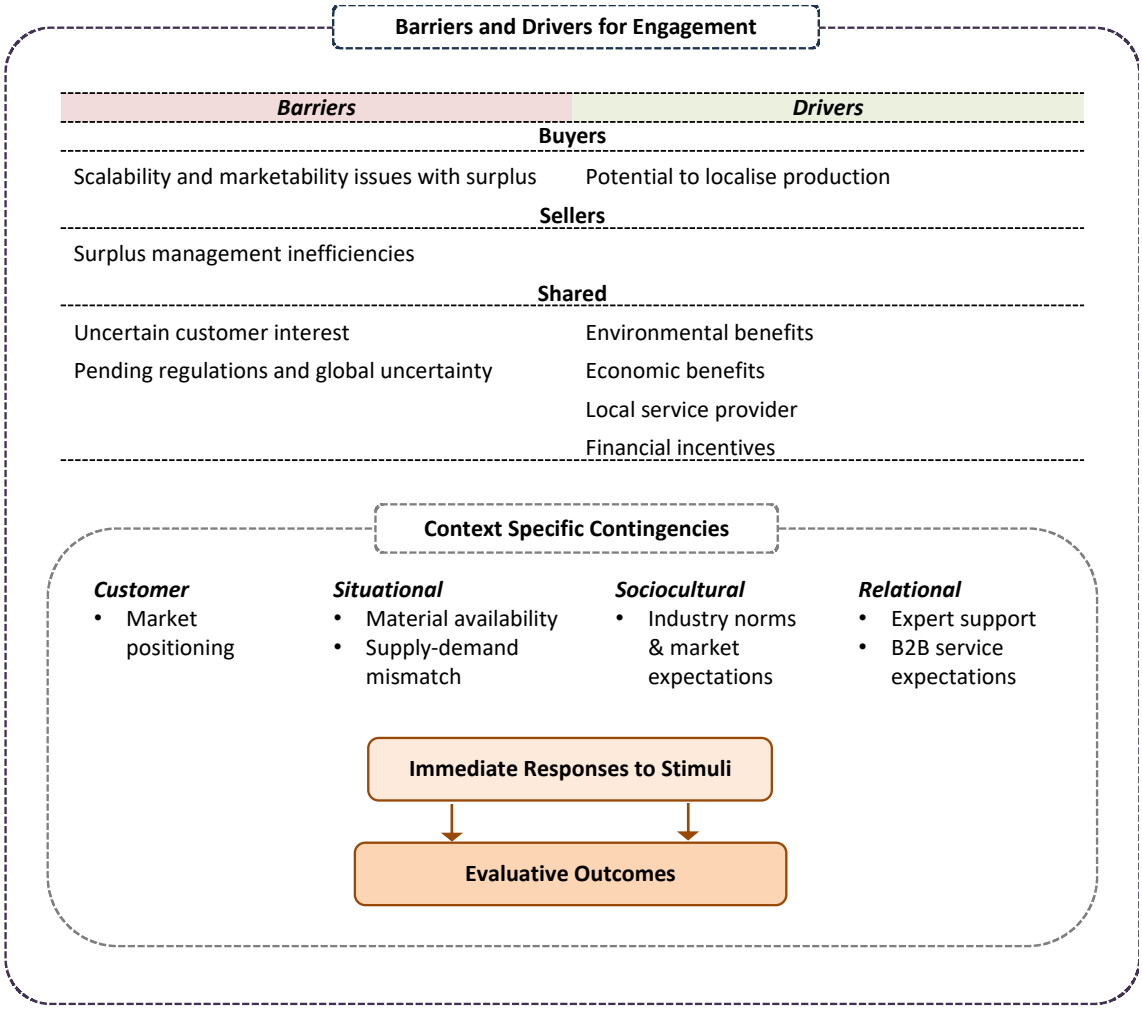


Figure 7 Factors influencing B2B engagement, experiences and evaluative outcomes within circular digital platforms

These contingencies shape firms' immediate responses to platform interactions, ultimately influencing evaluative outcomes. The next subchapter builds on these insights by defining the formation of B2B customer experience during different journey stages.

7.3.2 Framework for experience formation within circular digital platforms

Building on the insights from the previous sections, which examined why firms engage (drivers and barriers) and how different firms experience the service (contingencies), this section introduces a refined understanding of B2B customer journeys and customer experience within circular digital platforms. By focusing on the dynamic and multi-dimensional nature of these journeys (Ta et al. 2022, 8; Purmonen et al. 2023, 79; Gounaris & Almoraish 2024, 14), the section highlights the distinct stages buyers and sellers navigate when engaging with circular platforms and how these stages shape their overall experiences.

B2B customer journeys on circular digital platforms are dynamic, iterative, and relational processes through which firms engage with circular services to meet their sourcing or surplus management needs (Ta et al. 2022, 8; Purmonen et al. 2023, 79; Gounaris & Almoraish 2024, 14). These journeys unfold across distinct stages and involve a combination of digital, human, and material touchpoints (Wirtz et al. 2019, 454; Ta et al. 2022, 8; Purmonen et al. 2023, 79).

Unlike Purmonen et al.'s (2023) B2B customer journey model, which focuses on traditional organizational buying processes, this study incorporates both buyer and seller perspectives, recognizing their unique goals, challenges, and engagement patterns. The study found that sellers seek for an effortless and sustainable solution to offload surplus materials, ensuring that excess inventory is circulated rather than wasted. In contrast, buyers look for a reliable, cost-effective, and flexible supply of surplus materials, balancing sustainability goals with operational feasibility and procurement efficiency.

The study revealed that the journey stages identified in previous theoretical models (*need, search, compare, select, deploy, use, maintain, reassess, continue/ discontinue*) (Purmonen et al. 2023, 79) do not fully reflect the realities of buyer and seller experiences on circular digital platforms. By refining these stages (see Table 15), the research highlights the operational and experiential complexities of integrating circular processes into firms' workflows.

