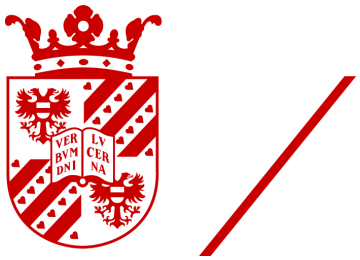

university of groningen

Mending the gap:
How fashion organizations foster consumer participation in garment repair initiatives

University of Groningen | Campus Fryslân

Author: Svenja Barth | S5944538

Sustainable Entrepreneurship Project

5 June 2025

Supervisor: Dr. Mariana Cardoso Chrispim

Co-assessor: Dr. Berfu Ünal

ABSTRACT

This study explores how fashion organizations foster consumer participation in circular initiatives, with a specific focus on garment repair. While garment repair is recognized as a valuable strategy within the circular economy, it is still underrepresented in both academic research and business practice—especially compared to recycling and upcycling. This thesis draws on circular economy theory and uses the R-imperatives framework to position repair as an impactful but often overlooked approach to extend the life cycle of garments.

A qualitative research design was employed, with semi-structured interviews conducted with eight fashion organizations in the Netherlands and Germany. Thematic analysis revealed that organizations adopt different strategies shaped by size, mission, and resources. Community-led initiatives emphasize accessibility, education, and emotional value, while larger companies prioritize structured, scalable garment repair services.

Findings show that consumer engagement is influenced by both practical and emotional motivations, but hindered by barriers such as cost perceptions, lack of awareness, and skill deficits. Hybrid approaches—combining operational scalability with personalized, value-driven engagement—emerged as the most promising path forward. The study concludes with practical recommendations and calls for future research incorporating direct consumer perspectives and broader geographic contexts.

TABLE OF CONTENTS

1. INTRODUCTION

The fashion industry is at a crossroads, simultaneously driving economic growth and posing significant environmental challenges. Despite increasing awareness of sustainability, the industry continues to exert substantial pressure on the environment. Annually, approximately 12.6 million tons of textile waste are generated in the European Union alone, with clothing and footwear amounting to 5.2 million tons—equivalent to 12 kg of waste per person each year (European Parliament, 2023). Globally, the fashion industry is responsible for around 10% of carbon emissions and 20% of wastewater pollution (European Parliament, 2023).

The inefficiency of the current system is highlighted by the fact that only 1% of clothing is recycled back into new garments (European Parliament, 2023). The problem's scale is further exacerbated by the shortened life cycle of garments, which has decreased by 36% over the past 15 years, with individuals purchasing five times more clothing today than in 1980 (Thomas, 2019). The author further elaborated that the average garment is now worn only seven times before disposal, despite still being functional. According to McQueen et al. (2022) extending the average lifespan of garments by just nine months has the potential to save approximately €5.93 billion resources annually.

In the light of these challenges, extending the lifespan of garments has emerged as a critical yet often underutilized strategy in addressing the fashion industry's environmental footprint (Wiedeman et al., 2023). Among the circular economy interventions available, *garment repair* plays a vital role by maintaining clothing in active use, thus directly mitigating waste and reducing the demand for new production (Ramirez-Escamilla et al., 2024). While Oxford English Dictionary (2025) defines garment as an item of clothing, the term *garment repair* refers to the process of restoring damaged or worn clothing items to a functional and wearable condition. This includes mending techniques such as sewing, patching, darning, reattaching buttons, and replacing zippers (University of Delaware, n.d.; Durrani, 2021). In this study, garment repair is limited to clothing items—excluding shoes, bags, and other accessories such as hats.

Historically, garment repair was a common practice driven by necessity, resource scarcity, and cultural values emphasizing durability and frugality. Individuals routinely employed techniques such as darning, patching, and sewing, passing these essential skills through generations (Berthon, 2017). Although the Industrial Revolution introduced mass production, making clothing more affordable (Fashinnovation, 2024), the culture of repair persisted into the mid-20th century as illustrated by Berthon (2017), Britain's 'Make, Do and Mend' campaign during World War II encouraged garment repair due to fabric rationing. However, with the rise of fast fashion—defined as *'inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends'* by Oxford English Dictionary (2025) —has contributed to a decline in repair practices (Diddi and Yan, 2019). As the authors state, advancements in manufacturing and supply chains reduced clothing prices significantly, fostering a disposable culture that favored new garments over repairing existing ones and thereby diminishing traditional mending skills. Manufacturers reinforced this disposability by producing garments with shorter lifespans and promoting rapid consumption cycles, profoundly impacting both society and the environment (Diddi and Yan, 2019). As Perzanowski (2022) observed, today's fashion industry is 'designed to be replaced, not to be repaired'.

An increasing number of initiatives are working to revive the repair practices in response to the growing impacts of fast fashion. This trend is gaining more and more attention in urban centers in the Netherlands (Circle Economy, 2024) and Germany, where circular and sustainable fashion consumption is flourishing (Russ, 2024). Various organizations and initiatives in both countries are beginning to embrace clothing repair, offering services and hosting workshops to encourage garment longevity (Beddington, 2023; United Repair Centre, 2024; Mended, 2023). In this study, the term *fashion organizations* refers to entities and initiatives engaged in the design, production, repair, reuse, upcycling or resale of clothing and related services. This includes a diverse range of actors, from privately owned businesses and start-ups to community-driven initiatives such as repair cafés. While these organizations may differ in structure, scale, and funding—ranging from profit-driven companies to volunteer-based collectives—they share a common goal of contributing to circular fashion practices, particularly through garment repair. The use of the term *fashion organizations* allows for an inclusive approach that reflects the varied nature of the research participants.

Despite its potential, garment repair as a standalone circular strategy has been largely overlooked in academic research, which primarily focuses on recycling and upcycling (Majumdar et al., 2020; Uddin et al., 2024). While some studies mention repair within broader sustainability discussions, they rarely prioritize it as a central strategy (Zhang et al., 2022). Existing research predominantly addresses production processes and material innovations, creating a gap in understanding repair's strategic role in business models (Durrani, 2018). Concurrently, consumer-focused research highlights barriers such as cost, convenience, and lack of awareness or skills as significant deterrents to repair participation (De Aguiar Hugo, 2022; Harris, 2015; Hernandez, 2020). Thus, several research gaps have been identified.

Research gap	**Reference of previous papers**	**How this gap is addressed in this thesis**
Insufficient exploration of company-centric strategies to mainstream garment repair within business models, with most research concentrating on production or recycling, leaving a gap in understanding the strategic role of repair within business models.	Zhang et al. (2022); Durrani (2018)	This thesis addresses the gap by analyzing how fashion organizations in the Netherlands and Germany embed garment repair within their business models. It offers concrete insights into organization strategies of different types that prioritize repair as a core element of circular business practices.
A lack of research has been identified on how fashion organizations engage with consumers to overcome common barriers to garment repair, such as cost, convenience, and lack of awareness or skills. While prior studies highlight these obstacles, few have examined how organizations actively address them through tailored engagement strategies.	De Aguiar Hugo, 2022; McQueen et al., 2022; Ramirez-Escamilla et al., 2024	This gap is addressed by examining how fashion organizations communicate and design their repair services to actively engage consumers and reduce participation barriers. Through in-depth interviews, the study explores how organizations include consumers into the repair process and how they overcome barriers and challenges related to repair.

Table 1: Overview of the research gaps and how they are addressed in this study.

Garment repair directly addresses critical issues faced by the textile industry, such as reducing textile waste and extending garment lifecycles (Wiedeman et al, 2023). Notably, research indicates that extending the use of garments–such as by repairing them–by just nine months can reduce their carbon, water, and waste footprints by 20-30% on average (Niinimäki & Durrani, 2020; Wiedemann et al., 2023). However, operational challenges (Dissanayake & Weerasinghe, 2022; Ramirez-Escamilla et al., 2024), consumer barriers (De Aguiar Hugo, 2022; Harris et al., 2015; McQueen et al., 2022), and a lack of strategic integration into existing business models (Durani & Niinimäki, 2020) highlight a significant need for deeper exploration. The aim of this study is to analyze how fashion organizations foster consumer participation in garment repair initiatives within their circular economy strategies to provide actionable insights and practical recommendations.

The objectives are:

1. **Analyze current strategies for garment repair**
    1. Examine and compare repair strategies within fashion organizations.
    2. Explore repair initiatives and identify operational challenges.

2. **Evaluate consumer engagement on garment repair**
    1. Assess how these strategies encourage consumer engagement in garment repair.
    2. Identify fashion organization's perception about the barriers faced by consumers.

The central research question is:

How can fashion organizations foster consumer participation in circular initiatives, particularly garment repair?

