

A large, stylized letter 'U' graphic. The left vertical bar is a solid purple semi-circle. The right vertical bar is a vertical rectangle with a color gradient from blue at the top to red at the bottom. The text 'DESIGN ACROSS BORDERS UNITED IN CREATIVITY' is overlaid on the right side of the 'U' in white, bold, sans-serif font, with 'DESIGN' and 'UNITED' each enclosed in a black rectangular box.

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# DESIGNING FOR DURABILITY: HOW FASHION BRANDS ARE ENCOURAGING LONGER GARMENT LIFE THROUGH CONSUMER BEHAVIOUR CHANGE

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## ABSTRACT

The fashion system is confronted with a complex range of challenges, one of the most pressing of which is the unsustainable impact of the industry, that is responsible for a significant portion of world's pollution and textile waste. The fashion industry's linear model is environmentally destructive, as it relies on the extraction of excessive resources. In response to the linear models that have been prevalent in the fashion industry, alternative forms of collaborative retailing have emerged in the context of the Circular Economy, seeking novel solutions to promote more conscious and sustainable consumption. In this context, a growing number of fashion brands are taking proactive measures to educate consumers about the importance of garment care and durability, thus focusing on the final phases ('use' and 'post-use') as an integral asset of the transformation into a more sustainable fashion paradigm. The strategies adopted include maintenance and repair services; take-back schemes; awareness and marketing campaigns and collaborative business models. In this context, which is predominantly discussed from a managerial and marketing perspective, it is crucial to contribute to the discourse from a Design standpoint and identify its potential as an agent of change. This paper employs a qualitative approach, supported by a literature review and case study analysis, to examine the strategies employed by brands and platforms to raise consumer awareness about extending the life of clothing, thereby facilitating a shift in consumer behavior towards fashion circularity services and actions. In particular, the analysis considers the macro strategies of Care, Recommerce and Reverse Logistics services and practices, exploring how these are implemented to sensitize the consumer to a more sustainable consumption habit.

**KEYWORDS | CIRCULAR ECONOMY, SUSTAINABLE FASHION, DESIGN FOR SUSTAINABILITY, RESPONSIBLE CONSUMPTION**



## 1. Introduction

The fashion industry is a significant contributor to global pollution, responsible for considerable greenhouse gas emissions, excessive consumption of water and harmful chemicals, as well as generating a large amount of textile waste. The textile industry, in particular in developing countries, is characterised by precarious working conditions, including low wages, long working hours and exposure to dangerous chemicals (Battisti & Spennato, 2024). Furthermore, a considerable quantity of clothing is discarded annually, frequently before it has even been worn, due to the rapid obsolescence of fashion, the low quality of products and the lack of incentives for reuse and repair. The issue in question is linked to the linear business models that are typically employed by many fashion market participants. The linear economy correspond to a system in which resources are extracted to create products that ultimately become waste and are discarded. This approach, based on the principles of mass production, a focus on efficiency, a one-way business model and end-of-line disposal, has the potential to generate

several negative impacts such as damage to ecosystems, a reduction in the useful life of the product and a mismatch with the demand for responsible products (Bick et al., 2018; Brewer, 2019; Fletcher & Grose, 2012).

In contrast to the linear system, Circular Fashion (CF) has emerged as a promising alternative for the fashion industry. The objective of this approach is to reimagine the system as a continuous cycle, where resources are used efficiently and products are designed to last, being recyclable or reused (Dan et al., 2023; D'Itria & Aus, 2023). The collaboration of brands, manufacturers, retailers and policymakers is highly important to create a more sustainable fashion system based on circular business models (Poldner et al., 2022). However, another crucial factor in effecting a paradigm shift is the consumption habits (Koszevska, 2019). At this point in time, brands and companies are attempting to raise consumer awareness through a variety of strategies within the concept of CF, thus concentrating part of their efforts on the last stages of the fashion chain (retailing and consumption). These strategies include: maintenance and repair services (clear and accessible instructions on how

to wash, dry, iron and store each garment; online and offline customisation workshops, professional repair services, DIY repair kits); take-back programmes (collecting the products either directly from consumers or by setting up take-back points); awareness and marketing campaigns (content highlighting the importance of conscious consumption and durable fashion, clear information on the origin of materials, production processes and environmental impact of garments); collaborative business models (recommerce, rental and subscription platforms).