Table 15 Revised seller and buyer journeys

Seller journey stages	Buyer journey stages
Need identification: Recognizing the need to monetize or offload surplus materials.	**Need identification**: Identifying a requirement for ecological materials, guided by sustainability goals or cost considerations.
Search: Evaluating and comparing surplus solutions.	**Search**: Buyers browse available materials in the market.
Select: Selecting the platform and familiarizing themselves with listing processes.	**Compare**: Evaluating material options based on quality, price, and suitability before selecting.
Prepare inventory: Organizing, categorizing, and documenting their surplus materials.	**Order**: Selecting materials, making purchase decisions, and finalizing the purchase by confirming the order and payment.
Shipment: Preparing materials for collection, which are handled by third-party logistics providers.	**Deploy/produce:** Integrating purchased materials into their production processes.
Payment: Receiving financial reimbursement for the materials sold.	**Sell**: Selling the finished products made from surplus materials
Reassess experience: Evaluating the process, including effort, outcomes, and platform efficiency.	**Reassess experience**: Evaluating the overall experience, including material quality, platform usability, and logistical efficiency.
Continue or discontinue participation: Based on reassessment, deciding whether to maintain engagement with the platform.	**Continue or discontinue participation**

Customer experiences during these journeys are shaped by specific *stimuli* encountered at each stage. These stimuli include the *platform's digital interface*, *interactions with service providers*, and the *circulated materials*. Immediate and spontaneous responses to these stimuli influence how customers perceive the service and shape their engagement (Becker & Jaakkola 2020, 639).

This study expands the theoretical understanding of B2B customer experience by demonstrating that it is a multi-dimensional process shaped by *cognitive* (usability), *emotional* (trust), *sensory* (material quality), *behavioural* (process adaptation), and *social* (B2B relationships) dimensions (Lemon & Verhoef 2016, 71; Becker & Jaakkola 2020, 638; De Keyser et al. 2020, 443; Ta et al. 2022, 8–11). Unlike prior research that primarily defines B2B customer experience in cognitive, affective, and social terms (Gounaris & Almoraish 2024, 4), this study highlights how all five dimensions interact and evolve across different engagement stages, shaped by both *drivers and barriers for engagement* and *context-specific contingencies* (Figure 8) (Boons & Lüdeke-Freund 2013, 13; Berg & Wilts 2019, 3–4; Becker & Jaakkola 2020, 640; Purmonen et al. 2023, 79).

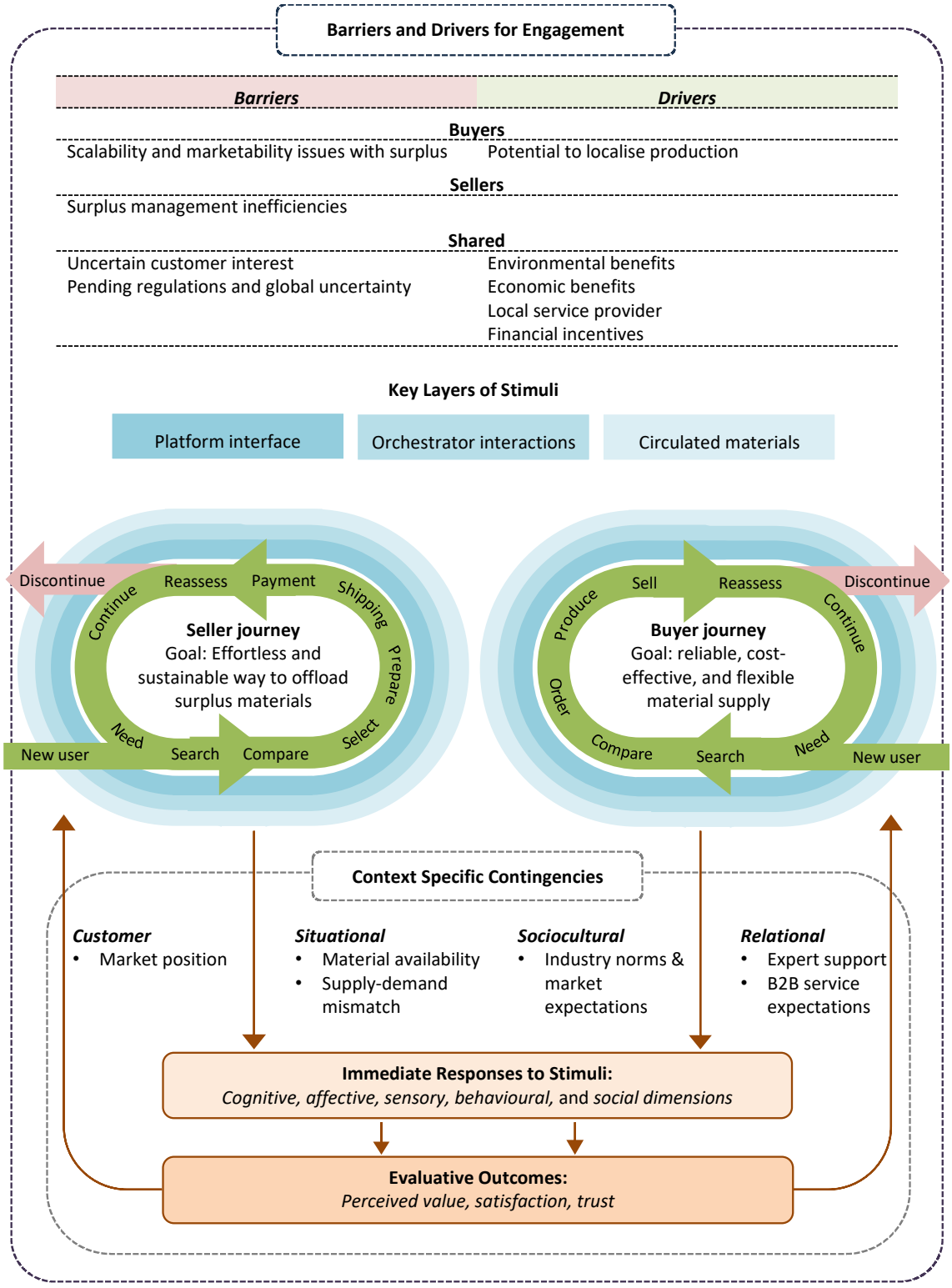


Figure 8 Framework for B2B customer experience formation within circular digital platforms