2. THEORY

2.1 Circular Economy and the R-imperatives in the Fashion Industry

Reike et al. (2018) conceptualize the circular economy as a system for maximizing resource value through closed-loop strategies such as reuse, repair, and recycling. Rather than a single definition, they offer a spectrum of R-imperatives—ranging from maintenance and reuse to recycling—that differ in environmental impact and level of intervention. This framework guides sustainable production and consumption by emphasizing loop-slowing, narrowing, and closing strategies. This circular approach marks a departure from the linear *'take-make-dispose'* model and aims to extend product lifespans, reduce waste, and minimize resource inputs (Ellen MacArthur Foundation, 2017).

Within this framework, the R-imperatives—reduce, reuse, repair, refurbish, remanufacture, and recycle—help map out different strategies for achieving sustainability in practice (Dissanayake & Weerasinghe, 2022). Strategies such as reuse and repair are more environmentally favorable than recycling as they require less additional energy and infrastructure (Abagnato et al., 2024). Repair plays a pivotal role in slowing the loop by maintaining garments in use longer without requiring energy-intensive interventions like recycling. It is therefore ranked higher on the circularity hierarchy (Abagnato et al., 2024) and supported by organizations like United Nations Environment Programme (2018) for its capacity to reduce emissions, raw material use, and waste. In a sector known for overproduction and short garment lifecycles, repair emerges as a practical, high-impact strategy.

Despite its strategic importance, repair is often overlooked in fashion's circular economy discourse. Mishra et al. (2021) and Huynh (2022) point to systemic barriers—such as low garment repairability, weak infrastructure, and lack of consumer incentives—as factors limiting its adoption. Chen and Tabata (2024) emphasize that true circularity also requires alignment across product design, consumer engagement, and policy support. Their study reveals that awareness alone is insufficient; supportive infrastructure and economic incentives are essential to shift behaviors from passive consumption toward active participation in reuse and repair.

In this light, Vanacker et al. (2023) argue that access to repair should also be viewed through a lens of equity, suggesting that circular practices must be inclusive and affordable to ensure wide adoption. These theoretical insights shape how this study positions repair—not just as a technical fix—but as a socially embedded and underutilized circular practice.

2.2 Positioning Garment Repair within Circular Fashion Strategies

Most literature on circular fashion emphasizes upstream innovations like *recycling* and *upcycling*. *Recycling* typically involves transforming post-consumer textiles into raw fibers, while *upcycling* transforms waste into new, often higher-value products (Uddin et al., 2024; Ramirez-Escamilla et al., 2024). Both contribute to resource efficiency, but demand energy, infrastructure, or design intervention (Ramirez-Escamilla et al., 2024; Durrani, 2018).

By contrast, garment repair prolongs product use by addressing small damages—such as holes or broken seams—with low energy input and little material waste (Zhang & Hale, 2022). It is therefore an accessible and immediate intervention, especially valuable in reducing post-consumer waste and unlike re- or upcycling, repair maintains the original function of the garment Zhang & Hale, 2022). As a low-tech, high-impact strategy, repair can directly support waste reduction and more conscious consumption (Zhang & Hale, 2022).

Despite its advantages, repair remains marginal in both academic research and corporate practice. Scholars like Zhang and Hale (2022) note that repair is often mentioned only peripherally in sustainability discussions. Durrani and Niinimäki (2020) add that research tends to focus on production or recycling innovations, leaving repair underexplored as a circular business strategy.

Dissanayake and Weerasinghe (2022) identify four pillars of circular fashion: resource efficiency (minimizing inputs through sustainable materials and energy-saving methods), circular design (creating durable and recyclable garments), end-of-life circularity (promoting reuse, remanufacturing, and recycling), and product life extension (prolonging garment use through

practices such as repair and reuse). Repair, where this study is situated, falls under the latter and, according to the authors, is the most immediately impactful yet least applied strategy. While strategies like rental and resale are increasingly popular, repair receives less attention, despite its potential to directly reduce textile waste (Dissanayake & Weerasinghe, 2022).

Industry examples, such as the United Repair Center or Patagonia's Worn Wear program, show that repair-focused business models are emerging (United Repair Centre, 2024; Patagonia, 2025). Yet, these remain exceptions rather than the norm. Academic analysis often overlooks how such models operate, or how they engage consumers in extending product lifespans.

2.3 Operational and Systemic Challenges in Implementing Garment Repair

Numerous barriers hinder the widespread adoption of repair in fashion. De Aguiar Hugo et al. (2021) cite fragmented supply chains, limited standardization, and poor infrastructure as key obstacles to operationalizing repair services. Fast fashion compounds these challenges by producing low-cost garments that are often not designed to be repairable (Perzanowski, 2022).

Offering repair services also poses resource challenges. Without supportive frameworks or financial incentives, companies report that repairs can be labor-intensive and economically unsustainable (Mishra et al., 2021). Systemic limitations are further emphasized by Dissanayake and Weerasinghe (2022), who stress that circular strategies demand collaboration across sectors. They state that even when fashion businesses are open to sustainability transitions, they face logistical, regulatory, and coordination challenges that slow adoption.

Gautam (2024) adds that many circular initiatives remain siloed due to short-term thinking and a lack of policy support. Repair, though conceptually strong, is often side-lined in favor of more scalable or quantifiable strategies, which results in companies prioritizing visible sustainability actions like recycled materials over less tangible efforts like repair (Gautam, 2024).

Ramirez-Escamilla et al. (2024) argue that repair is central to slowing consumption but remains constrained by weak infrastructure, insufficient education, and limited consumer awareness. Addressing these barriers requires more than corporate will; it demands systemic change. This

study therefore focuses on how fashion organizations work within—and around—these constraints to implement repair services and engage consumers.

2.4 Consumer Engagement: Barriers, Motivations and Community Influence

At the consumer level, research shows that while pro-environmental attitudes exist, actual repair behavior is hindered by key barriers: cost, convenience, lack of awareness, and limited skills (De Aguiar Hugo, 2022; Harris et al., 2015; McQueen et al., 2022). These barriers are particularly acute in fast fashion cultures where garments are cheap and disposable.

Durrani and Niinimäki (2020) highlight that consumers face practical barriers to participation such as lack of time, limited repair knowledge and the relatively high cost of professional repair services, which often makes replacing garments more appealing than fixing them. McQueen et al. (2022) further emphasize that access to skills, tools, and affordable services critically influence repair decisions—especially for younger consumers.

Potdar et al. (2024) provide valuable insights into consumer behavior, revealing a complex relationship between consumer awareness and engagement in clothing repair. Their findings indicate that pro-environmental attitudes significantly influence repair behavior among consumers. Awareness alone, however, may not be enough. The ‘value-action gap’ identified by Williams and Hodges (2022) among Gen Z consumers shows that while adolescents express concern about environmental and social issues, their actual behavior often contradicts these values. Lack of knowledge and convenience prevent them from acting sustainably, even if they support sustainability in theory (Williams and Hodges, 2022).

Community initiatives such as repair cafés offer promising models for overcoming these barriers. They provide free or donation-based assistance, skill-sharing, and social reinforcement—factors known to enhance participation (Durrani, 2018; Madon, 2021). Diddi and Yan (2019) found that consumers attending mending events were motivated not only by environmental values, but also by the communal experience and a desire to extend the life of beloved items. Kalantidou et al. (2023) frame such spaces as socio-cultural environments that foster belonging and promote sustainability through emotional connection and active participation. Durrani (2021) adds that

garment mending carries emotional and cultural significance, contributing to identity and personal storytelling. Besides that, Jiménez-Marín et al. (2022) argue that social marketing and communication campaigns can boost consumer engagement by improving knowledge and framing sustainability as a source of well-being—particularly where awareness doesn't yet translate into action.

In short, consumer engagement in repair is shaped not only by practical considerations but also by emotional, cultural, and social dimensions. This research builds on that understanding by exploring how organizations activate these factors through their strategies.

2.5 Relevance and Target Audience

This research targets both academic and industry audiences. Academically, it contributes to circular economy literature by addressing the underexplored role of garment repair, expanding on a field that has largely focused on recycling and upcycling (Zhang et al., 2022; Hernandez, 2020). It advances theoretical understanding of repair within sustainable business practices.

For industry professionals, especially decision-makers in fashion, the study provides practical insights into embedding repair initiatives in business models. When well-executed, such initiatives can strengthen brand loyalty, build consumer trust, and support sustainability goals (Harris, 2015; Patagonia, 2024).

3. METHODS

3.1 Research Design

This study uses a qualitative research design to examine how fashion organizations promote garment repair within circular economy strategies. Qualitative methods allow for in-depth insights into organizational strategies, perceptions, and experiences (Creswell, 2009). Semi-structured interviews served as the primary data collection method, offering flexibility to explore key themes while allowing new insights to emerge (Creswell, 2009).

3.2 Data Collection

3.2.1. Participant recruitment and selection

Participants were selected through purposeful sampling, focusing on representatives of fashion organizations involved in garment repair (e.g., sustainability managers, founders, tailors, volunteers) across the Netherlands and Germany. Of 53 contacted companies, eight agreed to participate—one per organization. This sample provided diverse perspectives and approached thematic saturation, with no new themes emerging in the final interviews.