Within this context, this paper adopts a qualitative approach, supported by a literature review and case study analysis, to examine the macro-strategies and parallel processes employed by brands and platforms to raise consumer awareness about extending the life of clothing. The objective is to facilitate a shift in consumer behaviour towards fashion circularity services and actions. In particular, the analysis considers the macro strategies of Care, Recommerce and Reverse Logistics, exploring how these are implemented in order to sensitise the consumer to a more sustainable consumption habit.

## 2. Conceptual Background

### 2.1 Circular Fashion: How the fashion industry is moving towards a more sustainable model

The fashion market is gradually responding to the growing demand for sustainability, and the concept of CF, which promotes a more

responsible approach to the production and consumption of clothing, is gaining ground. However, the dichotomy between the traditional fashion system and sustainability principles remains a complex challenge. The concept of the Circular Economy (CE) within the fashion system (Hina et al., 2023; Koszewska, 2019; Vecchi, 2020) challenges the conventional linear production system for clothing, footwear and accessories. Instead of being discarded, these products are reintroduced into the production process after use, thereby inverting the traditional logic of linear production applied into the fast fashion market. The initiative replaces the dynamics of consuming finite resources, increases the useful life of materials, reduces industrial waste and promotes the sustainable development of the sector. In practice, companies that adhere to the principles of CF utilize fewer materials to create individual items, work to eliminate non-recyclable and polluting items from the supply chain, attracting new suppliers and sustainable inputs. Furthermore, they recapture all materials that leave their factories, from garments to packaging, for reuse. They also seek to reuse inputs as much as possible, promoting the collection and renewal of materials.

The dominance of fast fashion in the market over recent decades has been a significant factor in the transition to CF, which is a complex and gradual process. Fast fashion brands have an important role to play in this

transition, but they must overcome a number of challenges to adapt to a new business model. These challenges affect not only fast fashion but the entire fashion system - from high-end to luxury - which appears to be better equipped and ready for change at the moment and, therefore, able to drive the transition. Although the responsibility for change is not limited to brands, consumers, governments, and civil society also have a crucial role to play.

In the light of this, the Ecodesign for Sustainable Products Regulation (ESPR) represents a significant transformation in the landscape of European product regulation. The regulation, which came into force in July 2024, imposes rigorous environmental criteria on all products placed on the EU market, from the design phase to the end of their useful life. By prioritizing the possibility of repair, reuse and recycling, the ESPR facilitates the transition towards a circular economy and reduces waste. This regulation serves to protect the environment while simultaneously stimulating innovation and competitiveness within the EU, thereby establishing sustainable products as the new norm. Furthermore, the ESPR is set to transform the fashion industry, challenging the dominant fast fashion model. The regulation places an emphasis on durability, repairability and recycling, compelling fashion brands to prioritize quality over quantity, transition to sustainable materials and investigate circular business models such as rental, repair and resale. While it necessitates

substantial adaptation, the ESPR offers prospects for innovation and leadership, proposing a more environmentally responsible fashion landscape.

## **2.2 Design for Longevity: Making long-lasting clothing**

Design for Longevity represents a comprehensive methodology for product development, with a particular emphasis on extending the lifespan of the product in question. The objective is to create items that are not only durable and functional, but also resilient to changing conditions and user needs. By evaluating factors such as material selection, construction methods, and user experience, designers can develop products that retain their value and utility over time, thereby reducing waste and environmental impact (Carlsson et al., 2021). Such an approach frequently incorporates strategies such as modular design, repairability and adaptability, with the objective of ensuring that the product remains relevant and desirable throughout its lifecycle.

Particularly within the fashion system, this can be achieved through the implementation of strategies such as the creation of long-lasting clothing utilizing high-quality materials, the incorporation of durable construction, the provision of proper fit, and the incorporation of clear care instructions. Furthermore, fostering an emotional connection between the wearer and the garment, as well as exploring business models that prolong the active life of clothing, contribute to the creation of value and the extension of the product's lifecycle.