As firms progress through their journey stages, their final evaluative outcomes—based on effort, platform efficiency, material satisfaction, and overall experience—play a critical role in determining their continued engagement with circular digital platforms.

These outcomes reflect how well the platform meets the firm's operational needs and influences their satisfaction, perceived value, and trust (McLean 2017, 665; Wirtz et al. 2019, 466; Cen & Li 2020, 327; Gounaris & Almoraish 2024, 4).

7.4 Experiences shaping platform engagement

This section builds on previous insights by identifying specific customer experiences encountered by buyers and sellers throughout their journeys and linking them to strategic actions. By doing so, this study proposes targeted recommendations to enhance platform functionality, strengthen relationships, and build trust in the market, ultimately supporting broader adoption and the effective facilitation of surplus material circulation.

7.4.1 Key experiences affecting platform engagement

Cognitive and behavioural experiences significantly influenced buyer and seller engagement with the platform. This analysis relies on the theoretical understanding that the cognitive dimension captures the logical and rational aspects of how customers process and evaluate their experiences (Pecorari & Lima 2021, 9; Gounaris & Almoraish 2024, 3–4). Buyers faced *challenges navigating surplus listings* due to limited filtering options and time-intensive searches, creating barriers to efficiently finding materials that met their needs. Similarly, sellers struggled with the *complexity of organizing and listing surplus materials*, which required significant behavioural adaptation.

Behavioural experiences, as defined in theory, involve the actions customers take to adapt their practices to align with service requirements or circular principles (Ta et al. 2022, 10–11). For sellers*, transitioning from linear sourcing and disposal methods to circular processes* often necessitated internal workflow changes. As noted by Laughlin (1991, 228), such shifts require not only technical adjustments but also cultural changes and process redesigns, which can lead to resistance or inertia within organizations. These challenges underscore the importance of providing tools and features that minimize cognitive and behavioural effort, enabling businesses to adopt circular workflows with greater ease.

To address these challenges, the study highlights the need for enhancements in platform usability and searchability. Building on theoretical insights, such as Nielsen's (1992, 19–22) principle of user-centred design, the platform should aim to reduce cognitive load

through seamless navigation, effective interaction tools, and accurate material information (McLean 2017, 665; Wirtz et al. 2019, 466).

For sellers, *inventory management tools* would facilitate the organization, categorization, and documentation of surplus materials. For buyers, the implementation of real-time material availability alerts, advanced filtering options, and standardized material descriptions would enhance the search experience. Theoretical insights suggest that aesthetic elements, including inspiring visuals, can improve both cognitive and emotional experiences for users (Van Nguyen et al. 2022, 10). By showcasing potential material applications in creative and engaging ways or highlighting notable customer references, the platform could inspire buyers and encourage greater engagement. These features would not only improve operational efficiency but also promote the behavioural changes necessary to align workflows with circular principles.

Beyond usability enhancements, the platform's ability to offer *expert guidance and support* emerged as a key factor in overcoming knowledge gaps. The platform's consulting services provided critical assistance in navigating surplus material streams, selecting suitable materials, and even developing cutting patterns or production strategies for surplus-based products. By integrating marketplace functionality with specialized textile and production expertise, the platform addressed a knowledge gap that many firms, particularly those unfamiliar with circular processes, struggled with. Strengthening these value-added services would position the platform not only as a facilitator of transactions but also as a trusted partner in circular textile production.

Affective experiences played a critical role in shaping buyer and seller engagement, particularly in relation to trust, transparency, expectations, and motivation. This analysis draws on the theoretical understanding that positive and negative emotions directly impact customer behaviour and motivation, even in organizational buying contexts (Kemp et al. 2018, 25). Participants' emotional responses to their platform interactions were shaped by both the challenges they encountered and the meaningful aspects of engaging in circular practices.

While participants generally expressed confidence in the platform's local accountability and cultural alignment, challenges such as incomplete material descriptions and limited surplus availability required attention to sustain long-term engagement. Participants also displayed *empathy* toward the service provider, recognizing that as a young platform

operating within a novel business model, it was still refining its processes to facilitate transactions effectively. This empathy served as a buffer against dissatisfaction, helping maintain trust in the platform even when expectations were not fully met. Furthermore, *pleasure* from participating in an ecological and meaningful initiative outweighed minor inconveniences or feelings like *frustration*, as supported by the literature, which suggests that emotional satisfaction derived from sustainable actions can outweigh some service-related problems (Guyader et al. 2022, 8).

Despite these positive sentiments, some level of *disappointment* was inevitable when the platform was unable to match buyers with sellers. To address this, platforms can provide *certificates* or *visual reports* acknowledging customers' circular efforts, as suggested by a participant. Such tangible recognition reinforces participants' commitment to sustainability and helps maintain goodwill, even in cases where immediate transactions fail.

Beyond managing disappointment, the study found that sellers often experienced *strong emotional discomfort* when forced to discard surplus materials, as this conflicted with their sustainability values. This waste-related guilt presents an opportunity for marketing efforts to appeal to firms' ethical and sustainability-driven motivations. By emphasizing the platform's role as a *trusted alternative to waste*, marketing campaigns can highlight the shared commitment to sustainability, complementing financial incentives with ethical appeals.