The recruitment process followed three steps:

1. **Online search:** Google and LinkedIn were used to identify fashion organizations in the Netherlands and Germany offering garment repair, using keywords like *'repair café Netherlands'* or *'garment repair offerings Germany.'*Sources included articles listing relevant companies, e.g. *'17 brands that offer repair services'* by ISPO.com (2024).
2. **Verification:** Websites and social media (e.g., Instagram) were reviewed to confirm each organization's involvement in garment repair.
3. **Outreach:** Participants were contacted via email, website forms, or LinkedIn with an introduction of the researcher and the study, a request for their potential participation, and an explanation of how and why they were selected. After confirmation, further information and scheduling options were shared.

Table 2 provides an anonymized overview of the organizations, highlighting their country, type, repair focus, size, and business model.

Participant ID	Country	Organization type	Repair focus	Size (employees/ volunteers)	Business model purpose
1	Netherlands	Startup	Workshops	2	Commercial
2	Netherlands	Small fashion company	Repair offerings to customers only	< 25	Commercial
3	Germany	Tailor	Tailoring and repairs	1	Commercial
4	Netherlands	Startup	Workshops	2	Commercial
5	Germany	Medium-sized company	Repair offerings for customers and resale of repaired items	~ 120	Commercial
6	Netherlands	Creative community	Repair café and sewing classes	~ 50	Community-oriented
7	Netherlands	Volunteer-run initiative	Repair café	6	Community-oriented
8	Netherlands	Small family business	Sustainable knitwear and repairs for customers	4	Commercial

Table 2: Overview of participating fashion organizations and their repair activities.

3.2.2. Interviews

An interview guide with open-ended questions was developed to ensure consistency while allowing participants to elaborate on their specific contexts. Interviews followed a semi-structured format and covered five main areas: (1) introduction of the study and participants, (2) company context and repair strategies, (3) consumer engagement practices, (4) challenges in implementing or scaling repair (e.g., logistical, technical, or resource-related), and (5) closing remarks for additional insights. The full guide is available in Appendix - A.

Interviews lasted 35–50 minutes. All but one were conducted online via Google Meet; one took place in person. They were primarily in English, with some in German or Dutch. Non-English interviews were translated using Google Translate (2025) and refined by the researcher. With consent, all interviews were audio-recorded and transcribed using tools such as Apple Voice Memos (2025), WhisperTranscribe (2025), and Sonix.ai (2025).

3.3. Data Analysis

Thematic analysis, as outlined by Braun and Clarke (2006), was used to identify patterns and insights from the interview data. The process began with familiarization and systematic coding aligned with the research objectives (Braun and Clarke, 2006). Several themes—such as *consumer engagement*, *communication*, and *operational challenges*—were predefined based on the interview guide and literature, then refined during analysis.

A hybrid coding approach combined deductive and inductive methods (Reuben, 2024). For example, *financial barriers* and *lack of awareness* were identified beforehand, while codes like *education and skill-building* or *community and social space* emerged during analysis. In total, six themes and 43 codes were developed and organized in a codebook with definitions and examples. Themes were then integrated into the findings using participant quotes and linked to the theoretical framework to explore how repair initiatives address strategic and operational challenges.

To support comparison, cross-case analysis (Creswell, 2009) identified similarities and differences across the eight organizations based on size, business model, and repair strategy. This helped uncover context-specific patterns in circular fashion practices. This comparative lens provided insights into how diverse fashion organizations approach repair and illuminated context-specific challenges and opportunities within circular practices.

Finally, findings were interpreted in relation to academic discourse on garment repair and consumer engagement, addressing literature gaps noted by Zhang et al. (2022), Durrani (2018) De Aguiar Hugo (2022), McQueen et al. (2022), and Ramirez-Escamilla et al. (2024). The

analysis confirmed, expanded, or challenged existing theory while offering practical insights into scaling repair within circular business models.

3.4. Ethical Considerations

Ethical approval was obtained from the thesis supervisor at the University of Groningen. The study followed university guidelines and GDPR regulations to ensure lawful, secure, and research-only use of personal data. Participation was voluntary, with written informed consent based on the university's ethics form. Participants were informed of their rights, including the option to withdraw or request data deletion within one week of the interview.

All personal identifiers were anonymized, and data were stored securely, accessed only by the researcher. Recordings were used solely for transcription and interpretation. No sensitive personal data were collected, and all handling complied fully with GDPR standards.

4. FINDINGS AND DISCUSSION

4.1 Introduction

The following section presents and discusses the key findings from the interviews, offering insights into how fashion organizations implement garment repair within circular economy strategies. Each subsection integrates empirical evidence with theoretical perspectives to explore current practices, consumer engagement, and perceived barriers.

To guide the reader and provide a visual summary of the qualitative data, *figure 1* presents an overview of the main findings, organizing the interview insights into four core themes and their corresponding codes. This thematic structure serves as the analytical foundation for the sections that follow, illustrating both the breadth and depth of the interviewees' contributions.

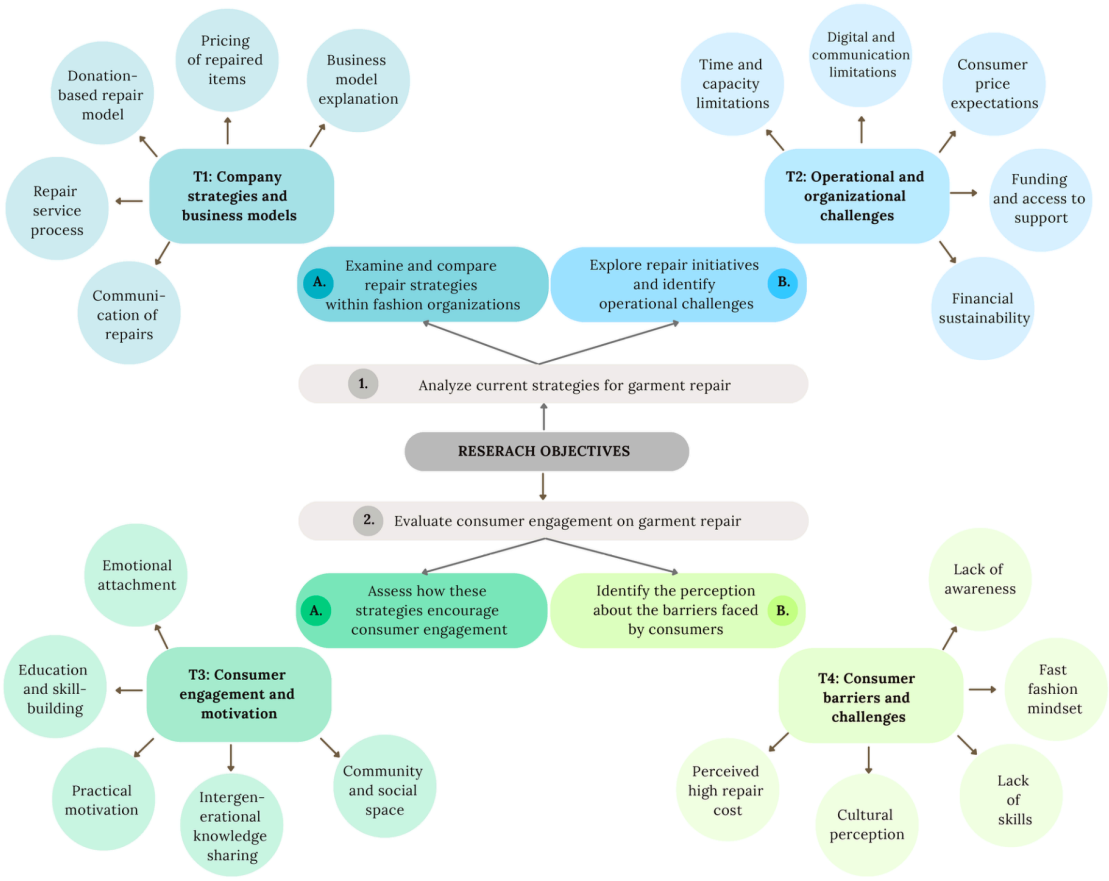

Figure 1: Overview of themes and codes structured around the research objectives.

4.2. Analyze Strategies for Garment Repair

This section examines how fashion organizations of different sizes and models integrate repair into their circular strategies. Approaches range from community-based, volunteer-led efforts to structured in-house programs, tailored to each organization's resources, goals, and customer engagement.