Within this context, the initial phases of the fashion supply chain (conceptualization, sourcing and assembling) is of particular importance with regard to the role of Design. At this stage, the choice of materials is of great consequence, as is the development of the patterns, it should ensure that the garments are not disposed of prematurely due to rapid wear and tear or an imperfect fit. Moreover, during the modelling and sewing phase, it is essential to adopt an approach that contrasts with that of low-level production. This entails considering the social implications of the production process and re-evaluating the working conditions of those responsible for assembling the items. By doing so, it is possible to promote transparency in production processes, thereby fostering an emotional connection with consumers who choose to adopt a more sustainable lifestyle. Nevertheless, the role of Design is not limited to the initial stages of the fashion supply chain. The final phases (retailing and consumption) are being examined from a sustainable perspective due to the growing recognition of the importance of 'use' and 'post-use' as integral and crucial aspects for transformation of the fashion system into a more sustainable paradigm (Spagnoli & Iannilli, 2023).

Some fashion companies, for instance, are undertaking a process of business model redesign based on the concept of Collaborative Fashion Consumption (CFC). These business models are based on the provision of resale, rental, leasing, sharing, gifting and swapping services (Arrigo, 2021; Becker-Leifhold &

Iran, 2018). The services most frequently offered by fashion brands and companies have been resale and rental (Fabro Cardoso, 2024). In theory, by being reused and shared, clothes last longer, reducing the need for constant production. However, the rationale behind consumers' decision to utilize this type of service remains inconclusive, with motivations oscillating between a sustainable positioning and an economic choice (Khalek & Chakraborty, 2023). This is because, when resold or rented, the products price is reduced. In Europe, there is a significant presence of resale services (including Vestiaire Collective, Vinted, DePop), while the United States is also open to exploring sustainable solutions through rental and subscription services (including Rent the Runaway, Nuuly, Cocoon).

Other post-usage service that is being explored by fashion brands and retailers are the Takeback schemes, these programmes are implemented with the objective of collecting used clothing (Kant Hvass & Pedersen, 2019). The objective is to minimize the disposal of garments in landfill sites and to encourage the concept of circular fashion. By recovering the garments, companies have the option of recycling them, transforming them into new products, or even selling them on resale platforms. Such practices can offer a number of advantages, including a reduction in environmental impact, the creation of a more sustainable image for brands, and the promotion of more conscious consumption on the part of consumers. Nevertheless, the implementation of these programmes

necessitates meticulous planning and the overcoming of challenges, including those pertaining to collection logistics and the quality of returned items. Among the brands that have adopted these programmes are H&M, Levi's, Eileen Fisher Patagonia and The North Face.

Furthermore, some brands are creating dedicated areas in their stores where customers can take their parts to be repaired by qualified professionals. Another alternative is to provide repair kits so that customers can carry out small repairs at home. This option allows consumers to be more independent and to carry out small repairs quickly. Other brands and platforms are partnering with local seamstresses to provide repair services to their customers. This strategy not only facilitates access to the service, but also contributes to local economic development by strengthening local trade. Repair and reuse are fundamental pillars of the 'Care' concept in the fashion industry. By offering repair services and promoting the reuse of clothing, brands are contributing to a more sustainable and circular future. Veja, Nudie Jeans and RE;CODE are companies involved in this concept.

In this context, Product-Service Systems (PSS) Design is an emerging as that provide valuable tools in the redesign of fashion services (Afief et al., 2021; Johnson & Plepys, 2021; Lang & Armstrong, 2018; Pal, 2016). PSSs in the fashion industry represent a paradigm shift in the way clothing is sold and used, moving beyond the traditional model of a one-time purchase. By offering services such as rental,

subscription, repair, customization and take-back schemes, PSSs provide consumers with access to a wider variety of items, thereby extending the life cycle of clothing and reducing waste (Vezzoli et al., 2022). This business model has the potential to promote sustainability, personalization and customer satisfaction, transforming the fashion industry into a more circular and conscious model. In contrast to the linear model of production, consumption and disposal, PSSs can possibly promote reuse, recycling and the creation of value from existing products (Tukker, 2015).

Fashion brands, companies and retailers are not limiting themselves to a single strategy or process when responding to sustainable demands. Instead, they seek to integrate a variety of practices and processes to engage consumers, as will be discussed in further detail in this paper.

### 3. Methodology

The aim of this paper is to identify and discuss the strategies that the fashion system is currently pursuing to transition towards a more sustainable system, with a particular focus on how it is encouraging longer garment life through consumer behavior change. Moreover, the regulatory proposals put forth by the EU, which aim to enhance the circularity, energy performance, and environmental sustainability of products sold within the EU market (known as the Ecodesign for Sustainable Products Regulation, or ESPR), serve as a further catalyst for this study.