Sensory experiences, which include the tactile and visual elements of circular materials (Ta et al. 2022, 8), played a crucial role in engagement, particularly for buyers who highly valued the *ability to order samples*. Being able to see and touch the materials allowed them to properly assess texture, durability, and usability, making it an essential step in the buying process. While buyers recognized the value of this feature, they also noted that ordering samples could be made even more seamless on the platform to further enhance efficiency and accessibility. Streamlining the sample-ordering process with *clear request options* and *improved interface design* would strengthen buyer confidence and improve decision-making.

In addition to tactile engagement, *high-quality visuals* were identified as another critical factor in improving the sensory experience of surplus materials. Buyers emphasized the need for detailed, high-resolution images that accurately depict fabric characteristics such

as texture, weight, and colour variations. This would allow firms to better assess materials before ordering samples, reducing uncertainty and improving decision-making.

Research on traditional platform models emphasize the role of network effects, suggesting that the value of a platform increases as more users join and participate (Johnson 2013, 348; Arica & Oliveira 2019, 708; Wirtz et al. 2019, 457; Cen & Li 2020, 327). Berg and Wilts (2019) support this view but add that in the context of circular digital platforms, transaction efficiency, data transparency, and platform governance emerge as equally critical factors. This study confirms these insights but extends them by introducing a B2B customer experience perspective, revealing that circular digital platforms are not purely transactional but *relational environments* where user trust, interaction quality, and opportunities for collaboration significantly impact engagement.

Social and collaborative experiences played a significant role in shaping platform engagement, reflecting the theoretical understanding that the social dimension emerges from interactions and relationships formed through platform use (Gounaris & Almoraish 2024, 5–6). Participants emphasized the platform's potential as a *collaborative ecosystem*, where businesses could co-create value, share resources, and drive innovation together. Through initiatives like shared marketing campaigns, co-branding efforts, and cross-sector partnerships, the platform fosters networks of collaboration, enhancing engagement and loyalty. Additionally, research on circular practices highlights that platforms can create a sense of community among participants who share ecological values, emphasizing shared responsibility and mutual support (Pera & Ferrulli 2024, 2939).

Beyond B2B relationships, firms also engage in social experiences with their customers, particularly in how surplus-based products are communicated and marketed. In the Nextex case, the platform's *standardized surplus material label* emerged as a valuable tool in facilitating these interactions. Participants reported that the label helped buyer firms clearly convey the sustainability and uniqueness of surplus-based products, resonating with consumers. As a result, some customers actively chose surplus-based products over conventional alternatives, demonstrating how effective communication tools can influence consumer preference.

Despite this positive outcome, participants emphasized that public awareness of production waste and surplus materials remains low, limiting demand for surplus-based

products. A *strong branding strategy*—similar to widely recognized labels like "100% recycled textile"—could reshape perceptions and position surplus-based products as high-value, desirable items.

Given the growing consumer interest in personal style and individuality, the success of second-hand and vintage fashion highlights uniqueness as a key market driver. Surplus materials align with this mindset by offering exclusive, one-of-a-kind products—creating a sense of "no one else has this exact piece but me." By leveraging this narrative, platforms can strengthen consumer engagement and drive mainstream adoption of surplus-based products.

7.4.2 Framework for circular digital platform development

To summarize the key experiences outlined in this chapter, figure 9 presents a visual framework that integrates concrete actions to enhance B2B engagement on circular digital platforms. This model illustrates how platform interface, orchestrator interactions, and circulated materials function across different stages of buyer and seller engagement. It categorizes the strategic recommendations into five key customer experience dimensions.

Cognitive aspects focus on platform usability, consultation, and standardization by suggesting advanced search functions, transparent material information, expertise services, and buyer-seller matching mechanisms to streamline surplus transactions. *Affective* experiences emphasize trust-building and motivation, with strategies such as highlighting environmental impact, offering certifications to reinforce sustainability values, and showing inspiring examples of material applications. *Sensory* engagement is addressed through improved access to material samples and high-quality visuals, enabling firms to better evaluate surplus materials.

Behavioural aspects concentrate on ease of service adoption, reducing entry barriers by introducing order flexibility, inventory management tools, structured buyer inquiries, and automated logistics support. The *social* dimension highlights the importance of B2B relationships, communication, and collaboration, focusing on customer support through meetings, surplus branding strategies to increase visibility, and facilitating shared marketing efforts and a sense of community among platform users.