4.2.1. Integration of Repairs into Business Models

Repair strategies vary across business models, reflecting differences in scale and audience. Smaller companies and community initiatives often rely on dual-income—where repair is supplemented by other sources of income, such as additional jobs or product sales—or voluntary-based models. One interviewee noted, *"The repairs themselves are for free - no one is obligated to pay anything… They can make a voluntary donation."* These models couple repair with social and educational activities: *"It's like a community center…with a small lunchroom/bar… different ateliers… and a shared space where we do the production and the repairs."*

Other organizations combine repair with upcycling and creative customization: *"We encourage upcycling, participation in mending sessions, repairing, and creative customization. Our goal is to extend the life of clothing."* Their mobile setup allows travelling to local markets across the Netherlands: *"We essentially have a giant suitcase… the two big double bags and we get on the train…set everything up."* These examples show flexible, mission-driven models that are built on accessibility, customer engagement, awareness and creativity. They align with Vanacker et al.'s (2023) view who emphasize the role of repair in fostering inclusive access to circular resources.

One start-up explained the transitioning from selling upcycled garments to focusing only on repair workshops: *"We wanted to reduce waste in the clothing industry… we started making blouses from waste… sustainable clothing is quite difficult to sell because the price is much higher than for fast fashion… Now we're only doing workshops."* This reflects the challenges in selling sustainable fashion and a shift to education and awareness building. As argued by Dissanayake and Weerasinghe (2022), product life extension is one of the most impactful—yet

underutilized—strategies within circular fashion as it directly contributes to resource conservation by maximizing garment use.

In contrast, for larger organizations, repair is often part of a wider ecosystem—linked to warranties and the resale of repaired items—that prioritizes consistency, scalability, quality control, and customer service. While these companies may not rely on community engagement to the same extent, their reach and logistical capabilities allow them to normalize repair as mainstream. This resonates with Abagnato et al.'s (2024) hierarchy, which positions repair above recycling for environmental impact.

Community-driven models emphasize social value and personalization, while larger companies focus on operational integration that support long-term brand loyalty. The diversity of these models supports Chen and Tabata's (2024) call for systemic alignment across design, infrastructure, and consumer engagement, and echoes Durani and Niinimäki's (2020) critique of repair's underrepresentation in strategic business discourse.

4.2.2. Repair Service Offerings and Process Design

Repair services reflect organizational size and strategy. Small companies typically host informal workshops several times a year or monthly: *"we give repair workshops a few times per year… those are quite full."* Some invite walk-ins at themed events: *"on Valentine's Day… people bring in their favorite piece… we'd help you mend it."* These event-based services focus on hands-on interaction and education. Limited capacity is offset by a tailored approach: *"We only have very few repairs so we look at them carefully and then make the decision how to proceed."* This more personal approach enables customized repair decisions, maximizing consumer satisfaction and resource efficiency despite limited capacity. Their service design aligns with Vanacker et al.'s (2023) principle of 'slowing the loop,' treating repair as a thoughtful intervention.

Volunteer-run initiatives emphasize flexibility and accessibility, offering repairs in a welcoming, low-barrier setting: *"First, they're offered a cup of coffee or tea… our hostess checks which repairer is available."* These informal sessions prioritize the social and communal aspects of repair over formal scheduling, creating inclusive environments that encourage participation.

A larger company explained using formal, structured workflows with repairs mainly handled in-house. Customers initiate repairs online: *"You go to our website, fill out a contact form"* More complex repairs are outsourced: "*Where the zipper needs to be replaced, we work with a partner."* Repair workshops are only occasional promotional tools: *"We do offer workshops, but mainly as part of dealer tours… to raise awareness"* This structured approach embeds repair into after-sale services, prioritizing scale and efficiency. While less personal, it supports product life extension and aligns with circular fashion goals (Dissanayake & Weerasinghe, 2022). While this enhances scalability, it may lack the immediacy and social engagement seen in smaller initiatives. These contrasting models illustrate how repair offerings vary across organizational contexts and highlight the need for strategic alignment (Chen & Tabata, 2024) to foster shift consumer behavior from passive consumption to active engagement.

4.2.3. Repair Pricing Strategies

Pricing strategies reflect organizational scale and mission. Smaller companies may charge fixed workshop fees—*"15 euros for 90 minutes"*—or corporate rates—*"70 euros per hour."* Volunteer-run models rely on donations: *"We have a little piggy bank… with those donations, we buy things like tools."* These approaches illustrate how small initiatives prioritize accessibility, minimal entry barriers and inclusivity. While affordable and community-driven, donation-based models rely on funding and volunteer support. This aligns with Zhang & Hale's (2022) positioning of repair as a low-tech, high-impact strategy.

Larger companies use tiered systems to balance cost and accessibility. Repairs under 30 euros are processed directly; costlier ones involve follow-up with the customer: *"if it's more than that, we get back in touch."* Warranty repairs are free unless caused by misuse: *"everything… under legal warranty is handled free of charge—unless… user error."* This structured model balances cost recovery with transparency. However, it must also address fast fashion norms, where new items are often cheaper than repairs. Pricing strategies reveal trade-offs between sustainability, consumer expectations, and financial viability.

4.2.4. Communication of Repairs

Companies communicate repair services through various channels. Digital platforms like Instagram help brands connect with broad and diverse audiences: *"Our main thing is Instagram… we mostly communicate in English because we want to be inclusive of people who don't speak Dutch"* This shows how social media is not only for visibility but also fosters inclusiveness and community-building. Building sustainability narratives resonates with Potdar et al., (2024), who highlighted the potential of digital communication to activate pro-environmental attitudes which in turn influence repair-behavior. Communication campaigns also play a strategic role in creating awareness and influencing consumer engagement (Jiménez-Marín et al., 2022).

Some companies rely on organic, customer-initiated communication: *"We don't actively promote… Customers usually bring it up themselves."* This reactive model relies on a strong customer base, trust and authenticity. It allows communication to unfold naturally and for more personalized support when customers reach out. These forms of communication reflect the dynamics described by Kalantidou et al. (2023) who positions repair as a socio-cultural practice tied closely to community norms, shared values, and informal networks of influence.

Community networks are important tools: "*It's a sustainable clothing community… around 80 people in… a WhatsApp group where people share their events."* Besides that repair events are often supported by word-of-mouth, *"people bring people".* These demonstrate how alternative communication channels can be powerful tools in fostering a repair culture. Rather than relying on advertising, these organizations build communication around shared values and personal recommendations built on trust and credibility.

Altogether, communication strategies mirror company size and values. While some invest in digital storytelling, others rely on local networks and informal exchange. As McQueen et al. (2022) suggest, effective communication must normalize repair and lower engagement barriers—whether online or in person.

4.3. Repair Initiatives and Operational Challenges

Fashion organizations encounter several operational challenges when integrating repair services, including financial, technical, capacity-related, and communication issues.

4.3.1. Financial and Pricing Challenges

Aligning repair pricing with customer expectations remains challenging, especially when competitors offer subsidized or low-cost alternatives. As one participant said, "*People's expectations around pricing were difficult*". Another highlighted, "*A lot of these institutions… get funding. So they can offer workshops at 15 euros… that's hard to compete with. But we lowered prices — and we gained more people*". Independent initiatives often balance affordability with financial viability. Lowering prices may boost engagement but can shrink already narrow margins. Publicly funded competitors create uneven ground for providers reliant on service income. This aligns with Mishra et al. (2021) and Huynh (2022), who highlight the lack of scalable business incentives for repair, especially in a fast fashion culture where cheap replacements are the norm.

Many depend on volunteer labor or personal funds, threatening long-term sustainability: *"Some don't donate anything either... I could offer that, but I must, of course, earn money."* Donation-based models, while inclusive, aren't viable for those depending on repair for income. These challenges underscore the importance of contextual support, such as free infrastructure or public funding. One interviewee shared: *"We're lucky to be allowed to use a free space… That means we don't have to pay rent."* Another explained that the initiative received government funding from the Dutch Government and other institutions, which eliminates financial strain.

This contrast between mission-driven and market-driven models is significant. Supported initiatives can emphasize community-building without financial strain, while others struggle for survival. As De Aguiar Hugo et al. (2021) suggest, the lack of financial infrastructure hinders the viability of repair services, especially without external support. These findings suggest that long-term success of repair models may depend on more equitable access to funding and infrastructure.

4.3.2 Digital and Communication Limitations

Limited digital skills hinder online visibility and communication. One interviewee said, *"I'm not really well-versed in it. On Instagram I'm very new now."* This is common in small or founder-led businesses, where digital tasks fall to individuals without much expertise in the field, as one interviewee shared: *"One major aspect of our brand… we're lacking — is being fully part of the social media world — because neither one of us is really into it."* This gap limits opportunities for education, storytelling, and community-building. A lack of engagement limits the ability to connect with like-minded consumers, build brand identity, and reduces the visibility of repair as a viable option.

Technical issues also hinder operations. One interviewee reported issues with contactless payment, *"and nobody has cash."* These challenges, while small individually, collectively impact consumer trust and conversion. As Mishra et al. (2021) and Huynh (2022) emphasize, poor digital infrastructure impedes circular strategy implementation.

These hurdles constrain scale and outreach. Technical malfunctions and limited digital skills reduce engagement opportunities. Gautam (2024) argues that circular initiatives remain underleveraged due to fragmented systems and short-term priorities. Without better digital infrastructure, many initiatives cannot compete in today's digital environment.