Methodologically, this article is structured in two parts. Initially, a conceptual background is presented, based on a literature review, followed by an analysis of case studies. The selection of the cases was made through secondary research methods, resulting in the identification of six case studies. The following criteria were employed in the selection of the cases: (1) Commitment to sustainability: all the selected cases adhere to principles based on circular and sustainable fashion as their guiding philosophy; (2) Diversity/Relevance in consumer awareness initiatives: variety and/or relevance of initiatives to raise consumer awareness of the durability of clothing's life cycle; (3) The cases are approached from two distinct perspectives: In one approach, half of the cases are developed by established fashion brands, while the other half concern businesses that act as support and consultancy for fashion companies.

The cases were primarily framed into three macro strategies: (1) Care, exemplified by the cases RE;CODE and The Seam; (2) Recommerce, exemplified by the cases of Pangaia Rewear and Vestiaire Collective; and (3) Reverse Logistics, exemplified by the Ellen Fischer and SuperCycle cases.

Within those macro strategies, the processes explored are: (1) Maintenance and repair services: clear and accessible instructions on how to wash, dry, iron and store each garment; online and offline customisation workshops, professional repair services, DIY repair kits; (2) Take back programmes: collecting the products either directly from consumers or

by setting up take-back points; (3) Awareness and marketing campaigns: content highlighting the importance of conscious consumption and durable fashion, clear information on the origin of materials, production processes and environmental impact of garments; (4) Collaborative business models: resale, rental and subscription platforms.

Taking these factors into account, the analysis aims to investigate the strategies adopted by the fashion industry to prolong the lifespan of clothing items by fostering consumer awareness. Furthermore, the objective is also to identify which processes are addressed in parallel with the macro strategy.

## 4. Case Studies Analysis

### 4.1 CARE

This section will analyse two case studies in relation to the 'Care' macro-strategy. The first case study considers RE;CODE, and the second case study considers The Seam.

RE;CODE is a South Korean sustainable fashion brand that has as primary focus the upcycling, specialized in transforming surplus materials and discarded textiles into garments, reducing waste and promoting an eco-friendlier fashion cycle. The incorporation of recycled and organic materials into their collections serves to minimize the environmental footprint, allowing the brand to create unique pieces or limited collections. In this context, the service called MOL 1 RE;CODE offered by the brand is dedicated

to the upcycling and transformation of pre-owned clothing. The service provides a means of transforming existing garments into new and stylish items through the application of alterations, enabling the wearer to refresh their wardrobe and give new life to items that are no longer worn. The customer selects a garment that they wish to have reworked, RE;CODE tailors and upcycles the piece based on the customer's preferences and their design expertise. The customer then receives their renewed garment.

Furthermore, the brand offers a movement called RE;TABLE, an activity where individuals can gather with friends and family at the table and practice fun upcycling together. Until today, 20,824 people participated of the initiative, which also aims to empower single mothers financially and to sustain their economic activity. The promotion of upcycling and sewing education is offered to single mothers who experience difficulties in balancing childcare and economic activity. They are trained to become professional instructors through this initiative, and those who successfully complete the educational programme are subsequently employed as skilled upcycling workshop instructors, guaranteeing a stable standard of living through continued economic activity. In addition, RE;CODE keeps its sustainable impact numbers up to date on its website (number of revived stock garments; number of repair/remodeling requests; number of designers who have partnered with them, number of socially responsible people together; number of participants in the workshop RE;TABLE).

Moreover, RE;CODE's BOX ATELIER represents an expansion of the company's commitment to sustainable fashion practices through the incorporation of a resale service, facilitating the circularity of garments by enabling customers to extend the life cycle of their pre-owned RE;CODE clothing. To do so, individuals may present unwanted items to the BOX ATELIER, where a potential consultation may assess the condition of the garment and establish a fair resale value. Subsequently, RE;CODE oversees the listing and sales process, thereby enabling the clothing to be repurposed and reducing textile waste. Conversely, the resale section enables customers to become active participants in sustainable fashion by offering a curated selection of pre-owned garments at potentially reduced prices.