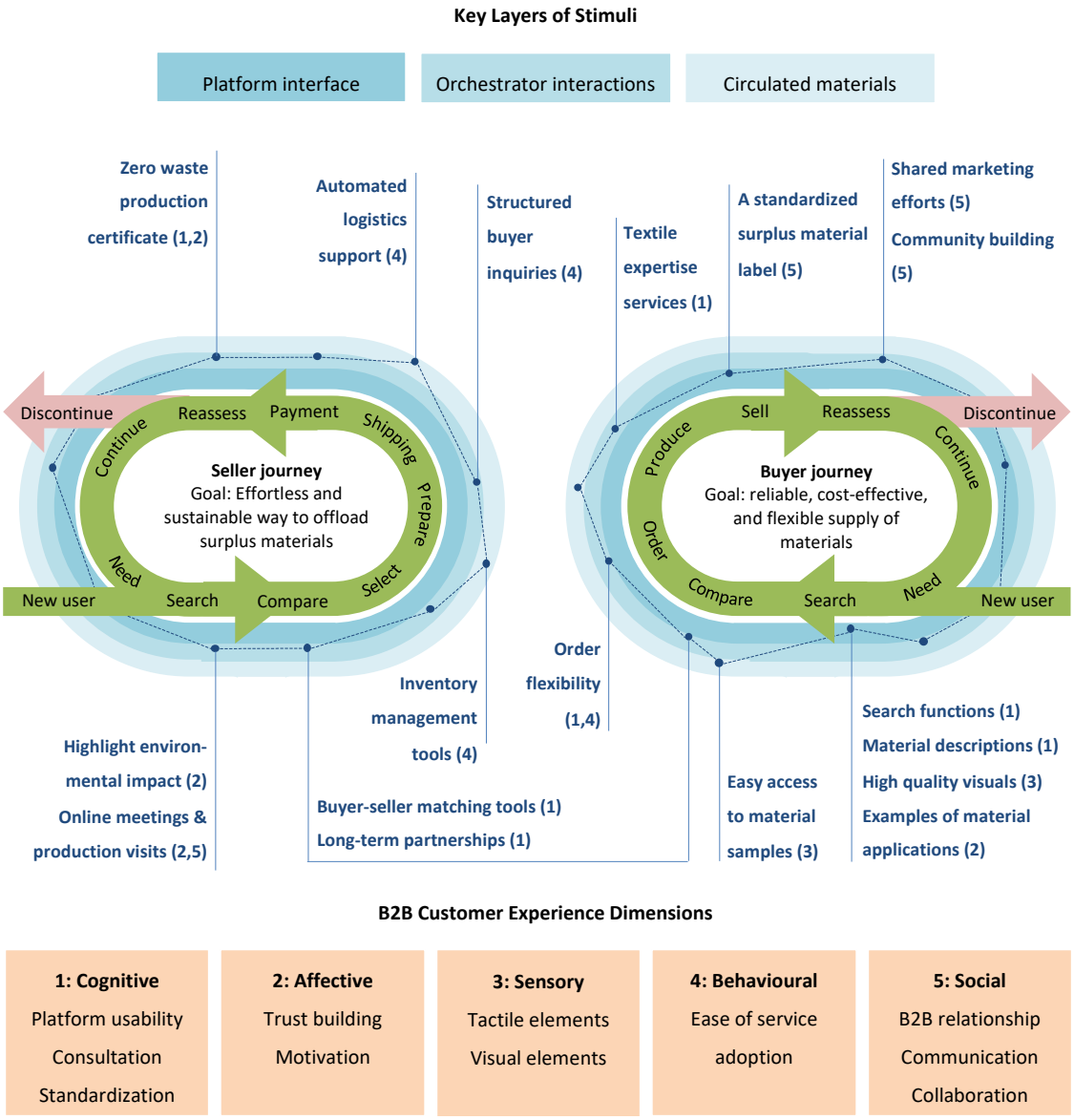


Figure 9 A framework for circular platform development based on B2B customer experiences

This framework serves as a practical guide not only for the case company but also for other circular digital platform designers. By translating B2B customer experiences into strategic, actionable elements, it bridges theoretical insight with real-world applicability. The proposed suggestions can inform the development of more engaging, functional, and value-driven platforms, ultimately supporting the wider adoption of circular practices in B2B settings.

7.4.3 Implications for industry and policy

Findings from this research have broader implications beyond the case study of Nextex, particularly for the development of circular digital platforms and the regulatory

environment that shapes their adoption. For the industry, circular digital platforms must evolve *beyond transactional marketplaces into service-driven ecosystems* that actively support businesses in navigating the complexities of surplus material exchange. This research highlights the importance of value-added services, such as certification mechanisms, which enhance trust and credibility, customization and material matching tools that help address buyer-seller misalignments, and demand forecasting solutions that mitigate supply unpredictability. Additionally, platforms should incorporate human-facilitated services, such as expert consultation and structured inquiries, to bridge knowledge gaps and improve usability for both buyers and sellers. By integrating these elements, circular platforms can foster stronger engagement, enhance scalability, and create more reliable sourcing solutions for businesses.

For policy, accelerating circular economy adoption requires *regulatory interventions that facilitate surplus material reuse*. To encourage broader participation, policymakers should implement financial incentives, such as tax benefits and subsidies, that make surplus-based sourcing more economically viable. Additionally, regulatory support is needed to address the overlooked pre-consumer waste problem, that stems from poor production waste management practises. By increasing the cost of textile incineration and demanding surplus material traceability, producers will have better incentives to offload their leftovers through the platform. This study also underscores the need for policies that promote collaborative networks within the circular economy, fostering industry-wide cooperation in surplus management. By addressing these factors, policymakers can help create a more structured and scalable circular economy, where surplus materials are seamlessly reintegrated into production cycles rather than lost as waste.

7.5 Limitations and future research directions

While this research provides valuable insights into B2B customer experiences within circular digital platforms, it has certain limitations that present opportunities for further exploration. Addressing these gaps can deepen the understanding of surplus-based digital ecosystems and their role in enabling circular material flows.

One key limitation is the *industry-specific focus* of this study. By examining surplus material exchange within the textile and clothing sector, the findings may not fully capture the dynamics of circular digital platforms in other industries, such as construction or electronics, where material flows, procurement practices, and regulatory frameworks

differ. Future research could explore cross-industry comparisons to assess how platform engagement varies and whether cross-industrial material circulation could be a viable solution.

The study's qualitative, *case-study approach* provides rich contextual insights, but its generalizability is limited. A broader quantitative study incorporating a larger sample of platform users across multiple industries could validate the identified contingencies, experiential dimensions, and strategic recommendations, leading to a more comprehensive framework for circular platform engagement.

Additionally, this research captures a *single point in time*, meaning it does not account for how platform engagement evolves. The long-term usability and impact of circular digital platforms—including whether businesses increase or decrease participation based on evaluative outcomes—remains an open question. Longitudinal studies tracking firm engagement over time could offer insights into scalability, organizational learning, and strategic shifts regarding surplus material sourcing and selling.