4.3.3. Capacity, Staffing, and Time Constraints

Staffing and time limitations are major barriers for small businesses: *"It's always a time issue — the balance between the two jobs and our private lives. That's really complicated."* In founder-led initiatives, repair is often a part-time activity, making it hard to scale or plan long-term. This is supported by De Aguiar Hugo et al. (2021), who highlight the lack of capacity and systemic support in small businesses.

Scheduling conflicts exacerbate the issue: *"It's really difficult… because we don't want to work on weekends — but people want the workshops on weekends."* This misalignment between provider availability and consumer demand reduces engagement opportunities and points to a need for more flexible or collaborative staffing models. As a result, even highly motivated initiatives may face limitations in accommodating the most opportune times for engagement.

Volunteer-run spaces face similar issues: *"Sometimes we had issues with organizing staff... It was difficult to find someone who could both sew and teach it."* These initiatives rely on individuals with both technical and teaching skills, a rare combination. This limits the frequency and quality of workshops and makes the initiatives dependent on a small number of skilled volunteers. As Dissanayake and Weerasinghe (2022) identified, coordinated systems and cross-sector support are essential for scaling repair practices.

Overall, time and staffing challenges restrict the frequency and scalability of repair activities. Ramirez-Escamilla et al. (2024) point out that the lack of skilled human resources is a structural limitation, contributing to the underutilization of repair in circular fashion.

4.4. Strategies to Encourage Consumer Engagement

Understanding what drives or hinders consumers to participate in garment repair requires attention to the underlying motivations, learning opportunities, and social contexts. Based on the interviews, three themes emerged as key to fostering engagement: motivations and values, education and skill-building, and community experience.

4.4.1. Motivations and Values

Consumer motivations for repair are primarily grounded in practical and financial considerations as well as emotional attachment. As one participant noted, *"a new purchase is expensive."* Another added: *"Most of them just want to have it done easily, quickly, and cheaply."* These quotes illustrate how repair is often a rational, cost-saving decision rather than a sustainability-driven one.

Accessibility and convenience play a central role in encouraging such participation, especially when repair is perceived as more cost-effective than buying new. These insights reflect what McQueen et al. (2022), de Aguiar Hugo et al. (2022), and Harris et al. (2015) identify as core influences—affordability, convenience, and garment value—on repair behavior.

In contrast, emotional attachment was another strong motivator. Consumers often want to repair items tied to personal memories: *"Many customers associate specific adventures or mountain*

experiences with their jacket, and that builds an emotional connection" while another remarked: *"People are very happy when their beloved device or piece of clothing is repaired again… People want to keep them as long as possible."* Here, repair serves not only to prolong material use but also to preserve sentimental value. This aligns with Durrani (2021), who emphasizes that mending often carries cultural and emotional meaning. Likewise, Diddi and Yan (2019) and Kalantidou et al. (2023) highlight that repair can strengthen consumer identity, community bonds, and long-term attachment to products.

4.4.2. Education and Skill-building

Many initiatives aim to empower consumers through learning: "*We want to teach people to repair their own clothes instead of buying new ones – so the impact is way bigger."* This shift from service to self-sufficiency positions consumers as active participants. Repair workshops provide practical learning environments and enhance consumer self-sufficiency and awareness, and address the lack of skills highlighted by McQueen et al. (2022)—especially among younger generations. Interviewees noted that even small lessons made a big difference: *"If they've learned something simple from us, like how to sew on a button – then they're really happy… It gives them a feeling of independence."* This shows that learning basic techniques fosters a sense of competence and pride, which in turn strengthens emotional investment into clothing. As people begin to feel more capable, they are more likely to extend the life of their garments and avoid unnecessary consumption.

The informal, supportive setting of repair cafés is crucial in fostering this mindset: *"It's not the idea that people just drop off their items and leave… They're supposed to stay, watch how the repair is done, and often they help a little."* These participatory environments reduce intimidation, encourage experimentation, and make repair more approachable. Durrani (2018) and Madon (2021) describe how such spaces reshape consumer attitudes by fostering skill-sharing and building a culture of environmental stewardship.

Larger companies use workshops less frequently but as awareness tools. These events may be less immersive, but they still contribute to consumer education and help position repair as a core sustainability practice.

4.4.3. Social and Community Engagement

Repair initiatives often serve as social hubs, fostering practical repair activities alongside social interaction, intergenerational knowledge exchange, and community building. As one participant explained, *"Some people are also just looking for a social event… just have a nice day."* The communal atmosphere is often intentionally cultivated: "*It's not called a repair café for nothing – it's really meant to be a meeting place. So people also stick around for a bit, have a drink, chat with each other... It's a really cozy atmosphere.*"

These low-barrier, informal settings help normalize repair by embedding it in everyday social life. Durrani (2018) and Madon (2021) support this view, describing repair cafés as spaces where sustainability becomes a shared, lived experience. Repeat visits and personal comfort indicate that engagement extends beyond the act of fixing clothes.

Inclusivity further broadens participation. Many initiatives offer sewing lessons or exchange projects: *"People can join sewing lessons… or take part in clothing exchange projects. It's very inclusive, and we always try to make it a place where people can grow - whether that's in skills, confidence or just through meeting others in the community."* By blending skill-building with inclusivity, repair spaces become platforms of empowerment. Participants don't just learn how to fix garments—they gain confidence, connect with others, and engage with sustainability through lived experience. Kalantidou et al. (2023) describe these spaces as socio-cultural ecosystems that build belonging through emotional and practical engagement.

Intergenerational learning also plays a role. One noted: *"At every event, when you sit somewhere with your sewing machine, it's always the case that some older woman comes by and says, 'Oh, you're doing some embroidery — I used to do that when I was young'."* This social and historical dimension enriches the repair experience and strengthens community ties. Volunteer support from older generations enhanced these efforts: *"We invite them… and they just come and volunteer."* In doing so, valuable knowledge is maintained and social connections across generations are reinforced. The importance of such intergenerational and informal exchanges is supported by Durrani (2021), who emphasizes that repair carries cultural and emotional weight and is most impactful when practiced in socially meaningful, peer-supported environments.

4.5. Consumer Barriers Perceived by Organizations

Fashion organizations identified several barriers that prevent consumers from engaging in garment repair—most notably cost, limited awareness, lack of skills, and the cultural mindset shaped by fast fashion.

4.5.1 Perceived High Repair Costs and Fast Fashion Mindset

Cost is the most frequently cited barrier to garment repair. Many consumers view repair as expensive relative to the low prices of new garments: *"Sometimes people think you're doing this for free. Not everyone has the same amount of money — so it really depends on what people consider expensive."* The labor intensity of repairs adds to this perception: *"Changing a zipper on jeans or removing one — 45€ ... People then don't go along with it or they simply leave it unaltered."* This difficulty in justifying repair costs is magnified in a fast fashion culture where garments are expected to be cheap and disposable. As one interviewee put it, *"If I charge an hourly rate of €60… They then say, 'The trousers cost only 30€ — the zipper should be that expensive?'"* These consumer expectations, shaped by fast fashion pricing models, often devalue the time, skill, and sustainability benefits of repair. Another participant added, *"Nothing kills me more than seeing someone buy something from… Zara, or H&M, or Shein… Getting them to take something they already have and change it up — that's kind of hard."*

These reflections illustrate what Durrani and Niinimäki (2020) describe as a major deterrent: the perceived high cost of repair relative to cheap replacements. Similarly, Williams and Hodges (2022) identify a *'value-action gap'*—particularly in Gen Z—where pro-sustainability values are overridden by habits of convenience and affordability.

For small and independent businesses, this perception is especially challenging. They must keep prices low to remain accessible while covering real labor and material costs. Unlike larger brands, they often lack institutional support or subsidies. Bridging this gap may require external funding, subsidized pricing models, or more effective communication about the value and sustainability of repair services. Ultimately, challenging the cultural mindset of disposability is critical—repair must be reframed not just as a cost, but as a socially and environmentally meaningful act.

4.5.2 Low Consumer Awareness

A major barrier to consumer engagement is limited awareness of repair options and their feasibility. Many do not consider repair as a first option or view it as unnecessary: *"Some people don't think it's worth repairing their clothes. Or they just don't think about it — repair isn't their first thought."* Others are unaware of what can actually be repaired: *"Many customers don't realize that repair is even an option until they ask."* Another interviewee added, *"There's a lot possible, which people don't know. The slider breaks, and people think it's broken, there has to be a new one."*

These statements highlight a clear disconnection between the services available and what consumers perceive as possible. This knowledge gap limits proactive repair behavior and reinforces a culture of disposability—when unaware of simple fixes, people are more likely to discard garments unnecessarily. This finding is echoed in Potdar et al. (2024), who emphasize that awareness, while not sufficient on its own, is a requirement for engaging in sustainable behaviors like repair. Similarly, De Aguiar Hugo (2022) and McQueen et al. (2022) point out that awareness gaps are among the most persistent barriers, particularly when repair is not made visible or accessible in mainstream retail environments. The lack of awareness is further highlighted by the confusion caused by misleading sustainability claims, as one interviewee pointed out: *"A lot of consumers are still not feeling enough the urgency of the issue we are facing in the fashion industry… this is also strengthened by the huge greenwashing campaigns of numerous fashion brands."* This quote shows how greenwashing undermines real sustainability efforts and contributes to consumer misunderstanding, making it harder for people to recognize the value and urgency of practices like repair.