Still concerning Care strategies, the platform The Seam has established itself as a crucial service provider within the fashion industry, with a particular focus on the UK market. The organization's fundamental objective is to encourage the adoption of sustainable practices through the provision of clothing repair and alteration services. This approach directly addresses the environmental consequences of fast fashion by extending the lifespan of existing garments, thereby reducing textile waste and the necessity for continual new clothing purchases. The Seam offers a comprehensive range of services, encompassing repairs that address minor imperfections such as ripped seams, as well as more intricate alterations such as zipper replacements. Furthermore, they offer

garment tailoring services with the objective of achieving an optimal fit, including operations such as suit tailoring, hem adjustments, and dress alterations. Additionally, select locations offer cleaning services for garments, thereby providing a comprehensive approach to clothing care. This dedication to sustainability is not limited to the longevity of garments, The Seam actively fosters the revival of skilled craftsmanship within local communities. By forming partnerships with local tailors and seamstresses, they are able to guarantee the provision of high-quality alterations and repairs, while simultaneously supporting the growth of small businesses.

The Seam also places a premium on customer convenience. Their website offers a user-friendly interface for online appointment booking and service selection. This includes the option of studio visits, whereby customers can bring their garments to a designated Seam location. For an additional fee, they offer the convenience of at-home visits by skilled tailors.

## 4.2 RECOMMERCE

This section will present an analysis of two cases pertaining to the 'Recommerce' macro strategy. The first case study is that of Pangaia Rewear, and the second is that of Vestiaire Collective.

The PANGAIA Rewear initiative, projected by the sustainable clothing brand PANGAIA, is a peer-to-peer resale platform dedicated to the sale of pre-owned PANGAIA clothing items, aiming to extend the life of their garments by

encouraging consumers to resell them when they are no longer fit for purpose. From an environmental perspective, this process has the benefit of reducing the amount of clothing waste and the necessity for new PANGAIA clothing production.

The use of Quick Response (QR) codes on care labels facilitates the listing of items. PANGAIA Rewear is conceived as a nexus for their circular fashion mission, with the potential for the integration of rental, repair, and take-back schemes in the future. In addition, PANGAIA has a page dedicated solely to the care of its articles. Entitled 'PANGAIA Aftercare', the use of natural fibers and dyes in their products, requires an extra care to keep them in good condition.

Other incentive of the brand regards the Pangaia's Inner Circle, a complimentary loyalty programme. The registration process can be completed by creating an account on their website, and for each purchase made, customers are awarded points, which can subsequently be redeemed for discounts and vouchers on future purchases. In addition, members of the Inner Circle have exclusive benefits, including the opportunity to gain early access to new product launches and sales. As one ascends through the tiers, which are unlocked by accumulating more points, one may gain access to special events or experiences that align with PANGAIA's sustainability mission. One may also select a welcome gift at the time of joining, such as a discount or a donation to environmental causes.

The brand goes beyond, offering a B2B service named 'Powered by PANGAIA', a platform that makes its apparel and accessories available to corporate clients who are inspired by and aligned with the platform's mission. From the provision of merchandise to major corporations for the benefit of their employees and for corporate gifting, to the formation of bespoke artist partnerships with cultural institutions, to the enhancement of company uniforms for employees, as well as to larger innovation-driven projects such as the recycling of old garments into new materials, 'Powered by PANGAIA' ensures that other business solutions achieve the same high quality and responsible standards as their own brand.

The second case studied in this section regards the global online marketplace Vestiaire Collective, where users can purchase and sell pre-owned designer clothing and accessories. The company's focus is on luxury, with a particular emphasis on top brands and vintage items, as opposed to fast fashion. The platform employs a multi-faceted approach to act against the phenomenon of fast fashion. The promotion of CF is a key aspect of the company's business model, predicated on the repurposing of garments and accessories, thereby curbing the demand for mass-produced fast fashion items. In 2022, the company initiated a policy of banning fast fashion brands from its platform, making it increasingly challenging for users to locate these items on the site. Vestiaire Collective also educates consumers about the negative impacts of fast fashion, such as textile waste and pollution, and demonstrates the lower

cost per use of second-hand clothes, which is typically less than that of fast fashion items. The company has also formed sustainable partnerships with organizations such as The OR Foundation to address the issue of clothing waste in developing countries.