This study also highlights *relational contingencies* as a key factor shaping B2B engagement, emphasizing the role of trust, ongoing collaboration, and human facilitation in surplus material exchange. However, further research is needed to explore how trust is built, sustained, or eroded in a highly digitized platform environment. As platform functionalities advance, an important question remains: Will B2B customers still rely on human interactions to establish trust, or can platform interfaces fulfil these relational needs?

Additionally, if enhanced platform functionalities reduce the role of the platform orchestrator in facilitating transactions, it becomes crucial to consider *the duality of trust*—not only trust in the platform orchestrator but also in the sellers themselves. Future research should examine how digital platforms can ensure credibility, reliability, and quality assurance when direct orchestrator involvement diminishes, and whether trust mechanisms need to evolve to accommodate a more automated exchange process.

The *scalability and standardization* of circular digital platforms also require further examination. While digital solutions help address inefficiencies (Berg & Wilts 2019), surplus material flows remain unpredictable, posing challenges for large-scale production with surplus-based inputs. Future research could investigate successful business models

that have scaled surplus-based production and whether standardization is possible within smaller-scale operations. A multiple case study exploring such examples could offer valuable insights into how businesses can thrive using surplus materials.

Moreover, *technological advancements* could help bridge the persistent gap between fluctuating supply and demand. Future research should explore AI-driven matchmaking tools that enhance seller-buyer alignment, making surplus-based sourcing more viable and efficient. Similarly, studying long-term surplus seller-buyer relationships—where firms consistently source from the same surplus providers—could reveal the role of contract-based sourcing, trust-building mechanisms, and material standardization in creating more structured and predictable surplus exchanges in B2B markets.

Finally, *e-commerce challenges* related to surplus-based products warrant further exploration. Given the unique and limited availability of surplus materials, future research should assess whether brands need new digital marketing strategies to differentiate surplus-based products from traditional offerings. Visual presentation, consumer education, and branding approaches may need to be adapted to effectively communicate the value and uniqueness of surplus materials in an online marketplace.

By addressing these limitations, future research can contribute to a more comprehensive, scalable, and service-oriented vision for circular digital platforms, supporting the broader transition to a circular economy.

8 Summary

The textile and clothing industry is a significant contributor to global waste, yet pre-consumer textile waste—including production offcuts, overstock, and roll ends—remains largely unaddressed. While circular economy initiatives have gained traction, the redistribution of surplus materials remains underdeveloped, limiting its potential for waste reduction and resource efficiency. Circular digital platforms have emerged as promising facilitators of surplus exchange, connecting firms with excess materials to those who can repurpose them. However, the adoption of these platforms remains limited.

This study explored how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the T&C industry. It examined the barriers and enablers to platform adoption, the formation of B2B customer experience within these platforms, and the key experiences that support engagement. Through this investigation the study aims to provide strategic tools for designing services that encourage participation on circular digital platforms. The research is based on qualitative data from business customers of a textile deadstock marketplace, focusing on how firms navigate these platforms and what kind of service experiences support engagement.

The findings reveal that firms are primarily driven by sustainability commitments and economic benefits when engaging with circular digital platforms. However, several barriers hinder participation, including inefficient surplus management systems, limited consumer interest, and the challenge of scaling and marketing surplus-based products. Beyond these barriers, context-specific contingencies influence how businesses experience circular platforms. Factors such as market positioning, supply-demand mismatches, and industry norms shape engagement. Notably, firms with limited knowledge of surplus material management or product development often relied on consulting services from the platform orchestrator, emphasizing the role of value-adding expert support in fostering long-term engagement.

Theoretically, this research bridges a knowledge gap by integrating insights from circular economy, digital platforms, and B2B customer experience literature. It extends the existing body of knowledge by demonstrating that barriers to circular platform adoption are not solely economic or operational but also tied to consumer perception and market positioning. It further challenges the assumption that circular business models are

primarily demand-driven, revealing that firms often engage with surplus-based solutions proactively, despite limited external incentives. Moreover, this study highlights that circular digital platforms are not purely transactional but relational environments, where trust, interaction quality, and collaboration opportunities significantly shape engagement.

From a platform development perspective, the study provides a framework for enhancing long-term engagement by improving platform usability, expertise-based customer support, surplus-based product communication, and ease of service adoption. These insights offer practical tools for circular platform developers not only within the textile and clothing sector but also across other industries aiming to facilitate material circulation through digital platforms.

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Appendices

Appendix 1 Interview questions in Finnish

Introduction

The interviewer briefly introduces the research purpose that includes definitions of key concepts such as circular economy.

Background

The interviewee is asked to briefly describe their role in their firm, how long they have worked there, and when and for how long the firm has been a customer of Nextex.

RQ1: How can circular digital platforms facilitate the reuse of production waste in the T&C industry?

- *Millainen rooli kiertotaloudella on liiketoiminnassanne?*
- *Oletteko liiketoiminnassanne ottaneet jonkinlaisia kiertotalouden toimintamalleja käyttöön?*
- *Onko teillä kokemuksia muista kiertotalousalustoista?*

RQ2: What kind of drivers and barriers do businesses face when engaging with circular digital platforms?

- *Mikä on motivoinut teitä käyttämään Nextexin palveluja?*
    - *Esim. arvot*
    - *Esim. EU:n laatimat kannustimet*
    - *Esim. asiakkaiden kysyntä*
- *Oletteko kohdanneet jonkinlaisia haasteita tai esteitä palvelun käyttöönottamisessa? Millaisia?*
    - *Esim. vaikeuksia muuttaa aiempia toimintamalleja*
    - *Esim. taloudelliset haasteet*
    - *Esim. taloustilanteen epävarmuus*

RQ3: Which experiences in B2B customer journeys support engagement with circular digital platforms?