These insights suggest that organizations must go beyond offering repair; they must actively educate and normalize it through visible examples, clear communication, and storytelling that reframe repair as both practical and empowering.

4.5.3. Skill Deficits and Confidence

Many consumers lack basic sewing or repair skills, which restricts their ability to engage independently. As one interviewee shared, *"Some people don't think they can repair things on*

their own — there's a skill gap. We always see people who think they can't use a sewing machine. But once they try it, even just once, they're like, 'Oh, okay, that was easier than I thought'." Another added, *"Just sewing on a button — they can't do that. They bring the buttons over, want them sewn on, either have no material at home, no needle, no — or simply no motivation."*

Providing educational support is therefore essential. One repair café interviewee emphasized: *"The skills are definitely a barrier. That is why we want people to not drop off their things and leave. We want them to learn how to do it. So that the next time… they can fix it themselves."* Skill deficits represent both a practical and psychological barrier. The perception that repair is difficult or only for experts discourages engagement, particularly among younger generations unfamiliar with sewing. As Harris et al. (2015) notes, low confidence and perceived incompetence reduce participation. Yet, small learning successes—like fixing a button—can shift these perceptions and build confidence. Hands-on participation and simplicity are key. Communal, low-pressure environments such as repair cafés make the learning process approachable and enjoyable, transforming repair from a daunting task into an empowering activity.

4.6. Synthesis and Interconnections: Aligning Strategies, Barriers, and Engagement

The findings of this study reveal a complex interplay between organizational strategy, operational capacity, and consumer behavior, underscoring that there is no singular model for garment repair. Instead, organizations adopt diverse, adaptive approaches shaped by their size, mission, resources, and relationships with consumers.

A key contrast emerged between community-driven and corporate-led models of repair. Smaller initiatives embed repair into participatory and social formats—like workshops and informal events—grounded in accessibility, empowerment, and education. Larger companies, meanwhile, institutionalize repair through formal systems tied to warranties, customer service, and resale logistics, emphasizing scalability and efficiency.

These different models are not mutually exclusive but reflect distinct organizational logics. Community-based initiatives excel at emotional resonance and personalized engagement, while

corporate models offer structure and reach. As Chen and Tabata (2024) argue, effective circular strategies require alignment between infrastructure and user experience. Recognizing the value of both approaches suggests that integration—not uniformity—is key to advancing garment repair at scale. Importantly, this comparison highlights that strategy must align with organizational values and customer relationships rather than follow a one-size-fits-all blueprint.

Despite their strategic differences, all organizations face operational barriers. Financial limitations challenge smaller initiatives that operate without public funding or rely on donation-based models. The economic pressure of offering labor-intensive services in a fast fashion market intensifies this tension. Digital communication challenges further constrain outreach, especially among founder-led organizations with limited technical resources. Staffing shortages—particularly the scarcity of individuals with both repair and facilitation skills—compound these constraints.

Rather than listing these challenges separately, it is their interaction that poses the greatest threat to sustainability. For example, limited funding restricts digital investment; understaffing curtails both service offerings and communication efforts. As Gautam (2024) and De Aguiar Hugo et al. (2021) emphasize, without systemic support and capacity-building, even highly motivated repair actors risk stagnation.

Consumers engage with repair for both practical and emotional reasons. While many seek cost-effective alternatives to replacement—especially for high-value items—others are motivated by the desire to preserve personally meaningful garments. These motivations are most effectively activated in community settings, where inclusive, hands-on environments foster learning, confidence, and social connection.

However, widespread barriers remain. Consumers often perceive repair as costly, are unaware of feasible options, or lack confidence in their own skills. These findings echo earlier research (e.g., McQueen et al., 2022; Potdar et al., 2024) and underline the importance of accessible education and visible repair narratives. Even simple experiences—like learning to sew on a button—can shift mindsets and behavior.

These findings suggest that garment repair, while still often treated as a niche activity, holds significant potential to become a mainstream element of circular fashion. However, for this shift to happen, repair needs to be not only logistically and financially feasible for organizations, but also emotionally relevant and accessible for consumers. The data showed that emotional connection, education, and inclusive experiences are key to making repair more approachable and meaningful. If strategies are developed with both infrastructure and consumer experience in mind—through storytelling, fair pricing, and supportive learning environments—repair can evolve from a marginal practice into a widely accepted cultural norm. This highlights the importance of integrated, cross-sector approaches that align operational capacity with social engagement

5. LIMITATIONS

While this study provides valuable insights into how fashion organizations implement and promote garment repair, several limitations should be acknowledged. First, the sample size was relatively small. Although 53 fashion organizations were contacted, only eight agreed to participate in an interview. The low response rate—despite reminders—may reflect time constraints, internal policies, or limited interest in research participation. This limits the representativeness of the findings and restricts broader generalizations.

Second, the sample exclusively involved organizational representatives; no direct interviews with consumers were conducted. As a result, consumer perspectives are interpreted through the lens of company narratives, which may introduce bias or overlook divergent consumer experiences.

Third, while the study aimed for cross-national insights, it focused only on organizations based in the Netherlands and Germany. Although these are relevant contexts for circular fashion innovation, the findings may not fully reflect dynamics in other cultural or economic settings. Moreover, Dutch organizations were contacted in English, which could have had an impact on response rates—some might have responded if the request had been made in Dutch.

Lastly, the interviews conducted in German and one in Dutch were translated into English with the support of Google Translate. While efforts were made to ensure accuracy, nuances in language and meaning may have been lost in translation.

These limitations suggest that while the study provides a strong foundation for understanding organizational approaches to garment repair, future research should aim to incorporate consumer voices, expand geographic diversity, and explore more varied market contexts to enhance the generalizability and depth of insights.

6. REFLECTION ON TRANSDISCIPLINARY

This research was shaped by an ongoing interaction between academic and practical insights. Engaging directly with fashion organizations—ranging from small community initiatives to larger commercial actors—allowed the researcher to move beyond theoretical assumptions and understand how garment repair operates in diverse, real-world contexts. Integrating these perspectives with academic frameworks created certain challenges, such as translating industry language into analytical categories suitable for coding and addressing potential bias in self-reported experiences. However, it also enriched the research process by highlighting nuances that might otherwise be overlooked—particularly around the emotional, social, and operational dimensions of repair. This blend of perspectives ultimately strengthened the study's relevance and impact, aligning well with the goals of transdisciplinary research.

7. CONCLUSION

This research explored how fashion organizations can foster consumer participation in circular initiatives, with a particular focus on garment repair. Drawing from interviews with eight diverse organizations in the Netherlands and Germany, the study revealed that garment repair is a multifaceted practice shaped by organizational strategy, operational capacity, and consumer engagement dynamics.

The main findings show that there is no single pathway to integrate garment repair. Organizations apply diverse strategies depending on their size, mission, and available resources. Smaller, community-driven initiatives emphasize inclusivity, skill-building, and emotional connection. They embed repair into interactive formats such as workshops and events. In contrast, larger companies implement structured and scalable repair systems into their customer service and product life-cycle processes. Both have distinct advantages—while efforts of small initiatives build strong consumer engagement, institutional strategies help to normalize repair at a scale.

However, the findings also stress that challenges consist across all models. Limited funding, digital communication skills, time and staffing capacities limit the frequency and visibility of repair offerings. These issues are particularly significant in small or volunteer-run initiatives, which often lack systemic support. At the same time, consumer engagement is influenced by both practical and emotional factors: motivations like cost-saving and garment attachment can encourage participation, but barriers such as high perceived costs, limited skills, and low awareness remain widespread. Encouragingly, these findings suggest that hands-on learning in an inclusive, welcoming and low-pressure environment—like repair cafés—can significantly boost consumer confidence and initiate a change in behavior.

A key insight from this study is the interdependence of strategy, infrastructure, and consumer experience. Therefore, the study concludes that, to foster consumer participation in circular initiatives—particularly garment repair—a hybrid approach may offer the most effective path forward. Fashion organizations must balance operational feasibility with emotional and social

relevance. Repair must be made accessible, visible, and meaningful through storytelling, education, and inclusive practices. Collaborations between large brands and small repair initiatives could combine operational scalability with personalized, value-driven engagement. For instance, larger companies might support local repair cafés through sponsorship, shared digital platforms, or educational campaigns, while community initiatives could benefit from mentorship or funding support. Such partnerships could help bridge the gap between cultural meaning and operational feasibility—moving repair from the margins to the mainstream.