With Sojo, a UK-based enterprise specializing in the repair and alteration of garments, Vestiaire Collective has established a strategic alliance. The objective of this collaboration is to address two significant challenges within the pre-owned fashion market: achieving an optimal fit and ensuring the longevity of garments. By incorporating Sojo's services into their platform, customers can now purchase pre-owned luxury items with greater assurance of size and fit. The capacity to tailor these garments ensure a precise fit, thereby reducing the risk of disappointment due to sizing issues and fostering a more favorable perception of pre-owned fashion.

Finally, in response to the growing demand from our eco-conscious consumption, Gucci has collaborated with Vestiaire Collective to launch a new take-back programme. The proprietor of a handbag from one of their signature lines can exchange it for store credit. This may be done either through an elevated in-person experience in selected Gucci boutiques or online, the extension of the lifespan of a Gucci product is in alignment with the House's vision of a circular future for fashion.

### 4.3 REVERSE LOGISTICS

The section will analyze two cases in relation to the 'Reverse Logistic' macro-strategy. The initial case study is that of Ellen Fisher Renew and Supercycle Platform.

The Eileen Fisher Renew platform was developed with the objective of promoting sustainability in the fashion industry, where pre-owned Eileen Fisher clothing to be given a second life. The programme is a recycling initiative whereby used Eileen Fisher clothing is collected and returned to the company, it encourages the practice of responsible consumption and the reduction of textile waste. Clothing produced by Eileen Fisher may be returned regardless of its condition, whether it is gently used, damaged, or in any other way unsuitable for sale. For the consumer there is a reward in the form of a Renew Rewards Card for each returned item. From an environmental perspective, this process extends the lifespan of garments and reduces the necessity for new clothing production.

Launched in 2018, Eileen Fisher's Waste No More initiative extends the life of clothing and resources by transforming pre-consumer and post-consumer textile waste, specifically unwanted Eileen Fisher garments, into unique and artisanal textiles. Through the Eileen Fisher Renew programme, customers can return used clothing in any condition. Waste No More then meticulously sorts, cleans and repairs

these garments whenever possible. Using a felting technique (process of matting and condensing wool fibers together using heat, moisture, and agitation), they give new life into the used materials, creating one-of-a-kind sustainable textiles. These transformed textiles are then used to make products such as cushions, wall hangings and decorative objects. Waste No More not only combats textile waste destined for landfill, but also offers customers the opportunity to participate in a more environmentally conscious fashion cycle. Furthermore, although the brand doesn't focus on marketing campaigns, it does have a section called 'the journal' on its website, dedicated to providing information on repair and resale techniques, on the certificates the brand has earned, such as the B Corp, and on materials and how to extend their useful life.

Supercycle is a comprehensive technology platform designed to assist retail brands in the implementation of circular practices, with a particular focus on the textile industry. The platform's primary objective is to facilitate the transition towards a more circular economy. Aiming to reduce textile waste by establishing a closed-loop system for the collection, processing, and reuse of clothing, footwear, and other textiles. This is accomplished through the provision of a range of services for brands. Through the Turnkey Trade-In Programmes, Supercycle assists brands in implementing consumer-facing programs that facilitate

the return of unwanted items and provide customers with credit towards future purchases. This encourages the practice of responsible consumption and facilitates the reintroduction of used items into the supply chain. The platform also offers solutions for excess inventory overseeing the management of a brand's surplus inventory, which may include damaged goods, samples, or excess stock. Supercircle assumes responsibility for the collection, transportation, and potential resale or recycling of these items.

In terms of data and reporting, Supercircle furnishes brands with exhaustive data and reports on the performance of their programmes. This enables brands to monitor the environmental impact and customer response to their circular initiatives. Brand partners of Supercircle include Reformation, ALC and Uniqlo US.

## 5. Discussion and Conclusion

The aim of this paper was to contribute to the field of Design by illustrating 6 of the best practices in the fashion system in relation to consumer awareness through strategies and processes related mainly to the use and post-use of clothing (Figure 1).