Kertoisitko lisää kokemuksistasi Nextexin palvelun käyttäjänä? Kuinka kauan käytitte palvelua? Mitä ostitte /myitte?

Millainen on viimeisin kokemuksenne Nextexin kanssa? Mikä teki siitä hyvän tai huonon? Muistatko kun joku asia meni erityisen hyvin tai huonosti?

Millainen olisi sinulle ideaali ylijäämätekstiilien markkinapaikka?

Depending on the participant's experiences, the interview would focus on the following areas in the table below.

	Dimensions	**Themes**	**Questions**
Platform interface	Quality	Information Security Usability	*Koitteko, että palvelusta oli tarpeeksi informoitu sivuilla? Koitteko alustan turvalliseksi /luotettavaksi?*
	Design	Interface design Visual features	*Oliko alusta selkeä tai miellyttävän näköinen?*
	Userbase	Network effects	Ostaja: *Millainen oli alustan materiaalitarjonta?* Myyjä: *Koitteko, että materiaaleillenne löytyi helposti ostajia?*
Orchestrator interactions	Cognitive	Customer goals Service price Efficiency	*Täyttikö palvelu odotukset/tavoitteet?* *Miten koitte palvelun hinnan? Entä saatu hyöty?*
	Affective	Ethical & moral satisfaction	*Tämän palvelun avulla osallistuitte kiertotalouteen ja pidensitte materiaalien elinkaarta. Miltä se tuntui?*
	Sensory	How materials look, feel, and smell	Ostaja: *Miltä tarjolla olevat materiaalit näyttivät, tuntuivat ja tuoksuivat?*
	Behavioural	Change resistance Effort required by the service	Ostaja*: Miten ylijäämän ostaminen poikkesi uusien materiaalien ostamisesta? Miltä se tuntui?* Myyjä*: Miten koitte ylijäämän myyntiprosessin? Oliko se haastavaa/ helppoa? Miksi?*

	Social	B2B relational context Long-term relationship Customer /consumer interactions Community building	*Miten koitte suhteenne palveluntarjoajan kanssa? Vaikuttiko suhde yleisesti palvelukokemukseen / tyytyväisyyteen?* *Viestittekö materiaalipalvelun käytöstä sidosryhmillenne, kuten asiakkaille?* *Koitteko tietynlaista kollektiivisuutta, osallisuutta kiertotalouden toimijaverkostoon?*

Appendix 2 Notice for participation in research

Tutkimuksen otsikko

B2B customer experience on circular digital platforms: Understanding engagement and challenges in a textile deadstock marketplace

Tutkimuksen kuvaus

Tämän tutkimus tarkastelee, miten B2B-asiakaskokemus ja sitoutuminen muodostuvat kiertotalouden digitaalisilla alustoilla, jotka edistävät ylijäämämateriaalien kiertoa tekstiili- ja vaateteollisuudessa. Tutkimalla, millaisia ajureita ja esteitä yritykset kohtaavat alustan käyttöönotossa, miten B2B-asiakaskokemus näillä alustoilla muodostuu ja mitkä avainkokemukset vaikuttavat sitoutumiseen, tutkimus pyrkii tarjoamaan strategisia työkaluja kiertotalouspalvelujen suunnitteluun.

Tutkimuksen haastatteluosio keskittyy kokemuksiisi kiertotalouteen osallistumisesta sekä case-yrityksen palveluiden käytöstä. Haastattelua käytetään yksinomaan tutkimustarkoituksiin. Tällä lomakkeella pyydämme suostumustasi haastatteluun sekä haastattelun nauhoittamiseen.

Tutkimuksen eteneminen

Tutkimus toteutetaan vuotena 2024 osana Olga Kauvosaaren kauppatieteiden maisterintutkielmaa sekä Liikesivistysrahaston tukemaa DESINEX-tutkimushanketta (Designing Circular Economy Experiences), jota johtaa Turun yliopiston markkinoinnin professori Elina Jaakkola.

Vapaaehtoisuus

Osallistuminen tutkimukseen on vapaaehtoista, ja osallistujat voivat vetäytyä haastattelusta milloin tahansa ilman, että heidän tarvitsee antaa syytä vetäytymiselleen. Huomioithan, että kun tutkimus on valmis, osallistumista ei voida jälkikäteen poistaa.

Luottamuksellisuus, tietojen käsittely ja säilytys

Tutkimustiedot käsitellään anonyymisti, mikä tarkoittaa, että yksittäisiä osallistujia ei voida tunnistaa tutkimusraportissa, eikä heidän tietojaan yhdistetä heihin. Tiedot säilytetään Turun yliopiston tietokannassa, johon on pääsy vain tutkijalla. Tutkija sitoutuu pitämään luottamukselliset, henkilökohtaiset tiedot salassa ulkopuolisilta. **Nämä tiedot sekä haastattelun nauhoitukset tuhotaan 31.12.2025 mennessä.**

Tutkimuksen tuloksia voidaan hyödyntää Liikesivistysrahaston tukemassa DESINEX-tutkimushankkeessa (Designing Circular Economy Experiences), jota johtaa Turun yliopiston markkinoinnin professori Elina Jaakkola.

Tämän tarkoituksena on antaa taustatietoa tutkimuksen tarkoituksesta, aihealueesta, tavoitteista ja toteutusmenetelmästä. Jos sinulla on kysyttävää tutkimuksesta tai tietojen säilyttämisestä, vastaan mielelläni lisätiedusteluihin (yhteystiedot alla). Kiitos paljon osallisuudestasi tähän tutkimukseen!

Tutkimuksen vastuuhenkilön yhteystiedot ovat alla.