The research contributes to existing circular economy literature by providing a detailed exploration of how garment repair is implemented in practice, an area that has received less attention compared to recycling and upcycling. It confirms the earlier findings on consumer barriers (e.g. Harris, 2015; McQueen et al., 2022) and adds depth by showing how organizations try to overcome them through tailored strategies. Moreover, it highlights the importance of storytelling, education, adn inclusive experiences in shaping repair behavior—factors that are often overlooked in strategic business planning.

From a practical perspective, the findings offer several recommendations. For fashion managers, integrating repair into business models requires more than just logistics—it demands emotional engagement and visible communication. Policymakers should consider supporting smaller repair actors through infrastructure funding, digital training, or public awareness campaigns. Educators might include repair skills and circular thinking in fashion or sustainability curricula to build long-term change.

Further research could build on this study by including direct consumer perspectives—either qualitative or quantitative—to complement the organizational view presented here. Exploring repair practices in other cultural or economic contexts would also provide a broader understanding of how garment repair functions within global circular economy efforts. Additionally, quantitative studies could measure the actual impact of hybrid repair models on consumer behavior or business performance.

REFERENCE LIST

Abagnato, S., Rigamonti, L., & Grosso, M. (2024). Life cycle assessment applications to reuse, recycling and circular practices for textiles: A review. *Waste Management, 182*, 74–90. https://doi.org/10.1016/j.wasman.2024.04.016

Apple. (2025). *iOS 18*. Retrieved from: https://www.apple.com/uk/ios/ios-18/

Beddington, E. (2023). *'Repair is the new cool': How Amsterdam started a fashion revolution*. The Guardian. Retrieved from: https://www.theguardian.com/lifeandstyle/2023/oct/11/repair-is-the-new-cool-how-amsterdam-started-a-fashion-revolution

Berthon, M., (January 3, 2017). *Make do and mend: The art of repair.* Cooper Hewitt. Retrieved from: https://www.cooperhewitt.org/2017/01/03/make-do-and-mend-the-art-of-repair/

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101.

Circle Economy. (2024). *A fully circular clothing industry in the Netherlands is possible and can bring plentiful employment benefits*. Retrieved from: https://www.circle-economy.com/news/a-fully-circular-clothing-industry-in-the-netherlands-is-possible-and-can-bring-plentiful-employment-benefits

Collins English Dictionary. (2025. *Fashion business*. In *CollinsDictionary.com*. Retrieved from https://www.collinsdictionary.com/dictionary/english/fashion-business

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Thousand Oaks, CA: SAGE Publications.

De Aguiar Hugo, C., & Nascimento, J. L. (2022). Consumer perceptions and actions related to circular fashion items: Perspectives of young consumers. Journal of Sustainable Fashion Practices, 5(1), 45–62.

Diddi, S., & Yan, R. (2019). Consumer perceptions related to clothing repair and community mending events: A circular economy perspective. *Sustainability, 11*(19), 5306. https://doi.org/10.3390/su11195306

Dissanayake, D. G. K., & Weerasinghe, D. (2022). Towards circular economy in fashion: Review of strategies, barriers and enablers. *Circular Economy and Sustainability, 2*(1), 25–45. https://doi.org/10.1007/s43615-021-00090-5

Durrani, M. (2018). "People gather for stranger things, so why not this?" Learning sustainable sensibilities through communal garment-mending practices. *Sustainability, 10*(7), 2218. https://doi.org/10.3390/su10072218

Durrani, M. (2021). *"Like stitches to a wound": Fashioning taste in and through garment mending practices*. *Journal of Contemporary Ethnography, 50*(6), 775–805. https://doi.org/10.1177/08912416211012031

Ellen MacArthur Foundation. (2017). A New Textiles Economy: Redesigning Fashion's Future. Retrieved from: https://www.ellenmacarthurfoundation.org/a-new-textiles-economy

European Parliament. (2023, September 18). *The impact of textile production and waste on the Environment*. Retrieved from: https://www.europarl.europa.eu/topics/en/article/20201208STO93327/the-impact-of-textile-production-and-waste-on-the-environment-infographics

Fashinnovation. (2024). *How the Industrial Revolution changed the fashion industry*. Retrieved from: https://fashinnovation.nyc/fashinnovation-industrial-revolution-fashion/

Gautam, R. (2024). The narrative of circular economy and sustainability: A critical analysis of the fashion industry. *Circular Economy and Sustainability, 4*(12), 3183–3213. https://doi.org/10.1007/s43615-024-00417-y

Google. (2025). *Google Translate*. Retrieved from: https://translate.google.com/?sl=en&tl=es&op=translate

Harris, F., Roby, H., & Dibb, S. (2016). Sustainable clothing: Challenges, barriers and interventions for encouraging more sustainable consumer behaviour. *International Journal of Consumer Studies, 40*(3), 309–318. https://doi.org/10.1111/ijcs.12257

Hernandez, R. J., Miranda, C., & Goñi, J. (2020). Empowering sustainable consumption by giving back to consumers the 'right to repair'. *Sustainability, 12*(3), 850. https://doi.org/10.3390/su12030850

Huynh, P.H. (2022), "'"Enabling circular business models in the fashion industry: the role of digital innovation"'",*International Journal of Productivity and Performance Management*, Vol. 71 No. 3, pp. 870-895. https://doi.org/10.1108/IJPPM-12-2020-0683

ISPO.com. (n.d.). *These brands offer repair services for their products*. Retrieved from: https://www.ispo.com/en/sustainability/brands-offer-repair-services

Jiménez-Marín, G., Galiano-Coronil, A., & Tobar-Pesántez, L. B. (2022). Organizational communication and social marketing strategies targeting Spanish consumers of fashion: Sustainability as a form of happiness management. *Corporate Governance, 22*(3), 506–520. https://doi.org/10.1108/CG-05-2021-0187

Kalantidou, E., Keulemans, G., Mellick Lopes, A., Rubenis, N., & Gill, A. (Eds.). (2023). *Design/Repair: Place, practice & community*. Springer. https://doi.org/10.1007/978-3-031-46862-9

Madon, J. (2022). Free repair against the consumer society: How repair cafés socialize people to a new relationship to objects. *Journal of Consumer Culture, 22*(2), 534–550. https://doi.org/10.1177/1469540521990871

Majumdar, A., Shukla, S., Singh, A. A., & Arora, S. (2020). Circular fashion: Properties of fabrics made from mechanically recycled poly-ethylene terephthalate (PET) bottles. *Resources, Conservation & Recycling, 161*, 104915. https://doi.org/10.1016/j.resconrec.2020.104915

McQueen, R. H., Kozlowski, A., Jain, A., & McNeill, L. S. (2023). The role of resources in repair practice: Engagement with self, paid and unpaid clothing repair by young consumers. *Textile Research Journal, 93*(3–4), 576–591. https://doi.org/10.1177/00405175221123067

Mended. (2023). *Mended launches in Germany with Armedangels as partner*. Retrieved from: https://www.mended.eu/blogs/stories/mended-launches-in-germany-with-armedangels-as-partner

Mended. (2025). *Mended: Home page*. Retrieved from: https://www.mended.eu

Mishra, S., Jain, S. and Malhotra, G. (2021), "The anatomy of circular economy transition in the fashion industry", *Social Responsibility Journal*, Vol. 17 No. 4, pp. 524-542. https://doi.org/10.1108/SRJ-06-2019-0216

Niinimäki, K., & Durrani, M. (2020). Repairing fashion cultures: From disposable to repairable. In *Transitioning to Responsible Consumption and Production* (pp. 154–168). MDPI.

Oxford English Dictionary. (2025). *Fast fashion*. In *OED Online*. Retrieved from: https://www.oed.com/dictionary/fast-fashion_n?tab=meaning_and_use

Oxford English Dictionary. (2025). *Garment*. In *OED Online*. Retrieved from: https://www.oed.com/dictionary/garment_n?tl=true&tab=meaning_and_use

Patagonia. (2025). Worn Wear: Buy used, trade in, and repair gear. Retrieved from: https://www.patagonia.com/worn-wear/

Perzanowski A. The History of Repair. In: *The Right to Repair: Reclaiming the Things We Own*. Cambridge University Press; 2022:49-71.