The first finding of this study concerns the encouragement that a fashion brands and platforms are providing for its consumers towards a more sustainable fashion system. The construction of a macro-strategy (Care/

Recommerce /Reverse Logistics) supported by parallel processes, can lead to positive socio-environmental effects. The cases presented illustrate two distinct paths. The first is exemplified by fashion brands (RE;CODE, PANGAIA and Eilen Fisher) that demonstrate diversity in their processes and services, irrespective of their macro-level strategies. The second is represented by platforms that have the fashion system as their target customer base (The Seam, Vestiaire Collective, Supercircle). In this case, processes and services tend to be more specialized. The analysis demonstrates the interrelationship between services and processes, given that in the majority of cases, brands and platforms offer a combination of them.

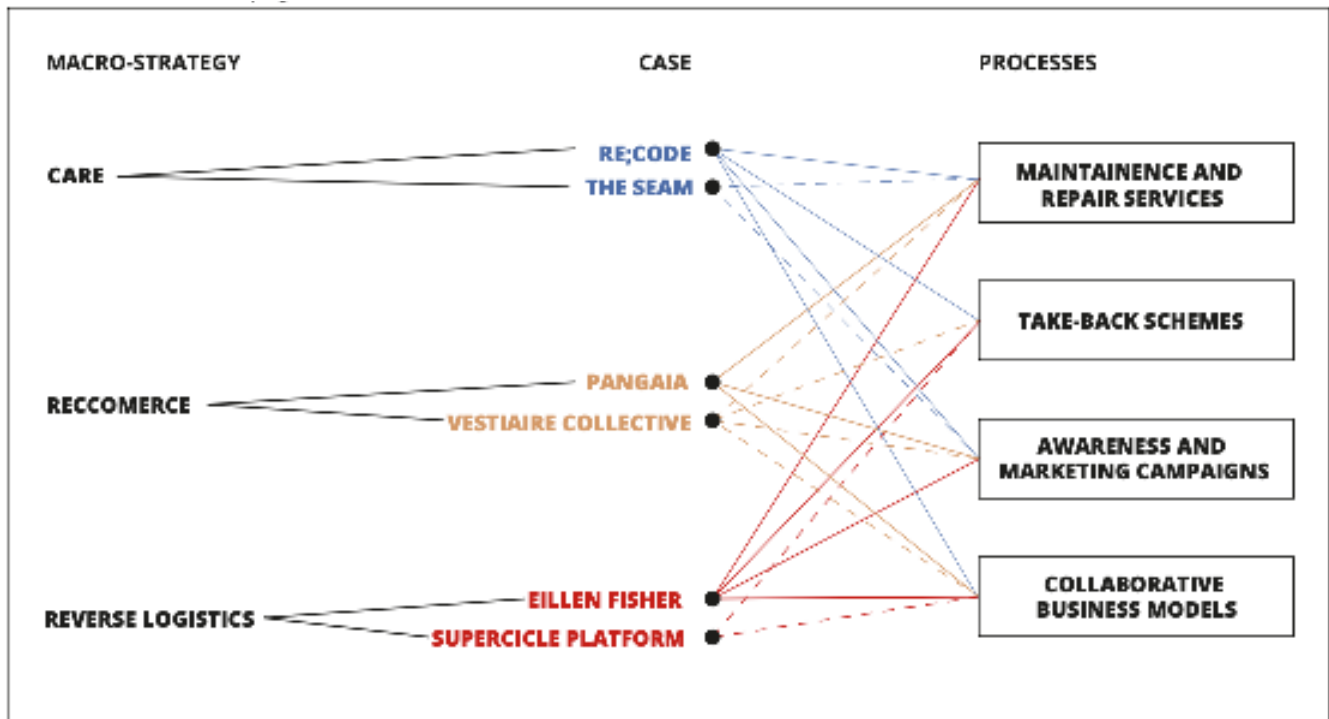


Figure 1. Connection among macro-strategies and processes gained from fashion best practices in relation to consumer awareness related mainly to the use and post-use of clothing.

Having as a macro-strategy the concept of ‘Care’, RE;CODE transforms surplus materials and discarded textiles into unique garments, offering services like custom upcycling and resale. Beyond environmental sustainability, the brand empowers single mothers through upcycling education and employment opportunities. By tracking its sustainable impact and offering a platform for community engagement through RE;TABLE, RE;CODE is leading the way in creating a circular and socially responsible fashion industry. The Seam instead, by offering a wide range of clothing repair and alteration services, extend the life of garments, reduce waste and promote ethical fashion. Their commitment to local craftsmanship ensures high quality repairs while supporting the community. The Seam also prioritizes customer convenience with online booking, in-store services, home visits and mail-in options.

From the ‘Recommerce’ macro-strategy point of view, the PANGAIA Rewear platform facilitates the resale of pre-owned PANGAIA items, extending the life of garments and reducing waste. But the brand also supports the consumer through other processes, for example the Inner Circle loyalty programme, where customers are rewarded for their sustainable choices and receive exclusive benefits. To extend its impact, Powered by PANGAIA offers B2B solutions for businesses in line with the brand’s sustainable mission. With a focus on aftercare and material transparency, PANGAIA aims to create a long-term relationship with its customers and the environment. Always

under the same macro strategy, Vestiaire Collective, through the promotion of circular fashion and the banning of fast fashion brands, addresses the adverse effects of the industry. Collaborations with organizations such as The OR Foundation and Sojo further enhance the sustainability efforts of the platform. Additionally, the partnership between Vestiaire Collective and Gucci highlights the growing significance of resale and circularity in the luxury fashion sector.

Furthermore, Eileen Fisher Renew programme, based on 'Reverse Logistics' macro-strategy, encourages customers to return used clothing in exchange for rewards. Meanwhile, Waste No More transforms unwanted garments into new products. Through education and transparency, Eileen Fisher empowers consumers to make informed choices. The Supercircle platform instead offers a technology platform to support brands in implementing similar circular initiatives. This provides tools for trade-in programmes, inventory management, and data analysis. Collectively, these initiatives promote a circular fashion economy and reduce textile waste.

The second key finding of this study highlights that the transformation of the fashion system does not depend solely on the actions of individual consumers despite the relevance of their role. Indeed, the role of consumers is crucial in shaping market trends, production decisions and the overall value chain of the fashion industry. Consumer demand, which

moves towards greater sustainability and circularity, is increasingly recognized as a driving force in encouraging more responsible corporate behaviour (Musova et al., 2021). Consumer and industry responsibilities are distinct but interdependent aspects of promoting responsible consumption (Cavender, Lee & Wesley, 2021). While research has traditionally focused on the lack of circularity in the textile supply chain or on consumer habits regarding the use and disposal of garments, the involvement of the fashion industry in the post-retail phase is a more recent development. The connection between consumer and industry responsibility is particularly evident in the increasing recognition of the fashion industry's role in the circular economy and the growing consumer awareness of sustainability. However, this awareness, widespread especially among the younger generations, does not always translate into behavioural changes. Therefore, fostering consumer attitudes towards sustainability, together with a sense of responsibility, is essential to promote meaningful change (Luchs, Phipps & Hill, 2015).

In response, companies, brands, retailers, and platforms can contribute through a range of strategies, engaging the consumer in the process. Design, in its diverse forms, represents a potential avenue for impact. In addition to influencing the initial stages of the fashion supply chain (conceptualization, sourcing and assembling), the efficacy of Design on the final stages of the fashion supply chain such as distribution, retail,

and consumption is important to guide the consumer into a more conscious use and post-use of the garments. In this sense and within the concept of Design for Longevity, the relationship between Use and Post-Use Services (such as Fashion Resale/Repair Platforms and Take Back schemes) and Product Service Systems (PSSs) Design is becoming increasingly close and strategic, with the objective of developing a circular and sustainable business model in the fashion industry. These approaches ultimately converge towards the extension of product lifespan and reduction of waste.

PSSs are embedded in a fashion system with the objective of minimizing resource use, waste, emissions and energy losses through the implementation of strategies that seek to slow down, close and narrow material and energy cycles. This can be achieved by extending the lifespan of products, improving efficiency in product use and operation, and recovering materials that could be exploited at the end of their lifespan. Therefore, PSSs must be intentionally developed for the purpose of the circular economy, although it is still challenging to see full results, since a fashion company can adopt circular economy principles of closing the loop and still be unsustainable, for example, if its employees work in poor working conditions.

In conclusion, the study shows that design processes, which will soon be further encouraged in light of the recently introduced EU ESPR regulations, have become a challenging undertaking. This is due to the necessity of developing a system comprising products and services in an integrated manner, in accordance with the new guidelines that have yet to be considered in the conventional linear development approaches employed by numerous companies within the fashion industry.

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