Olga Kauvosaari, xxxxxxxxx@xxx.com, xxxxxxxxxx

Olen saanut riittävästi tietoa tutkimuksesta ja minulla on ollut mahdollisuus esittää kysymyksiä tutkijalle siitä. Minulla on ollut tarpeeksi aikaa tehdä päätös osallistumisestani tutkimukseen. Minua on tiedotettu seuraavista tutkimuksen etenemiseen ja aineiston analyysiin liittyvistä seikoista:

- Osallistuminen tutkimukseen on täysin vapaaehtoista.
- Haastattelu tallennetaan äänitallenteena, joka on ainoastaan tutkijan käytössä (mahdollistaen keskittymisen keskusteluun haastattelun aikana).
- Aineisto on luottamuksellista, ja aineistoa käsittelevä henkilö sitoutuu suojaamaan aineiston ja sen sisältämät henkilökohtaiset tiedot ulkopuolisilta. Aineisto tuhotaan tutkimuksen jälkeen.

- Opinnäytetyön julkaistussa aineistossa olevat henkilökohtaiset tiedot muutetaan muotoon, jossa nimiä tai muita tunnistettavia tietoja ei paljasteta.
- Voin vetäytyä osallistumisestani ennen tutkimuksen alkua tai sen aikana ilman, että minun tarvitsee antaa syytä. Kuitenkin osallistumista ei voida jälkikäteen poistaa valmiista opinnäytetyöstä.

Vahvistathan sähköpostitse, että haastattelusi voidaan tallentaa äänitallenteena.

Research Description

The purpose of the research is to explore how B2B customer experience and engagement develop on circular digital platforms that facilitate surplus material circulation in the textile and clothing (T&C) industry. It examines the barriers and enablers to platform adoption, the formation of B2B customer experience within these platforms, and the key experiences that support engagement. Through this investigation the study aims to provide strategic tools for designing services that encourage participation on circular digital platforms. The interview will focus on your experience with circular practises and using the case company's services. Your consent is sought for an interview related to this area. The interview will be used exclusively for research purposes.

Progress of the Research

The research will be conducted in the summer of 2024 as part of the master's thesis of B.Sc. Olga Kauvosaari in the field of business administration.

Voluntariness

Participation in the study is voluntary, and participants may withdraw from the research process at any point without the need to provide a reason for withdrawal. However, once the thesis is completed, involvement cannot be retrospectively removed.

Confidentiality, Data Processing, and Storage

Research data will be handled anonymously, meaning individual participants will not be identifiable in the research report, and their information will not be linked to them. Data will be stored in the University of Turku's database, accessible only to the researcher. The researcher commits to keeping confidential, personal information from being disclosed to external parties. The data will be destroyed by 31.12.2025.

Research data may be utilized by the research initiative DESINEX.

The purpose of this statement is to provide background information on the research's purpose, topic area, objectives, and implementation method. If you have any questions about the research or data preservation, I am happy to provide additional information (contact details below). I appreciate your positive attitude toward my research and the opportunity to interview you as part of the study.

Contact information for the responsible researcher for the study is provided below.

Olga Kauvosaari, email: olgakauvosaari@xx.xx phone: xxxxxxxxx

Appendix 3 Research data management plan

Research data

Research data type	Contains personal details/information*	I will gather/produce the data myself	Someone else has gathered/produced the data	Other notes
Interviews	x	x		

Processing personal data in research

The researcher complies with the EU's General Data Protection Regulation (GDPR) and the Finnish Data Protection Act. For data that contains personal details, the researcher has prepared a Data Protection Notice for research participants and determined the controller for the research data.

- The researcher will prepare a Data Protection Notice and give it to the research participants before collecting data ☒
- The controller for the personal details is the researcher themself ☒

Permissions and rights related to the use of data

For this study, all interviewees were asked for permission to use their responses in the research. They were also asked for consent to record the interviews. Each participant provided written permission via email.

Storing the data during the research process

During the research process the data will be stored in the university’s network drive.

Documenting the data and metadata

Throughout the research process, the data has been systematically stored and categorized in Excel sheets. These sheets contain findings from all interviewees and have been organized according to key themes identified in the analysis. The data has been structured to ensure clarity and traceability of insights while maintaining consistency in

categorization. No personal data has been stored in these files, ensuring compliance with ethical and data protection standards.

Data arrangement and integrity

- The researcher will keep the original data files separate from the data they are using in the research process, so that they can always revert back to the original, if need be. ☒
- The researcher will plan before starting the research how they will name the different data versions, and they will adhere to the plan consistently. ☒
- The researcher recognises the life span of the data from the beginning of the research and is already prepared for situations, where the data can alter unnoticed, for example while recording, transcribing, downloading, or in data conversions from one file format to another, etc. ☒

Metadata

The researcher will not store their data into a public archive/repository, and therefore they will not need to create any metadata.

Data after completing the research

After the completion of this thesis, all personal information, recordings, transcriptions and any other data that could be traced back to participants will be permanently deleted to ensure their privacy. However, relevant data related to the thesis will be retained in an Excel sheet stored in the researcher's iCloud for five years. This file will not contain any sensitive or personally identifiable information.

Appendix 4 AI usage declaration

AI usage declaration for thesis

- Has AI been used in the thesis: Yes
- A confirmation of responsibility: I take full responsibility for the content of the work based on AI usage
- AI tools used: ChatGPT
- Purpose of the AI usage
  - Refining text: Improving clarity, grammar, and structure in my writing while ensuring that the original content and arguments remained my own
  - Brainstorming ideas: Generating alternative ways to frame concepts and structuring sections more effectively
- Examples of key prompts used:
  - "Check this sentence for grammar mistakes and suggest a more concise alternative."
  - "How can I improve the transition between these two sections?"

At no point was AI used to generate original thesis content, conduct data analysis, or replace critical thinking and academic argumentation. All AI-assisted modifications were reviewed and critically assessed to maintain the integrity and validity of the research.