Potdar, B., McNeill, L. S., & McQueen, R. H. (2024). An investigation into the clothing repair behaviour of fashion-sensitive consumers. *International Journal of Fashion Design, Technology and Education, 17*(3), 321–335. https://doi.org/10.1080/17543266.2023.2285327

Ramírez-Escamilla, H.G.; Martínez-Rodríguez, M.C.; Padilla-Rivera, A.; Domínguez-Solís, D.; Campos-Villegas, L.E. (2024). Advancing Toward Sustainability: A Systematic Review of Circular Economy Strategies in the Textile Industry. Recycling 2024, 9, 95. https://doi.org/10.3390/recycling9050095

Reike, D., Vermeulen, W. J. V., & Witjes, S. (2018). The circular economy: New or refurbished as CE 3.0? — Exploring controversies in the conceptualization of the circular economy through a focus on history and resource value retention options. *Resources, Conservation and Recycling, 135*, 246–264. https://doi.org/10.1016/j.resconrec.2017.08.027

Reuben, B. (2024). Qualitative Data Analysis: Novelty in Deductive and Inductive Coding. *Advance.* June 21, 2024. doi: 10.31124/advance.24143088.v2

Russ, B. (2024). *Kleider reparieren: Wo der Staat die Naht subventioniert*. FAZ.NET. Retrieved from: https://www.faz.net/aktuell/stil/mode-design/kleider-reparieren-wo-der-staat-die-naht-subventioniert-19426528.html

Sonix.ai (2025). *Automated transcription software powered by AI*. Retrieved from: https://sonix.ai/

Tabata, T., & Chen, X. (2024). Circular economy in fashion: Consumer awareness and lifestyle, and environmental impact on second-hand clothes. *Journal of Material Cycles and Waste Management, 26*(12), 3876–3892. https://doi.org/10.1007/s10163-024-02091-6

Thomas, D. (2019). Fashionopolis: The price of fast fashion and the future of clothes. *Bloomsbury Publishing.*

Uddin, A. J., & Rahaman, M. (2024). A sustainable and greener approach of transforming consumer-waste recycled fibers into value-added "grindle yarn" employing compact-Siro spinning. *Journal of Engineered Fibers and Fabrics, 19*, 1–22. https://doi.org/10.1177/15589250241270499

United Nations Environment Programme (UNEP). (2018). The environmental costs of fast fashion. Retrieved from: https://www.unep.org

United Repair Centre. (2024). *Repair services*. Retrieved January 15, 2025, from: https://www.unitedrepaircentre.com/services/repair

University of Delaware. (n.d.). *Mending and Repair*. Retrieved from https://sites.udel.edu/lizs/mending-and-repair/

Vanacker, H., Lemieux, A.-A., Bonnier, S., Yost, M., Poupard (2023). Circularity, Garment Durability, and Just Transition: Understanding the Trinary Interrelationship through an Integrative Literature Review. Sustainability 2023, 15, 11993. https://doi.org/10.3390/su151511993

Whisper Transcribe. (2025). *AI-powered transcription service*. Retrieved from: https://www.whispertranscribe.com

Wiedemann, S. G., Clarke, S. J., Nguyen, Q. V., Cheah, Z. X., & Simmons, A. T. (2023). Strategies to reduce environmental impacts from textiles: Extending clothing wear life compared to fibre displacement assessed using consequential LCA. *Resources, Conservation & Recycling, 198*, 107119. https://doi.org/10.1016/j.resconrec.2023.107119

Williams, A., & Hodges, N. (2022). Signaling sustainability: Exploring consumer perspectives on communicating apparel sustainability information. *Journal of Sustainable Marketing*, *3*(1), 25–45. https://doi.org/10.51300/jsm-2022-49

Williams, A. and Hodges, N. (2022), "Adolescent Generation Z and sustainable and responsible fashion consumption: exploring the value-action gap", Young Consumers, Vol. 23 No. 4, pp. 651-666. https://doi.org/10.1108/YC-11-2021-1419

Zhang, L.; Hale, J. (2022). Extending the Lifetime of Clothing through Repair and Repurpose: An Investigation of Barriers and Enablers in UK Citizens. Sustainability 2022, 14, 10821. https://doi.org/10.3390/su141710821

APPENDIX – A: Interview guide

Introduction

Brief introduction of the researcher and the study

Brief introduction of the participant and the organization

I. Company context & current repair strategy

1. You offer a variety of garment repair services including workshops for repair, up-cycling etc. How are these organized (in-house, outsourced, partnerships, community initiatives)?
    a. Could you specify how the program works?
    b. How is it financed?
    c. What is the most common product that you repair?
    d. How many products do you repair per month or week?
    e. What happens if the product is not repairable? Do you recycle/upcycle it?

2. Company specific questions on their repair initiatives arising from the above output.

II. Consumer engagement

3. How do you communicate and market initiatives and workshops to consumers?
    a. Do you use social media or digital solutions (apps, platforms) to facilitate consumer engagement?

4. What has been your experience with your repair initiatives and workshops so far?

5. Are your customers regularly engaged, or would you say participation in a workshop is only a one time thing?

6. Can you describe your customer base? What are the characteristics for instance in terms of age, gender, nationality, etc.?

7. Based on your experiences, what motivates your customers most to repair garments?

8. Have you identified specific barriers preventing consumers from engaging in garment repair? If so, could you give examples?

9. Do you collaborate with other stakeholders (local governments, NGOs, educational institutions) to foster consumer engagement? What does that collaboration look like?

III. Challenges and opportunities

10. Have you faced any challenges when implementing repair services/initiatives, and how have you addressed them (internally within your company, for instance financial, technical or organizational issues)?

IV. Closing remarks

11. Any follow up or clarification questions that arose during the respective interview were asked here.

12. Is there anything that we have not talked about but that you would like to add?

Thank you for your participation!

APPENDIX – B: Ethical documents

Information Sheet

Title of the study:
Circular fashion: How can fashion companies foster consumer participation in garment repair?

Dear participant,

Thank you for your interest in participating in this research. This letter explains what the research entails and how the research will be conducted. Please take time to read the following information carefully. If any information is not clear kindly ask questions using the contact details of the researchers provided at the end of this letter.

What is the study about?
The textile industry's environmental impact is staggering, with issues like overproduction, overconsumption, and textile waste exacerbating global sustainability challenges. Despite the growing awareness of sustainability, repair initiatives have been largely overlooked in favor of recycling and upcycling. The decline of repair culture, driven by fast fashion and short garment lifespans, has contributed to a disposable mindset. However, there is a rising movement advocating for the revival of repair practices. This study aims to explore how fashion companies foster consumer participation in garment repair initiatives and provides insights to promote circular fashion and reduce textile waste.

The study will interview at least 6 company representatives. Participants will be purposefully recruited from fashion companies engaged in garment repair. The study is neither sponsored nor funded.

Details concerning participation in the study

- Participation involves answering interview questions. The duration will be 30-45 minutes.
- Participation is completely voluntary. You may withdraw at any time during the interview. You do not have to answer any question if you feel uncomfortable.
- There are no known risks in participation. Therefore, risk is indicated as very low.
- There are no direct benefits for you. The study may help improve future repair practices in textile.

Recording, storing and protection of information

- The audio of the interview will be recorded and transcribed to ensure accuracy in data analysis. These recordings and transcripts will be stored securely and used solely for research purposes.
- The information you provide will be treated with confidentiality. While no sensitive data will be collected, your company's name and your name will not be mentioned in the research.
- All data will be handled in compliance with the General Data Protection Regulation (GDPR), which ensures that personal data is processed lawfully and securely. This means:
    - Your data will be stored securely and will not be shared with anyone outside the study.
    - The information will only be used for research purposes.
    - You have the right to request access to your data or ask for it to be deleted within one week after the interview.

Results of the study

The results of the study will be used for the purpose of the master thesis at the University of Groningen. The results will not be published. Additionally, the findings will be presented during the Campus Fryslan conference and, if applicable, the thesis may be uploaded to the RUG website under student projects, making it accessible for future research and academic reference.

Ethical approval

The study will be conducted in accordance with relevant ethical standards, ensuring that all participants are treated with respect, confidentiality is maintained, and data is handled responsibly.

Informed consent form

By signing the attached informed consent form, you agree that you have read this information and agree to participate in this study.

Contact details for further information:

Researcher:
mail:
phone:

INFORMED CONSENT FORM

Title of the study
Circular fashion: How can fashion companies foster consumer participation in garment repair?

Assessment

- I have read the information sheet and was able to ask any additional question to the researcher.
- I understand I may ask questions about the study at any time.
- I understand I have the right to withdraw from the study within one week after the interview.
- I understand that at any time I can refuse to answer any question without any consequences.
- I understand that I will not benefit directly from participating in this research.

Confidentiality and data use

- I understand that none of my individual information will be disclosed to anyone outside the study team and my name will not be published.
- I understand that the information provided will be used only for this research and publications directly related to this research project.
- I understand that data (consent forms, recordings, interview transcripts) will be retained on the Y-drive of the University of Groningen server for 5 years, in correspondence with the university GDPR legislation.

Future involvement

- I wish to receive a copy of the scientific output of the project.
  Yes ( ) No ( )
- I consent to be re-contacted for participating in future studies.
  Yes ( ) No ( )

Having read and understood all the above, I agree to participate in the research study:
Yes ( ) No ( )

Name participant:
Date, signature:

To be filled in by the researcher:

- I declare that I have thoroughly informed the research participant about the research study and answered any remaining questions to the best of my knowledge.
- I agree that this person participates in the research study.

Date, signature:
