

Monitor for Circular Fashion

REPORT 2023



Monitor for Circular Fashion

REPORT 2023

SDA Bocconi
SCHOOL OF MANAGEMENT

SUSTAINABILITY LAB
MONITOR FOR CIRCULAR FASHION

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Executive Summary

The following pages highlight the methodology and key research results of the Monitor for Circular Fashion. Further details are available in the report.

HOW TO MENTION THIS REPORT:

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www.sdabocconi.it/circularfashion

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For further information on the Research and the Monitor you can get in contact with Francesca Romana Rinaldi, Director Monitor for Circular Fashion

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Monitor for Circular Fashion: Year 3

WHO WE ARE

The SDA Bocconi School of Management Sustainability Lab Monitor for Circular Fashion is a:

1) multi-year research project

2) multistakeholder community

The Monitor for Circular Fashion, powered by Enel X, aims at disseminating the best practices of circular fashion and promote technical, managerial and scientific skills, especially those that contribute to the transition towards circular business models.

SDA Bocconi
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MONITOR FOR CIRCULAR FASHION

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Partner companies

Ingredient brands

Albini Group
Candiani Denim
Manteco
RadiciGroup
Vibram
Vitale Barberis Canonico
YKK

Vendors, Brands & Retailers

Giorgio Armani
Ferragamo
Holding Moda
Kering
Oscalito
Save The Duck
TOD'S Group
Vivienne Westwood

Service Providers

Avery Dennison
Certilogo
Deda Stealth
Lectra
PLM Impianti
Temera
UL Solutions

KPIs Committee

Bip
ICEC
PwC
UNIC

Technical Partner

Visualmade



2

Fashion Industry research, policy and regulatory developments

CIRCULAR FASHION 2023: AN OVERVIEW

Chapter 2 provides an overview of the current fashion circularity context, as well as the frameworks expected to be put in place on a legislative level. The need to regulate sustainability in the fashion value chain stems from the environmental and social impact assessed, which is multifaceted and widespread. Given the priorities for fashion companies, the chapter is especially centered around the EU Waste Framework.

On **March 30, 2022**, the European Commission published the **EU Strategy for Sustainable and Circular Textiles** as part of the EU Green Deal, aiming to create a coherent framework and a vision for the transition of the textiles sector whereby:

- **By the year 2030**, textile products introduced to the European Union market will be characterized by their **durability and recyclability**. They will predominantly consist of recycled fibers, be free from harmful substances, and be manufactured in compliance with social and environmental rights.
- Consumers will experience **longer utility from high-quality, affordable textiles**, rendering the fast fashion trend obsolete. Economically profitable **reuse and repair services** will be widely accessible.
- Within a competitive and innovative textiles sector, **producers will assume responsibility for their products across the entire value chain**, even when they reach the end of their useful life.
- The circular textiles ecosystem will flourish, supported by **ample capacities for advanced fiber-to-fiber recycling**, while significantly **reducing the incineration and landfill disposal of textiles**.

As part of this strategy:



- The **EU's Ecolabel Criteria for Textile Products** will become **mandatory**, including new restrictions on the use of microplastics in synthetic fibers.



- **New criteria for green claims** will be established, addressing factors like product durability, repairability, and future environmental performance.



- **Transparency requirements** will be enhanced, compelling large companies to publicly disclose the quantity of products they discard and dispose of, including textiles, along with details about their subsequent treatment, such as preparation for reuse, recycling, incineration, or landfilling.



- A **Digital Product Passport for textiles** will be introduced, featuring mandatory information related to circularity and other critical environmental aspects.



- As part of the upcoming revision of the Waste Framework Directive in 2023, **harmonized EU EPR rules for textiles**, with fee adjustments based on eco-modulation, will be implemented.

The European Commission urged EU institutions and bodies to endorse this strategy.

The **primary objective** is to establish an **economy centred on collecting, sorting, re-using, preparing for re-use, and recycling textiles, while incentivizing producers and brands to design products that align with circular principles**. As part of this effort and pending an impact assessment, a significant portion of contributions to EPR schemes might be allocated to waste prevention and preparation for re-use. Additionally, there is consideration for making it mandatory to prepare separately collected household textile waste for re-use as an initial step. This would encourage re-use and repair activities, and reduce reliance on lower-tier waste treatment methods.

3

Methodology TESTING THE KPIs

Testing the tailored KPIs for fashion

Thanks to the **collaboration with the Monitor for Circular Fashion companies** and the support of the KPIs Committee during 2023 the industry-specific KPIs have been implemented and tested onto 10 real life products, referring to the Circular Fashion Activities.

In addition to the 40+ Industry specific KPIs identified in 2021 and 2022, in 2023 additional eco-design KPIs have been added and tested.

KPIs selection was made implementing the SMART + CCC criteria.
The KPIs have been used to

substantiate the sustainability claims chosen for each pilot project with the careful verification operated during several rounds by the Monitor for Circular Fashion Legal Advisor, the overall SDA Bocconi research team, the Sustainability claim task force and the KPIs Committee.

ACTIVITIES OF THE MONITOR FOR CIRCULAR FASHION 2023.

SDA BOCCONI EDUCATIONAL SESSIONS & EXPERIENCE	SDA BOCCONI RESEARCH	INDIVIDUAL CE REPORT*
<ul style="list-style-type: none"> Training and brainstorming Methodological sessions on circular fashion business models Networking 	<ul style="list-style-type: none"> SDA Bocconi survey to identify the industry-specific KPIs, trade-offs, challenges and opportunities, technologies and solutions in circular fashion. SDA Bocconi in-depth interviews and co-creation workshops 	<ul style="list-style-type: none"> Corporate and Energy site Circular assessment Highlights the main gaps and creation of a tailored solution roadmap to improve circularity levels * report prepared by Enel X for the requesting companies
SDA BOCCONI PILOT PROJECTS	CIRCULAR FASHION MANIFESTO	SDA BOCCONI C-FACTOR* (first edition)
<ul style="list-style-type: none"> Teamwork along the supply chain to design a "circular product" Guidelines and technical support in the application of the circular principles to design the "circular product" offer 	<ul style="list-style-type: none"> Participation to multi-stakeholder initiatives and call to actions, including: <ul style="list-style-type: none"> • EC Textile Transition Pathway Call for commitments and pledges • UNECE Community of Practice "Sustainability Pledge" on traceability and transparency 	<ul style="list-style-type: none"> Selection of 16 circular fashion startups and SMEs to create a network among sustainability innovators and provide opportunities to multiple stakeholders of the fashion industry *See more in the dedicated section Annex I.

COMPLETE METHODOLOGY OF SDA BOCCONI RESEARCH - MONITOR FOR CIRCULAR FASHION 2023



Updated results from the corporate and energy KPIs

The "Circular Economy Report" is an Enel X service, based on a methodology validated by the external certification body Rina and CESI and accredited by Accredia, that is able to identify the current level of circularity of a company and propose a roadmap of innovative solutions to boost it. The methodology, based on over 70 KPIs, is divided into two levels of analysis: Corporate and Energy Site.

4

Data analysis MAIN FINDINGS

SDA Bocconi research results

During 2023 the partners of the Monitor for Circular Fashion have been asked to answer an extensive survey focused on the following topics: sustainability & circularity strategy, transparency and traceability, pre-consumer and post-consumer waste management, circular fashion advantages, obstacles and trade-offs and governance, includ-

ing board structure & characteristics, board and managerial incentives for sustainability and overall governance of sustainability and circularity practices. The Monitor for Circular Fashion pipeline respondents are both SMEs and Large companies and cover both B2B and B2C business

models. They cover all the value chain activities. In addition, 15 EU experts on textiles waste management and EPR have been interviewed. In this report, the point of view of consumers has been considered as well, and will also be presented in this chapter.

Mapping the textile waste resources pipeline

The Waste Framework Directive proposal, which includes the legislation on EPR, among its objectives has the reduction of textile products that, arrived at their end of life, end up directly into landfill, incinerated or exported to less regulated countries outside EU.

parts were interviewed, and the results are available in this chapter. Given the relevance of the waste management topic, part of the survey and co-creation workshops with the partners of the Monitor were dedicated to investigating actions in place and future plans to optimize waste management.

According to EPR legislation the producers will be considered responsible for the management of the post-consumer textile waste and will have to guarantee schemes in which reuse and recycle are enabled and promoted. To deep dive into the challenges and opportunities coming with the introduction of an EPR scheme, 15 European ex-

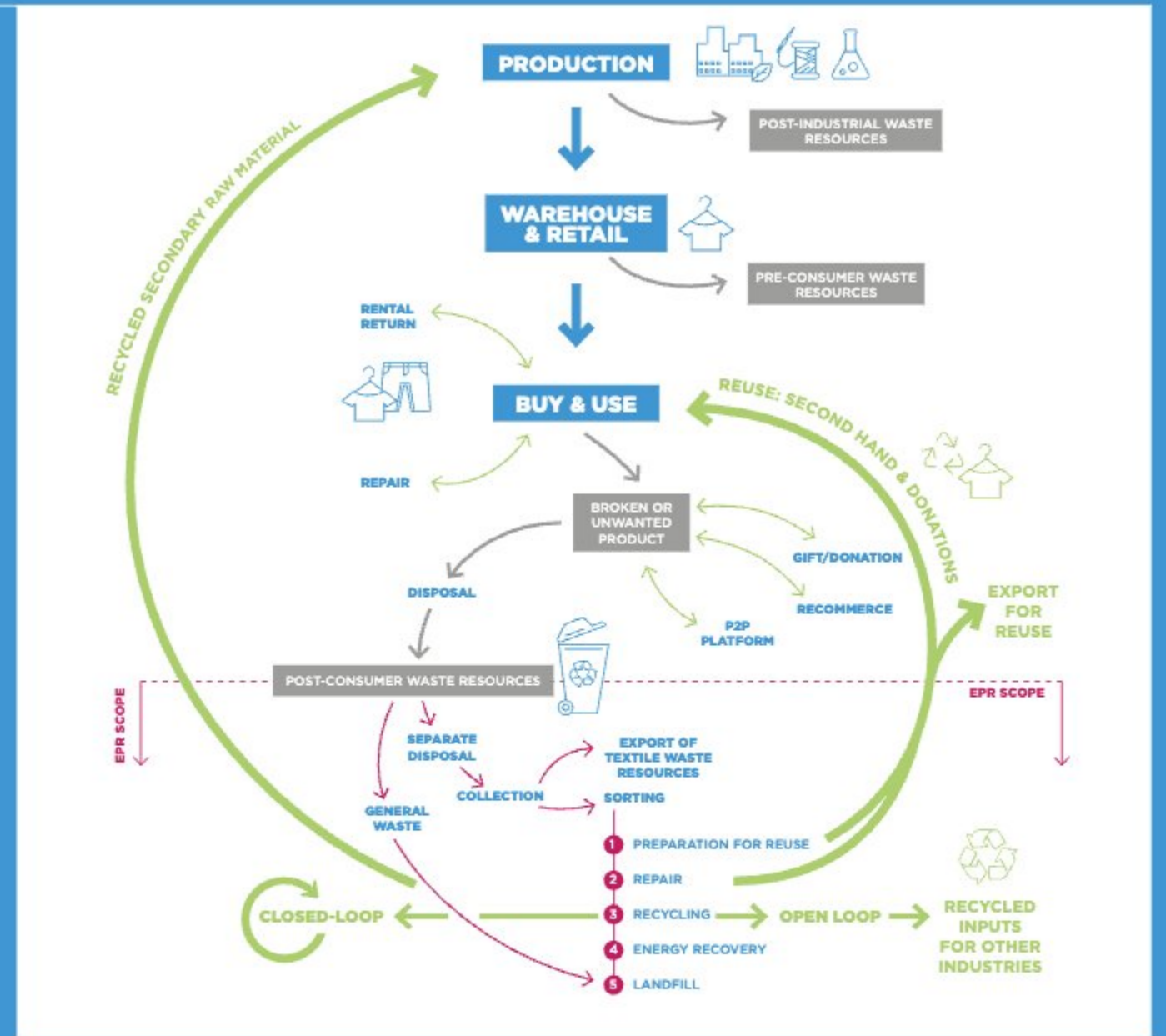
Actions in place to optimize textiles waste management emerged from the co-creation workshops:

Companies highlighted that they especially focus on the reduction of

the **post-industrial and pre-consumer waste** through: **Internal reuse, upcycling and recycling activities and donations.** While the low level of control over post-consumer waste, and the lack of official legislation on EPR, makes it harder for companies to directly manage the post-consumer waste.

Future plans to optimize textiles waste management emerged from the survey:

Optimization of **pre-consumer waste management:** **1. Internal reuse, 2. Partnerships with upcycling players, 3. Joining a consortium for recycling/**



upcycling 4. Implementation of 4.0 technologies.

Optimization of **post-consumer waste management:** **1. Partnership with existing players 2. Partnership with up-cycling players and 3.**

Join a consortium for EPR/ recycling/ upcycling. As emerged from the co-creation workshops, the entry into force of the EPR is considered by the partners as an opportunity not only to optimize the management and destination of post-consumer waste

- but also to improve:
- the reduction of waste generated during production;
 - the collaboration among actors of the value chain;
 - the pre-consumer waste management.



Circular fashion survey on new generations by PwC and SDA Bocconi School of Management for the Monitor for Circular Fashion Report 2023

From the survey "Circular fashion survey on New Generations by PwC and SDA Bocconi School of Management for the Monitor for Circular Fashion Report 2023" some key points have been highlighted. The survey involved 2,422* Italian and international respondents based in Italy, composed by: Gen Z (61%), Millennials (27%) and Generation X and Boomers (11%), with a gender-balanced composition (46% men, 52% women, 2% not available).

Among the New Generations, Millennials are the most sensitive to greenwashing: 56% no longer want to buy from brands that make claims by deliberately omitting or masking important information about the environment and 59% would no longer want to buy from brands that overestimate or exaggerate its functionality in terms of supporting the environment. As for the Digital Product Passport, 39% of new generations are willing to pay 10% more

for a product equipped with DPP, compared to 46% of Boomers.

According to all generations in aggregate, the information considered most important to be included in the DPP is the environmental impact and the composition and authentication of the product. The main benefits identified from the DPP are increased trust and loyalty, more informed decisions and combating counterfeiting in resale platforms.



The influence of Governance on sustainability and circularity performance

An in-depth analysis on governance for sustainability and circularity was carried out through survey and co-creation workshops with the companies of the Monitor for Circular Fashion.

Statistically significant quantitative analyses show that board size, CEO duality and the presence of sustainability incentives as executive remuneration are

positively correlated with sustainability performance.

Among other points discussed during the co-creation workshops, the following can be highlighted: the role of family businesses characterized by an intrinsic mission that goes beyond economic performance, the role of board diversity, or the participation in the board of directors of members dif-

ferent from each other by generation, gender, cultural background, being able to balance the different priorities in companies. The role of a widespread system of incentives for sustainability was also discussed: in order to accelerate the sustainability process, it is important to integrate the sustainability plan to the corporate strategy with clear quantitative KPIs.

* Calculations have been rounded up considering those who preferred not to answer

5

Actions towards 2030

MOVING FROM COMMITMENTS TO ACTIONS

Circular Fashion Manifesto and related Textiles Transition Pathway Actions

The "Circular Fashion Manifesto: Best Practices Update 2023" available on the website www.sdabocconi.it/circularfashion is the commitment officially presented to UNECE and the European Commission by the companies of the Monitor for Circular Fashion on September 19th 2023.

It answers to the UNECE "Sustainability Pledge" inviting all actors in the garment and footwear industry

to take action for traceability and transparency in order to accelerate the sustainability and circularity of value chains, in line with the United Nations 2030 Agenda for Sustainable Development.

The Textiles Ecosystem Transition Pathway was published by European Commission on 6 June 2023. The policy report includes 50 specific actions to support the twin transitions and the long-term resili-

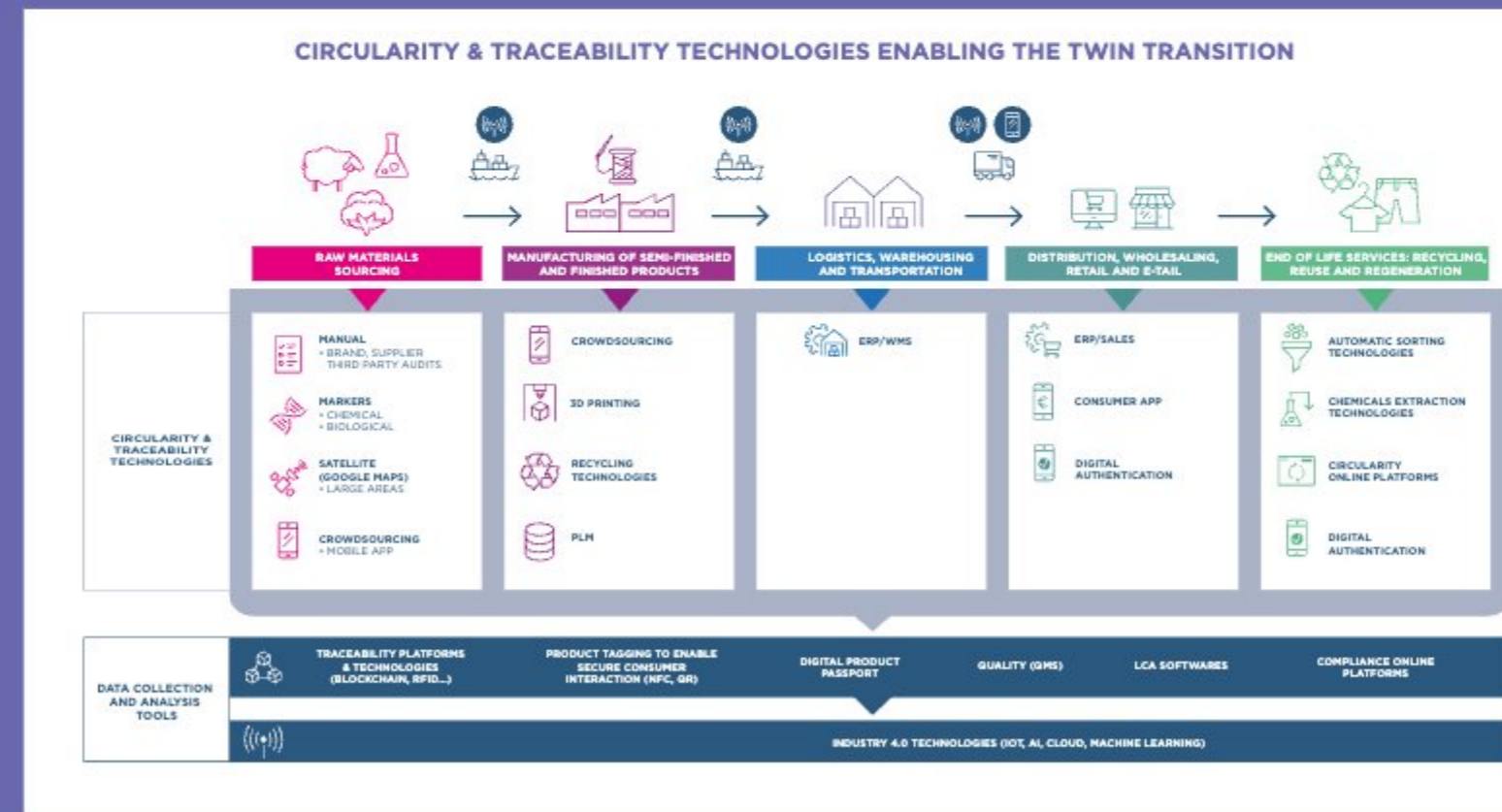
ence and competitiveness of the textiles ecosystem. The Companies of the Monitor for Circular Fashion are presenting their Pledge also to the European Commission call for commitments for stakeholders in the textiles ecosystem, highlighting the consistency of the existing "Circular Fashion Manifesto" and the related actions already implemented since 2021 with 8 actions identified in the Transition Pathway for the Textiles ecosystem.

Circularity & traceability technologies enabling the twin transition

As already mentioned in all Monitor for Circular Fashion reports, technologies are to be considered as essential enablers for the sustainable and circular transition, including traceability technologies and circu-

larity technologies. Companies of the Monitor for Circular Fashion, both pipeline players and service providers, have been asked to provide an answer to key technologies to enable the transition of fashion

towards circularity. The most popular identified are **recycling technologies, digital product passport, data collection and analysis tools and LCA softwares.**



Circular Fashion Roadmap

During the several plenary meetings with the companies of the Monitor for Circular Fashion it became clear that investment priorities need to be identified, considering both the requirements coming from upcoming textiles regula-

tions on sustainability and circularity (i.e. urgency) and the complexity generated implementing a circularity approach along the value chain activities involved (i.e. number of value chain activities involved). The level of complexity

can also be identified by looking at the stakeholders involved considering internal stakeholders (generally less complex and time consuming) vs external stakeholders (generally more complex and time consuming).

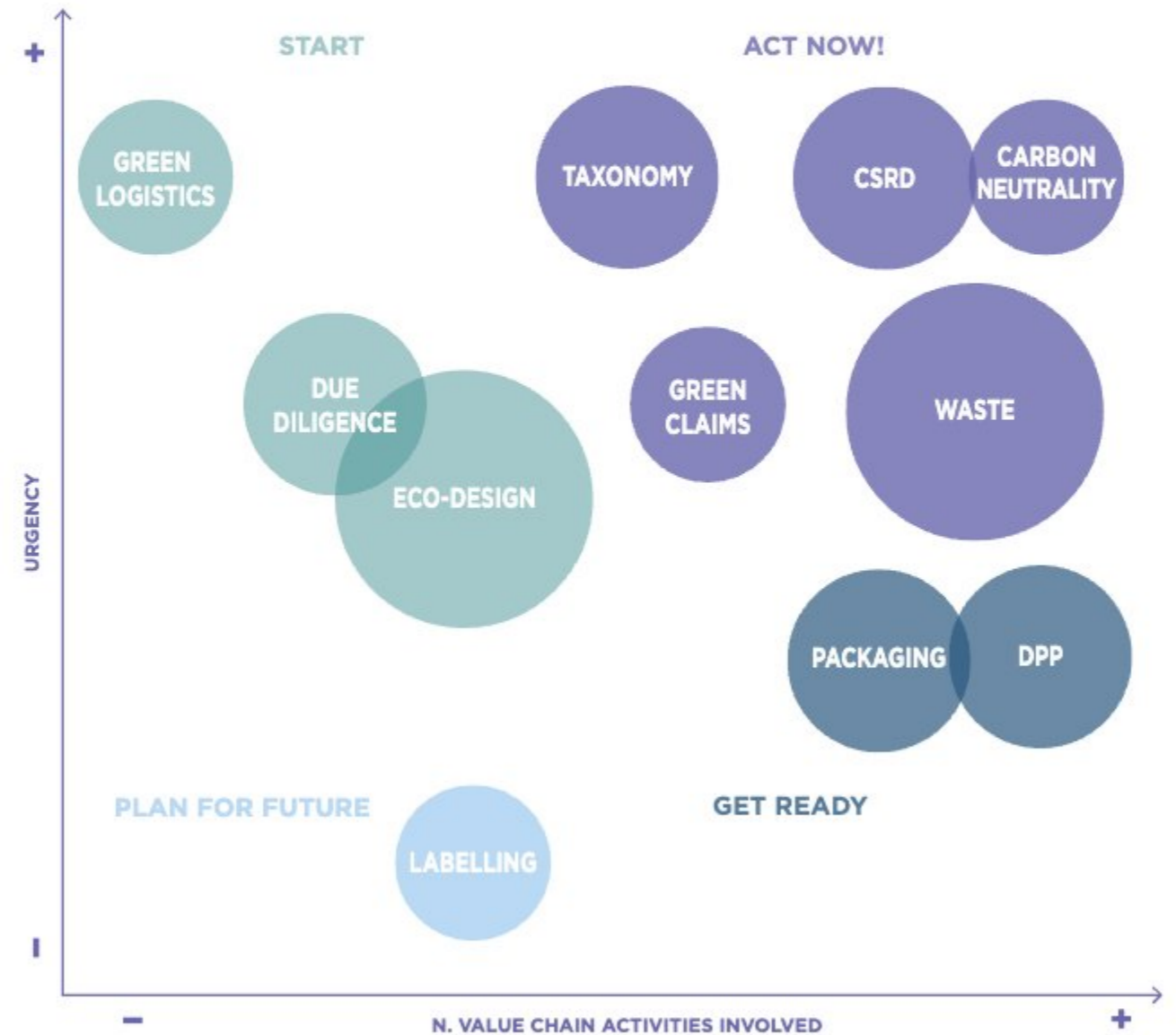
Next steps

During the next months and years new value chains will be explored to cover step by step all value chains of the Textile, Clothing, Leather and Footwear (TCLF) sector.

“During the next months and years the Monitor for Circular Fashion aims at acting as a community of frontrunners to implement eco-design principles, substantiate the sustainability claims, enhance traceability and transparency in fashion and increase the level of cooperation with born circular SMEs and relevant consortiums and alliances on the topic of waste management. The Monitor will also encourage Policy Makers to adopt a harmonized policy framework to support circular fashion initiatives.”

FRANCESCA ROMANA RINALDI
 Director Monitor for Circular Fashion
 SDA Bocconi School of Management

LEGENDA | COMPLEXITY LEVEL (STAKEHOLDERS INVOLVED) IS REPRESENTED BY BUBBLE SIZE:
LARGE - HIGH COMPLEXITY
SMALL - LOW COMPLEXITY



Monitor for Circular Fashion: Year 3

WHO WE ARE

1.1 Monitor for Circular Fashion 2023

1.2 Acknowledgements

1.3 Circular Fashion Manifesto: best practices update



1.1 Monitor for Circular Fashion 2023

The Monitor for Circular Fashion, part of the SDA Bocconi School of Management Sustainability Lab, is a multistakeholder scientific and technological community comprising of leading com-

panies in the Italian fashion industry and players in its supply chain. The Monitor for Circular Fashion, powered by Enel X, includes several activities (see Figure 1), disseminates the best practices of circu-

lar fashion, and promotes technical, managerial and scientific skills, especially those that contribute to the transition towards circular business models. www.sdabocconi.it/circularfashion

FIGURE 1: ACTIVITIES OF THE MONITOR FOR CIRCULAR FASHION 2023.

SDA BOCCONI EDUCATIONAL SESSIONS & EXPERIENCE	SDA BOCCONI RESEARCH	INDIVIDUAL CE REPORT*
Training and brainstorming Methodological sessions on circular fashion business models Networking	SDA Bocconi survey to identify the industry-specific KPIs, trade-offs, challenges and opportunities, technologies and solutions in circular fashion. SDA Bocconi in-depth interviews and co-creation workshops	Corporate and Energy site Circular assessment Highlights the main gaps and creation of a tailored solution roadmap to improve circularity levels * report prepared by Enel X for the requesting companies
SDA BOCCONI PILOT PROJECTS	CIRCULAR FASHION MANIFESTO	SDA BOCCONI C-FACTOR* (first edition)
Teamwork along the supply chain to design a "circular product" Guidelines and technical support in the application of the circular principles to design the "circular product" offer	Participation to multi-stakeholder initiatives and call to actions, including: <ul style="list-style-type: none"> • EC Textile Transition Pathway Call for commitments and pledges • UNECE Community of Practice "Sustainability Pledge" on traceability and transparency 	Selection of 16 circular fashion startups and SMEs to create a network among sustainability innovators and provide opportunities to multiple stakeholders of the fashion industry *See more in the dedicated section Annex I.

Who we are

SDA BOCCONI SCHOOL OF MANAGEMENT

SDA Bocconi School of Management has been a leading institution in management training for more than 50 years. The school's mission is to help individuals, companies and institutions grow by promoting managerial culture, knowledge and innovation. SDA Bocconi is among the leading

Business Schools in Europe and is among the few to have gained the triple accreditation - EQUIS, AMBA and AACSB - which puts it in the elite of Business Schools worldwide. #4 European B-School Financial Times Rankings 2023.

SDA Bocconi Sustainability Lab is a multidisciplinary think tank aiming at developing and spreading relevant and

innovative research to support enterprises and financial institutions, policy makers and non-profit organizations in their path towards sustainability.



POWERED BY ENEL X

Enel X Global Retail is the Enel Group's global business line active in the areas of energy supply and efficiency. As a global leader in the development of innovative solutions to support the energy transition, Enel X Global Retail provides consumers, businesses and

cities with a modular and integrated offer built around customer needs, promoting electrification and digitalization as drivers for creating new value. Enel X Global Retail's ecosystem of solutions includes assets for the optimization and self-production of energy, premium solutions for energy efficiency, and competitive and flexible

energy offers, with the end goal of helping customers develop their own energy roadmaps.



*Traceability is understood as "the ability to trace the history, application or location of an object" in a supply chain. (Source: ISO 9001: 2015, "Quality Management Systems Requirements"). It is the ability to "identify and trace the history, application, location and distribution of products, parts and materials to ensure the reliability of sustainability claims in the areas of human rights, labour (including health and safety), the environment and anti-corruption" (United Nations Global Compact Office, 2014, "A Guide to Traceability A Practical Approach to Advance Sustainability in Global Supply Chains") and "the process by which enterprises track materials and products and the conditions in which they were produced through the supply chain" (OECD, 2018, "Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector").

** Transparency relates directly to relevant information been made available to all elements of the value chain in a standardized way, which allows common understanding, accessibility, clarity, and comparison (European Commission, 2017, "A Background Analysis on Transparency and Traceability in the Garment Value Chain").

Partner companies



Founded in 1876 in Albino (Bergamo, Italy), the **Albini Group** is the largest European manufacturer of shirting fabrics and has always been a family-run business. Today, having reached its 146th year of activity, is led by the fifth generation of the family with Stefano, Fabio and Andrea Albini, whose actions guarantee a long-term business vision and a strong ethical commitment.

The fabrics designed and weaved by Albini Group are the result of a strong attention to R&D, focused on sustainable innovation. Thanks to its vertical integrated supply chain, Albini Group has the opportunity to innovate and to raise the standard at every step, in order to experiment new models for implementing low-impact and circular industrial processes.

GIORGIO ARMANI

The Group focuses on three key brands: **Giorgio Armani**, EmporioArmani and A|X Armani Exchange. The constant pursuit of style and the diversification of the selection allowed the Group to respond extremely quickly to market developments, targeting a wide-ranging client base with different purchasing opportunities and assigning a distinct style and image to each brand.

In 2021, the new sustainability strategy was launched, defined around three main areas of action: People, Planet and Prosperity. For each of the three areas, specific qualitative and quantitative objectives were identified and summarised in the Group's Sustainability Plan, which is fed by internal strategic planning and analysis processes, reinforced by stakeholder input and participation in national and international working groups, in line with the Sustainable Development Goals (SDGs) defined by the United Nations. The well-being of employees has always been at the centre of Armani Group's actions, their growth a constant consideration, their talent development the highest objective. Every piece of clothing is made designed as though from water, raw materials and so many elements of the nature that surrounds us. Armani Group's sustainability path has always embraced a wider horizon, traveling beyond the boundaries of fashion, exploring new sustainable paths, for a vision of prosperity that wants involve the entire community.



Avery Dennison Corporation (NYSE: AVY) is a global materials science and digital identification solutions company that provides branding and information labeling solutions, including Intelligent labels (RFID, NFC...), inlays and tags, and a variety of converted products and solutions. The company employs approximately 36,000 employees in more than 50 countries.

Avery Dennison Solutions Group including Apparel and Digital Solutions supports a wide range of segments like Fashion & Luxury, Performance, Team Sports, Retail, Factories, Recyclers, Brand Protection. Combining decades of materials science innovation with secure, global supply chain capabilities, our external embellishment solutions helps brands create the right impact. Today our portfolio includes high stretch, decorative, and durable transfers, reflective and low temperature applications, embroidery, woven patches, specialty products and beyond.

Avery Dennison also offers a suite of digital ID technologies that authenticate product history, provide tracking and inventory solutions. In a world of big data and massive amounts of information, digital ID technologies help create certainty, showing how a connected world can be a better world, full of greater possibilities. With our unique combination of materials expertise, innovative, end-to-end technologies and global capacity for supporting customers, Avery Dennison is partnering with companies across multiple industries including apparel, footwear, beauty, introducing transformative benefits through connecting the physical and digital worlds. Learn more at www.averydennison.com



Candiani Denim is an Italian family business founded in 1938, located between Milan and the Alps in a nature reserve, the Ticino Park. Candiani Denim is an internationally renowned denim factory that supplies some of the world's best-known fashion brands, creating the fabrics that have given birth to the premium denim industry. Candiani firmly believes in the importance of Made in Italy, Sustainability, and Innovation values that are deeply woven into every fabric giving it inimitable quality and uniqueness. Candiani's vision for the denim of the future is a product that is both regenerated and regenerative.

From the first to the last step, Candiani's goal is to make 100% compostable denim with a positive impact at every stage of its life cycle. Candiani Denim is headquartered in Robecchetto con Induno and has a Development Center in Los Angeles. Candiani Denim has developed and patented COREVA™ the World's first bio-based, biodegradable, and compostable stretch denim.



CertiLogo is Fashion & Luxury's most widely adopted solution for secure Digital Product IDs, Digital Product Passports and counterfeit-proof authentication worldwide. We help brands capture and preserve the value of their traceability and circularity initiatives by safeguarding the brand and consumers from replicas, thus establishing effective relationships built on trust. Our unique AI-powered technology and "Secure by Design™" methodology empower brands to deliver the most reliable authentication, compelling services and engaging experiences directly through their products, while collecting insights that support traceability, commercial, marketing, brand protection and sustainability strategies, throughout the entire circular product lifecycle.



Deda Stealth helps Fashion and Luxury companies grow and develop local and global markets. Over the last 30 years, its expertise and attitude have won it an enviable stable of iconic clients. As a leader in its market, Deda Stealth aims to generate positive change for people and our planet, releasing technology solutions supporting sustainable business models and circular fashion. Deda Stealth is a Deda company, one of the most crucial players in the "Made in Italy" Information Technology industry.

FERRAGAMO

The **Salvatore Ferragamo Group** is one of the leaders in the luxury industry, whose origins date back to 1927.

Ferragamo is renowned for the creation, production and worldwide distribution of luxury collections of footwear, leather goods, clothing, silk products and other accessories for men and women, including glasses, watches and perfumes made under licence. Embedding the spirit of its Founder, Ferragamo reinterprets its heritage with creativity, innovation and sustainable thinking. Uniqueness and exclusivity, along with the blend of style and exquisite 'Made in Italy' savoir-faire, are the hallmarks of all Ferragamo's products.

The Group is present in more than 90 countries around the world and counts more than 3.800 employees.



Holding Moda is a hub of Made in Italy manufacturing excellence operating in the luxury fashion sector and is promoted by Holding Industriale Spa (Hind), headquartered in Turin and Milan. Founded in 2011, Hind invests in the capital of small and medium-sized businesses with the aim of fostering growth, internationalization and generational turnover processes. The project involves the best fashion production realities acquisition and their enhancement through a management and development strategy which encourages technical, productive, commercial and financial coordination, maximizing synergies between companies. The companies of the Group can count on the savoir faire of highly qualified workers who make it possible to create high fashion garments in different product categories ranging from jersey, leather, softs, denim, outerwear, leather goods, sneakers, printing, embellishment and textiles.

The "HPlanet" sustainability department was created internally across the three ESG areas and linked to the business pillars of Sustainability, Made in Italy, Innovation and Culture, in order to support the business growth and to add value to human resources, the social and environmental ecosystem and supply chain.



A global Luxury group, **Kering** manages the development of a series of renowned Houses in Fashion, Leather Goods and Jewelry: Gucci, Saint Laurent, Bottega Veneta, Balenciaga, Alexander McQueen, Brioni, Boucheron, Pomellato, DoDo, Qeelin, as well as Kering Eyewear. By placing creativity at the heart of its strategy, Kering enables its Houses to set new limits in terms of their creative expression while crafting tomorrow's Luxury in a sustainable and responsible way. We capture these beliefs in our signature: "Empowering Imagination". In 2022, Kering had over 47,000 employees and revenue of €20.4 billion.



As a major player in the fashion, automotive and furniture markets, **Lectra** contributes to the Industry 4.0 revolution with boldness and passion by providing best-in-class technologies. The Group offers industrial intelligence solutions - software, equipment, data and services - that facilitate the digital transformation of the companies it serves. In doing so, Lectra helps its customers push boundaries and unlock their potential. The Group is proud to state that its 2,500 employees are driven by three core values: being open-minded thinkers, trusted partners and passionate innovators. Founded in 1973, Lectra reported revenues of 522 million euros in 2022. The company is listed on Euronext, where it is included in the following indices: SBF 120, CAC Mid 60, CAC Mid&Small, CAC All Shares, CAC All-Tradable, CAC Technology, EN Tech Leaders and ENT PEA-PME 150. For more information, please visit www.lectra.com.



Manteco S.p.A. is a leading textile company for sustainability and high-quality fabrics since 1943. It is fully committed to circular fashion and has developed numerous projects in order to achieve it: a zero-waste system to recover all the scraps coming from production phases, a sustainable design philosophy to create recyclable fabrics, projects to take back and recycle the cuts produced during garment making or unsold knits.

Manteco S.p.A. is adhering to the principles of the UN Agenda 2030 for sustainable development through its roadmap to sustainability MantEco for Planet® and applies science-based LCA studies on its recycled wool fabrics.



Oscalito has been producing quality underwear and knitwear for men and women since 1936, using an ethically responsible and sustainable production process. Oscalito commitment to social and environmental sustainability is seen in seven main key aspects: all their products are 1) 100% Made in Italy; 2) made of natural (or of natural origin) fibers; 3) made with raw materials with environmental or health protection certifications (OEKO TEX, GOTS); 4) the output of a short supply chain, using only Italian or European suppliers of raw materials; 5) high quality items; 6) produced with respect for workers; 7) made using renewable energy and sustainable packaging.



PLM Impianti is a leading company in the design and production of machinery and automation applied to inspection, cutting, handling and packing in the textile, automotive, denim, technical and non-woven sectors. Since 1960, the company has contributed to the productivity and sustainability of their customers through solutions designed specifically to optimize and rationalize processes, increase the first-choice product and reduce consumption, costs and waste. Sustainability is a core value in the day to day ongoings of the company, in the production processes and at the basis of their machinery.



RadiciGroup, a leading chemical multinational group, works everyday to make circularity its business model. The Group optimizes the use of materials while fine-tuning processes, reducing waste, promoting recyclability from the earliest product design phases. RadiciGroup supports recycling whenever it is the best environmental solution. It is always looking for low-impact solutions in terms of natural resources and energy, such as making green power the first choice. RadiciGroup relies on certified management systems for Safety, Environment and Energy to keep companies in line with the highest sustainability standards.



Save The Duck, the 100% animal free B Corp certified outerwear brand, takes care of the environment and all its inhabitants, promoting a transparent business model that is attentive to the responsible management of resources. Sustainability is a path that has no point of arrival, it requires commitment and dedication. Save The Duck works to ensure that the future of the next generations is not compromised by its work in the present.



Temera is the leading company providing IoT solutions dedicated to Fashion, Luxury & Retail industry. Temera gives a 'digital voice' to products through the use of unique identifiers, providing an end-to-end traceability through the value chain. Standing out as innovator and visionary, Temera represents a center of excellence in delivering digital transformation projects that bring high impact in terms of transparency and sustainability storytelling.



The **TOD'S Group** is a symbol of Italian excellence. It is deeply rooted in Italy's artisan traditions, with a passion for craftsmanship, superb quality and timeless style. At the turn of the 20th century, Filippo Della Valle, Diego's grandfather, set up a small shoemaking workshop. Under the guidance of Diego and Andrea Della Valle, this clear vision has enabled the Group to become a benchmark in the international luxury market.

TOD'S Group includes 4 brands, each with its own identity: TOD'S, Roger Vivier, Hogan and Fay. The Group has a leading position in the footwear, leather goods and clothing sectors with a significant presence in all the global markets.



Vitale Barberis Canonico has been creating prestigious 'Made in Italy' textiles for the clothing industry in the historical factory in Pratrivero, in the heart of Piedmont, for 360 years, operating in a harmonious way with the environment and the surroundings. Vitale Barberis Canonico is the largest global exporter with more than 450 employees, 40 agents throughout the world and two state-of-the-art factories in the Biella region of Italy. Heritage, Innovation and Sustainability are the key words of the company philosophy. The company annually publishes its Sustainability Report to trace the results achieved and to set challenging goals.



A global leader in applied safety science, **UL Solutions** transforms safety, security and sustainability challenges into opportunities for customers in more than 100 countries. UL Solutions delivers testing, inspection and certification services, together with software products and advisory offerings, that support our customers' product innovation and business growth. With wide expertise in the fashion and luxury industry, we help companies access their destination markets and navigate complex regulatory landscapes and supply chains to support their authentic path toward sustainability. We help deliver safer, more sustainable and high-quality products consumers can trust.



Vivienne Westwood Srl is part of one of the last independent global fashion houses that design, develop, manufacture, and sell luxury goods. In the last ten years, the Italian business unit had to rethink the production paradigm of the sector, to align it with a model sensitive to environmental and social issues. Social, environmental and circularity goals drive the company in the selection of raw materials, of manufacturing suppliers and motivate Vivienne Westwood to implement innovative processes until downstream. The company is willing to progressively map and trace the entire supply chain, monitoring the lifecycle of the products manufactured, mitigating the environmental and social risks.



Vibram Group manufactures and licenses the production of high performance rubber soles for footwear. Vibram aims to make the best soles in the world and is working towards minimizing its environmental and social impact without compromising its quality. Vibram The Sustainable Way strategy focuses on Vibram Values: People, Quality, Durability, Innovation, Inspiration, Test and No Waste. The company measures progress and sets goals in all impact areas in order to grow responsibly and continually decrease its impact on the planet with the ambition of inspiring all stakeholders to continuous improvement.



YKK solves the most complex fastening and attaching challenges. Since the company's founding in Tokyo in 1934, YKK has continuously set industry standards for quality, innovation, and sustainability in the production of zippers, plastic hardware, hook and loop fasteners, webbing tapes, and snap and buttons. YKK's "solutions-first" approach leverages its extensive product and machinery portfolio, engineering expertise, and integrated production, service, and supply chain solutions in 70+ countries/regions, leaving it well-positioned to support the growth of customers of all sizes and adapt to their evolving business needs. Guided by the CYCLE OF GOODNESS® philosophy – no one prospers without rendering benefit to others – YKK aims to contribute to a sustainable society through its products and manufacturing operations and constantly seeks new ways to serve the changing needs of its customers while at the same time investing in its employees and giving back to its communities. "YKK" and "YKK Little Parts. Big Difference." are registered trademarks or trademarks of YKK CORPORATION in Japan and other countries/regions.

KPIs Committee



Bip is an international consulting company born in 2003 in Italy, and now based in 12 countries, with 20 offices (London, Rio de Janeiro, New York, Abu Dhabi, etc.) and more than 4,700 employees globally. Bip supports large and medium companies to adopt sustainable and circular transformation principles into their own organization and processes, improving corporate, energy & environmental, social and financial sustainability. Bip supports its clients, on the fashion and luxury sector, with actions aimed at implementing sustainable approaches to supply and production by measuring the consequent level of sustainability achieved.



UNIC Italian Tanneries is the non-profit trade association officially representing the Italian tanning industry since 1946. The Italian tanning industry, made up of over 1,100 companies and approximately 18,000 employees, for a total annual turnover of €4.5 billion (of which over 70% deriving from exports to over 110 countries each year), is a key strategic player in the national and international leather manufacturing value chain, as well as an excellent component of the Made in Italy. A member of Confindustria, the UN Global Compact, Confindustria Moda, Cotance (Confederation of European tanning industries) and ICT (International Council of Tanners), UNIC's mission is to promote knowledge of Italian leather and industry at all levels, support its capacity for innovation and growth in the field of environmental and social sustainability, fostering its role as an ethically responsible economic actor, providing specialized and professional assistance services to its members in all areas of their interest.



ICEC, Quality Certification Institute for the Leather Sector, located in the heart of Milan, is the only accredited certification body in Italy and worldwide focusing exclusively on the leather sector. Founded in 1994, the company has extensive experience in the industry and offers the best expertise in its field. Its members include the main Associations of Tanneries, Fashion, Footwear, Leather Goods, Chemicals, NGOs, subcontractors, Scientific Institutes, and Universities. ICEC clients include tanneries, brands, manufacturers, raw material suppliers, and companies operating in the leather sector. ACCREDIA accredits ICEC to issue certificates of quality management systems (ISO 9001), environmental management systems (ISO 14001), EMAS, occupational health and safety management systems (ISO 45001), leather and derived products (according to UNI standards or manufacturer's specifications) and denomination of origin of leather (EN 16484). With its own standards, ICEC certifies traceability, chemicals, laboratories, and other specific issues related to the leather sector. ICEC comprises a team of qualified experts who understand the complexities of the tanning industry and work closely with companies to ensure they achieve the required quality standards. ICEC is committed to promoting best practices in the industry and providing a competitive advantage to companies that choose to be certified by us.

Technical partner



Visualmade, corporate communication agency, develops complex identity and information systems to meet specific communication needs, on paper, in the web, and in architectural spaces. During the last 15 years Visualmade has been developing more and more communication strategies and systems, focusing on sustainability as a corporate value.



PwC purpose is "solve important problems and build trust in society" and perhaps nowhere do we have greater opportunities to fulfill this purpose than in helping our clients address sustainability issues. PwC looks at sustainability as a key element for the development of services and guides organizations on a virtuous path for themselves and society, tracing sustainable paths, together.

#responsiblejourney

1.2 Acknowledgements

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Thanks to all partners for the great participation to the community activities.

This Report is the result of great community collaboration.



The Circular Fashion Manifesto has been presented to the United Nations Economic Commission for Europe (UNECE) starting from 2021. It is SDA Bocconi Sustainability Lab's response to the UNECE's "Sustainability Pledge", which comprises a dedicated toolbox of policy recommendations, implementation guidelines, standards plus a Call to Action. The UNECE invites all the players in the garment and footwear industry to implement this toolbox and take practical action for **traceability and transparency** for improved sustainability, in line with the **2030 Agenda for Sustainable Development**.



The Textiles Ecosystem Transition Pathway was published by the European Commission on 6 June 2023. The policy report includes 50 specific actions to support the twin transitions and the long-term resilience and competitiveness of the textiles ecosystem.

The Companies of the Monitor for Circular Fashion are presenting their

Pledge also to the European Commission call for commitments for stakeholders in the textiles ecosystem, highlighting the consistency of the existing "Circular Fashion Manifesto" and the related actions already implemented since 2021, with 8 actions identified in the Transition Pathway for the Textiles ecosystem.

8 ACTIONS IDENTIFIED IN THE TRANSITION PATHWAY FOR THE TEXTILES ECOSYSTEM

BUILDING BLOCK 1: SUSTAINABLE COMPETITIVENESS

1. Promote, support and implement circular and sustainability practices, services and business models, including social economy enterprises (such as product-as-service models, take-back services, second-hand and repair services, innovative sorting and recycling) including through Horizon Europe, LIFE, and the 'ReSet the Trend #ReFashionNow' campaign and actions from the Social Economy Action Plan.

11. Create more demand for sustainable products and onboard consumers in the green transition by launching consumer campaigns to create awareness and to reshape consumption patterns including under the motto ReSet the Trend #ReFashionNow, as well as supporting emotional durability by designing products that people want to keep.

BUILDING BLOCK 2: REGULATION AND PUBLIC GOVERNANCE

14. Follow-up on actions in the EU Strategy for Sustainable and Circular Textiles, including specific ecodesign requirements, the Digital Product Passport, circular and sustainable management of textile waste and possible extended producer responsibility rules, and encourage industry participation in the relevant consultations.

16. Finding common methods to assess and compare the sustainability performance of textile products in the context of the foreseen ecodesign requirements.

17. Improving traceability and transparency in the textile value chain through the proposed Digital Product Passport.

BUILDING BLOCK 3: SOCIAL DIMENSION

21. Support up-and reskilling, access to lifelong learning and training opportunities through for example, the EU Pact for Skills for the Textiles ecosystem, to ensure workers are skilled for the twin transition.

BUILDING BLOCK 4: R&I, TECHNIQUES AND TECHNOLOGICAL SOLUTIONS

25. Increase access and interaction of SMEs in the textiles ecosystem to/with tech support structures (for example through tech federations, digital innovation hubs, campuses, incubators, clusters, industry alliances).

BUILDING BLOCK 5: INFRASTRUCTURE

BUILDING BLOCK 6: SKILLS

40. Organise events and awareness-raising activities on the attractiveness of the sector and new opportunities to work in the industry around the European Year of Skills.

BUILDING BLOCK 7: INVESTMENTS AND FUNDING

BUILDING BLOCK 8: ECOSYSTEM'S READINESS TO SUPPORT EU STRATEGIC AUTONOMY AND DEFENCE EFFORTS

1.3 Circular Fashion Manifesto

BEST PRACTICES UPDATE

The Circular Fashion Manifesto (Figure 2) is answering the UNECE "Sustainability Pledge" inviting all actors in the garment and footwear industry to take action for traceability and transparency in order to accelerate the sustainability and circularity of value chains in this industry, in line with the United Nations 2030 Agenda for Sustainable Development. The initiative aims to establish a mechanism to support the uptake of measures in the UNECE Recommendation No. 46 as well as relevant UN/CEFACT standards, and to support the monitoring of their implementation. In 2023 the Pledge is also highlighting 8 actions identified in the Textiles Ecosystem Transition Pathway.



OBJECTIVES OF THE PILOT PROJECTS

- 1 ESTABLISHING TEAMWORK BETWEEN INGREDIENT BRANDS, VENDORS, BRANDS & RETAILERS AND SERVICE PROVIDERS
- 2 BUILDING RELIABLE SUSTAINABILITY CLAIMS TO FIGHT GREENWASHING
- 3 IMPLEMENTING AND TESTING INDUSTRY-SPECIFIC KPIS INTO A REAL LIFE PRODUCT, REFERRING TO THE CIRCULAR FASHION ACTIVITIES
- 4 IMPLEMENTING THE ECO-DESIGN PRINCIPLES INTO A REAL LIFE PRODUCT

THE PLEDGE

The companies participating in "The Monitor for Circular Fashion" commit to:

- **gather information** required to positively boost progress towards sustainability and more importantly reduce their negative impact on our planet;
- **enhance circularity** and sustainability of value chains through transparency and traceability;
- **implement circular business processes** along their value chains;
- **adopt common indicators** to measure progress on circularity in their value chains and report the results;
- **encourage high quality waste management**;
- **promote and implement corporate social responsibility** for pursuing long-term benefits to all stakeholders;
- **raise public awareness** and educate all relevant stakeholders on the positive impacts of sustainable and circular production and consumption;
- **exchange experiences and cooperate** with other multi-stakeholder circular initiatives.

SIGNATORIES

- Partner companies**
 ALBINI GROUP
 GIORGIO ARMANI
 AVERY DENNISON
 CANDIANI DENIM
 CERTILOGO
 DEDA STEALTH
 FERRAGAMO
 HOLDING MODA
 KERING
 LECTRA
 MANTECO
 OSCALITO
 PLM IMPIANTI
 RADICIGROUP
 SAVE THE DUCK
 TEMERA
 TOD'S Group
 UL SOLUTIONS
 VIBRAM
 VITALE BARBERIS CANONICO
 VIVIENNE WESTWOOD SRL
 YKK
- KPIs Committee***
 BIP
 ICEC
 PWC
 UNIC

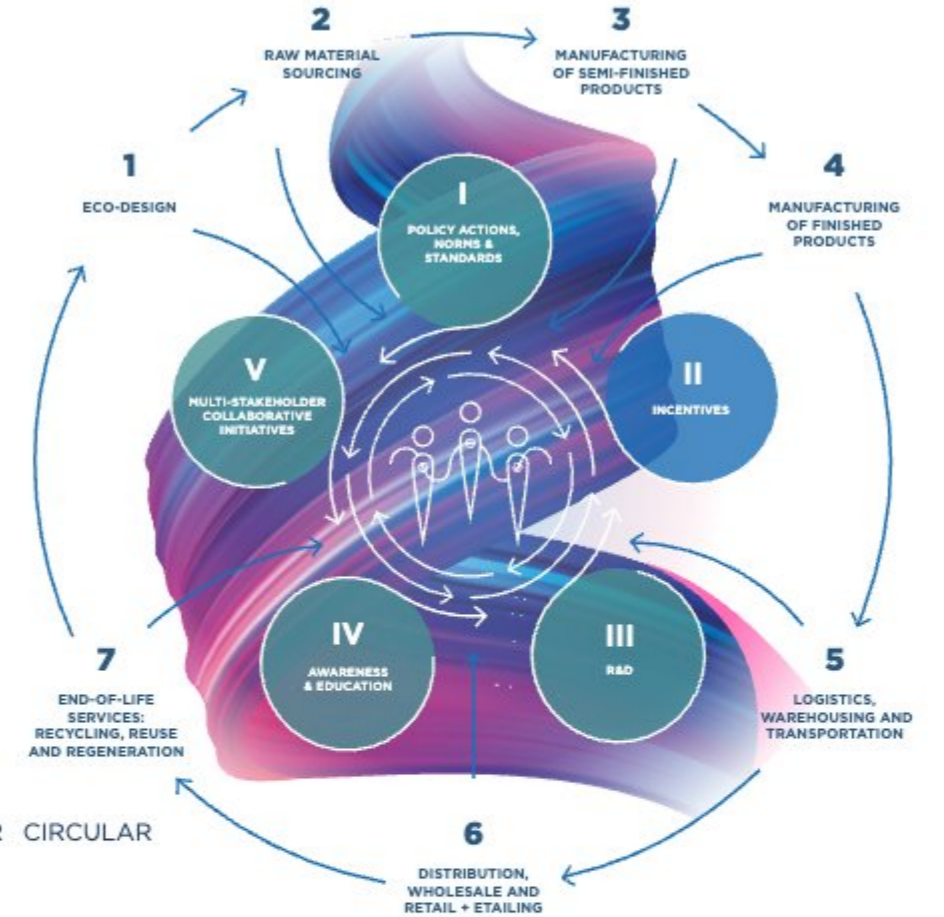


FIGURE 2: THE MONITOR FOR CIRCULAR FASHION MANIFESTO 2023.

KEY FACTS



26
SIGNATORIES



78,400
TOTAL N. OF EMPLOYEES REPRESENTED (2022, APPROX.)



29.50 BN €
TOTAL REVENUES (2022, APPROX.)

*The KPIs identification has been supported by the KPIs Committee of the Monitor for Circular Fashion composed by BIP and PwC.

Fashion Industry research, policy and regulatory developments

CIRCULAR FASHION 2023: AN OVERVIEW

2.1 The need for a more circular fashion

2.2 EU Waste Framework at a glance

2



2.1 The need for a more circular fashion

The fashion industry has a severe environmental impact on our world, with significant effects on pollution, water use, and biodiversity, as well as global social inequalities¹. The industry's GHG emissions are likely rise to around 2.7 billion tonnes a year by 2030 with an annual volume growth rate of 2.7%, if no further action will be implemented during the next decade, beyond measures already in place². Moreover, the industry consumes 215 trillion liters of water per year and is responsible for 16% and 4% of the total global use of pesticides and fertilizers respectively³ (UNEP, 2021). Additionally, waste is a key element when evaluating the industry's environmental impact (see next paragraph and Chapter 4).

To reduce this negative impact on the environment, sustainability and circularity are of paramount importance nowadays, both from a managerial and a consumer perspective. The McKinsey 2023 State of Fashion Report demonstrates how sustainability represents the biggest opportunity for the fashion industry and how 79% of executives believe that the lack of sustainability per-

formance standards is a major challenge to improving sustainability credentials in the eyes of consumers⁴. The consumer perspective has been captured for instance by PwC and SDA Bocconi with the Circular Fashion Survey on New Generations for the 2022 Monitor for Circular Fashion Report⁵: 88% of new generations respondents are worried about the future of the planet and 72% say they are willing to radically change their habits to protect the ecosystem⁶.

Nevertheless, "misinformation and greenwashing are ubiquitous and a significant challenge"⁷. In fact, a 2020 study by the European Commission found that 42% of environmental claims communicated in the EU at large were "exaggerated, false or deceptive and could therefore potentially amount to an unfair commercial practice under the Unfair Commercial Practices Directive (UCPD)"⁸. There is a large number of cases of dubious and vague claims, giving the impression to consumers that a product has no negative impact on the environment⁹. Another recent report by Changing Market Foundation

found that the majority of sustainability claims by large European players can be considered "unsubstantiated" or "misleading"¹⁰.

Greenwashing constitutes a major issue in the pursuit of sustainability, involving prominent players in the industry. For example, recently, a leader in the fast fashion sector was accused by a watchdog of using an unreliable index to support its environmental claims; a core sportswear player was investigated for not following their green claims about recycling their footwear, destroying them instead.

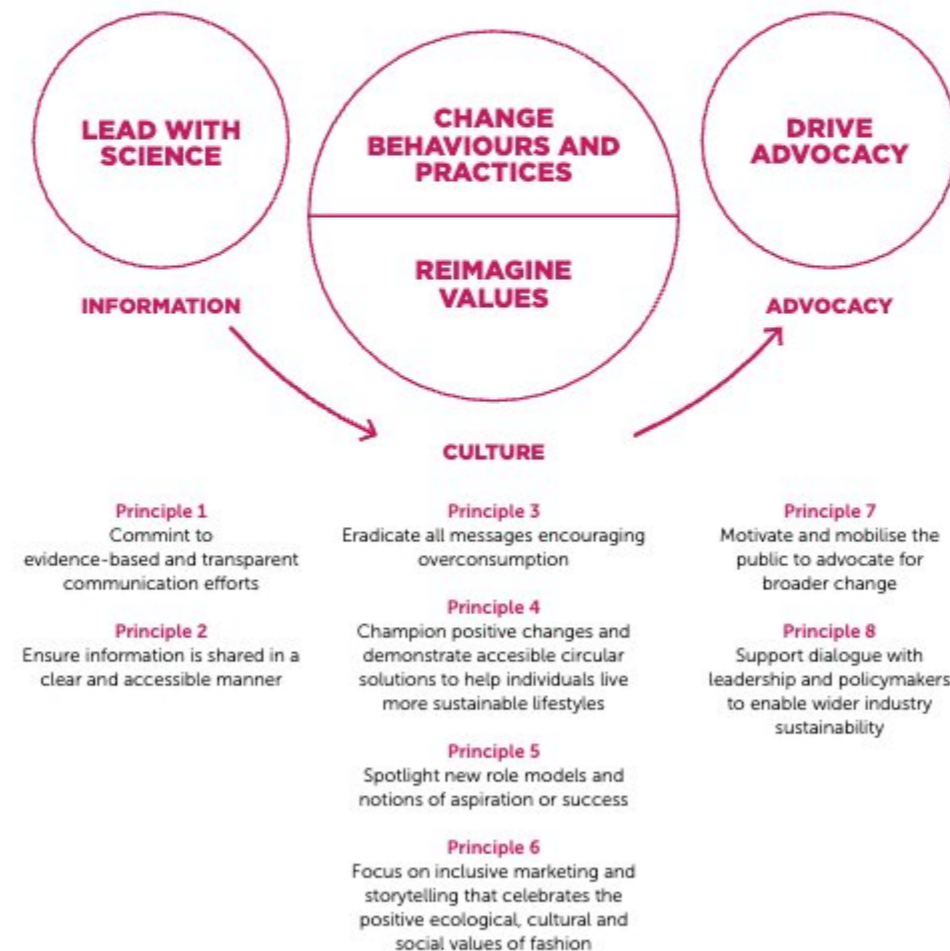
In conclusion, substantiating green claims with significant data when brands communicate sustainability to consumers is of great importance to avoid the greenwashing trap. As a matter of fact, laws and regulations were presented in recent years, such as the Green Claims Directive which, proposed in March 2023 by the European Commission, states rules for companies to support and verify ex-ante their sustainability claims¹¹.

Nevertheless, this is not enough: a real change towards sustainability will occur only when all stakeholders, including communicators, managers, investors, customers, and policymakers will collaborate to make this a priority in their agendas and habits. To turn this into reality, independent projects and organizations are developing guide-

lines. During the Global Fashion Agenda 2023, UNEP presented "The Sustainable Fashion Communication Playbook", which proposed 8 principles for sustainable fashion communication (Figure 3)¹². It should be noted how similar principles (Clarity, Relevance, Reliability, Disclosure, Truthfulness) were already introduced in the 2022 Monitor

for Circular Fashion Report and implemented in several pilot projects of the Circular Fashion Manifesto of 2022 and 2023, proving that true, evidence-based and data-driven claims should be the basis of an effective sustainable communication.

FIGURE 3: THE PRINCIPLES FOR SUSTAINABLE FASHION COMMUNICATION, UNEP (2023)



¹ UNEP (2023), "The Sustainable Fashion Communication Playbook"

² McKinsey & Co (2022), "Fashion on Climate: how the fashion industry can urgently act to reduce its greenhouse gas emissions"

³ UNEP (2021), "Catalysing science-based policy action on sustainable consumption and production: The value-chain approach & its application to food, construction and textiles"

⁴ BoF, McKinsey & Co (2023), "The State of Fashion 2023"

⁵ 2023 results can be found in the dedicated box on Chapter 4.

⁶ SDA Bocconi (2022), "Monitor for Circular Fashion Report 2022"

⁷ UNEP (2023), "The Sustainable Fashion Communication Playbook"

⁸ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_269

⁹ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_269

¹⁰ Changing Market Foundation (2022), "Synthetics Anonymous 2.0"

¹¹ EU Commission (2023), "Green Claims Directive" <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023PC0166>

See also the recent press release Empowering consumers <https://www.consilium.europa.eu/en/press/press-releases/2023/09/19/council-and-parliament-reach-provisional-agreement-to-empower-consumers-for-the-green-transition/>

¹² UNEP (2023), "The Sustainable Fashion Communication Playbook"

2.2 EU Waste Framework at a glance

Waste-related laws are implementing various measures aimed at enhancing waste management practices, including the adoption of Extended Producer Responsibility (EPR) requirements for various products and waste streams.

With **Directive (EU) 2018/851**¹⁵ issued on May 30 2018, amending Directive 2008/98/EC on waste, also known as the **Waste Framework Directive (WFD)**, the European Commission established a **series of requirements to enhance the recycling and re-use of waste** within the European Union.

The directive underscores the European Commission's belief that Member States should introduce **separate collection systems for bio-waste, household hazardous waste, and textile waste** - as outlined in Paragraph 42 of the Preamble of Directive (EU) 2018/851 - to **prevent waste treatment practices**

that entrap resources in lower levels of the waste hierarchy, increase the rates of preparing waste for re-use and recycling, facilitate high-quality recycling, and promote the use of quality secondary raw materials.

The revised Waste Framework Directive already includes a call for Member States to adopt regulations related to **EPR, specifically addressing textiles**. In fact, Article 12 of the WFD obligates Member States to establish **separate collection systems by January 1, 2025**.

Article 8 of the WFD mandates that Member States should ensure that professionals engaged in activities like development, manufacturing, processing, treatment, sale, or import of products bear an EPR. Under these schemes, producers will be financially responsible for the full lifecycle of **textile products** and in particular the end of their

products' life, meaning that they will cover the **costs of managing textile waste**. EPR could involve the **acceptance of returned products** and the **management of remaining waste after product usage**, as well as **financial responsibility** for these activities. It also encompasses the **obligation to provide publicly accessible information about a product's potential for re-usability and recyclability**.

In the ongoing context, if a Member State chooses to implement EPR schemes, it should assure that its legislation adheres to the **general minimum requirements set out in Article 8a of the WFD**. As a result, the adoption of an EPR scheme currently rests within the discretion of each Member State. Consequently, several EU Member States have already taken steps or are contemplating the introduction of their own EPR regulations for textiles.

On **March 30, 2022**, the European Commission published the **EU Strategy for Sustainable and Circular Textiles**¹⁴ as part of the EU Green Deal¹⁵, aiming to create a coherent framework and a vision for the transition of the textiles sector whereby:

- **By the year 2030**, textile products introduced to the European Union market will be characterized by their **durability and recyclability**. They will predominantly consist of recycled fibers, be free from harmful substances, and be manufactured in compliance with social and environmental rights.
- Consumers will experience **longer utility from high-quality, affordable textiles**, rendering the fast fashion trend obsolete. Economically profitable **reuse and repair services** will be widely accessible.
- Within a competitive and innovative textiles sector, **producers will assume responsibility for their products across the entire value chain**, even when they reach the end of their useful life.
- The circular textiles ecosystem will flourish, supported by **ample capacities for advanced fiber-to-fiber recycling**, while significantly **reducing the incineration and landfill disposal of textiles**.

As part of this strategy:

- The **EU's Ecolabel Criteria for Textile Products** will become **mandatory**, including new restrictions on the use of microplastics in synthetic fibers.
- **Transparency requirements** will be enhanced, compelling large companies to publicly disclose the quantity of products they discard and dispose of, including textiles, along with details about their subsequent treatment, such as preparation for reuse, recycling, incineration, or landfilling.
- A **Digital Product Passport for textiles** will be introduced, featuring mandatory information related to circularity and other critical environmental aspects.
- **New criteria for green claims** will be established, addressing factors like product durability, reparability, and future environmental performance.
- As part of the upcoming revision of the Waste Framework Directive in 2023, **harmonized EU EPR rules for textiles**, with fee adjustments based on eco-modulation, will be implemented.

The European Commission urged EU institutions and bodies to endorse this strategy.

The **primary objective** is to establish an **economy centred on collecting, sorting, re-using, preparing for re-use, and recycling textiles, while incentivizing producers and brands to design products that align with circular principles**. As part of this effort and pending an impact assessment, a significant portion of contributions to EPR schemes might be allocated to waste prevention and preparation for re-use. Additionally, there is consideration for making it mandatory to prepare separately collected household textile waste for re-use as an initial step. This would encourage re-use and repair activities, and reduce reliance on lower-tier waste treatment methods.

¹⁴ https://environment.ec.europa.eu/publications/textiles-strategy_en

¹⁵ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_it

¹⁵ <https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=CELEX%3A32018L0851>

On July 5, 2023, the European Commission unveiled the **"Proposal for a Directive of the European Parliament and of the Council amending Directive 2008/98/EC on waste"**¹⁶.

The proposal is closely linked to the European Green Deal and the Circular Economy Action Plan¹⁷, both of which advocate for stronger and swifter action by the EU and its Member States to ensure the environmental sustainability of the food and textiles sectors.

The new **requirements** established by the Proposal will ensure that all **Member States collect textile waste separately from 2025**, in line with the current WFD rules. The proposed directive would provide clarity on two key aspects:

(i) Defining what qualifies as waste, with specific criteria introduced to prevent the mislabelling of waste as "used goods."

(ii) Establishing clear guidelines for what constitutes reusable textiles, with the goal of preventing the export of waste

to non-EU countries. This complements a proposed Regulation on waste shipments, which strives to ensure that textile waste is exported only when there are firm assurances that it will be managed in an environmentally responsible manner.

The scope of textile producers subject to EPR includes **manufacturers, importers, distributors, and other entities involved in textile-related activities that makes available those products on the market for the first time within a territory of a Member States on a professional basis under its own name or trademark.**

The scope of textiles covered by the Directive is defined in Annex IVc of the document, encompassing a range of textile products from clothing and accessories to linens, leather goods, and footwear.

With the implementation of the textile's EPR system producers would be obliged to take **financial and opera-**

tional responsibility for the full lifecycle of textile products meaning that they will cover the costs or other forms of treatment and recovery processes for products at their end-of-life phase. Textile producers would be required to cover **costs related to the collection, waste management, information dissemination, data reporting, research and development, and support for sorting and recycling processes.** Furthermore, the textiles' EPR system would encompass outlays related to **data collection and mandatory reporting**, while also playing a role in funding **research and development** endeavours aimed at refining sorting and recycling methodologies. Online platforms enabling distance contracts between consumers and textile producers must also acquire relevant information from producers and ensure compliance with EPR requirements.

Among the measures put forth, the proposal includes the establishment of **local registers of textile producers** across all European Union Member States. These registers would contain details, encompassing:

- **comprehensive information about the producer**, including their name, mailing address, website, email contacts, and designated point of contact;
- **the producer's national identification code**, in addition to their EU or national tax identification number;
- **trademarks and brand identities affiliated with the producer**;
- **combined nomenclature codes** for the products intended for introduction to the market.

Textile producers must appoint an **authorized producer responsibility organization** to fulfil their EPR obligations. EPR fees will be calculated based

on the environmental performance of a producer's textiles, the key incentive (called **"eco-modulation"**) being that the **most sustainable textile producers will pay lower EPR fees.**

Producer responsibility organizations must set up a system for separate collection of used textiles, including collection points and opportunities for social enterprises and re-use operators. As already mentioned, **by January 1 2025 Member States must ensure separate textile collection for re-use, preparation for re-use, and recycling.**

The proposed Directive will undergo evaluation by the European Parliament and the Council through the regular legislative process.

In order to contribute to the ongoing legislative discussion, the proposal is available for input and feedback (07 July 2023 - 22 November 2023). The European Commission will compile and summarize all received feedback, then subsequently present it to the European Parliament and Council.

In the near future, European Union producers are expected to encounter higher operational costs related to the handling of textile waste. This is primarily due to the increased responsibilities they will bear and the potential requirement to pay EPR fees as outlined above.

Additional information within the Commission's proposals is essential to shed light on the impact on businesses, particularly concerning how producers will be evaluated for their sustainability and circularity practices, which will determine their EPR fee obligations, whether higher or lower.

Producers should familiarize with the upcoming EU waste legislation and national measures on waste established by the countries where they operate and stay updated on any regulatory changes.

¹⁶ https://environment.ec.europa.eu/publications/proposal-targeted-revision-waste-framework-directive_en

¹⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

Methodology

TESTING THE KPIs

- 3.1 Testing the tailored KPIs for fashion
- 3.2 Updated results from the corporate and energy KPIs

3



3.1 Testing the tailored KPIs for fashion

Since year 1, among the objectives of the Monitor for Circular Fashion there is the identification of tailored KPIs that fashion companies can adopt to assess their progress in sustainability, circularity, value chain traceability and transparency performance. In 2021 the identification of 40+ fashion industry-specific KPIs was based on primary and secondary data, gathered by the SDA Bocconi research team through desk research, an online survey and semi-structured interviews to the companies that are part of the community. Partner companies were asked to suggest adoptable KPIs based on their knowledge of the fashion industry through surveys. The

respondents were also interviewed with one-to-one semi-structured interviews on the information they provided through the questionnaires.

The responses from the surveys were analyzed via qualitative methods by the SDA Bocconi Sustainability Lab research team to map out a coherent framework of indicators based on shared definitions and measure units. The KPIs Committee validated and further refined the KPIs list, suggesting some KPI guidelines for measurement. The Monitor partners discussed the identified performance indicators during a Plenary Meeting meant to include the perspective of

brands, ingredient brands and service providers. Finally, the KPIs Committee carried out a closing review with the Sustainability Lab research team. In year 2, eco-design and chemical management KPIs have been added.

In year 3 the KPIs have been fine-tuned and adapted to the additional value chain of leather (Box 1).

Starting from year 2, the industry-specific KPIs have been implemented and tested onto real life product, referring to the Circular Fashion Activities (Figure 4).

FIGURE 4: CIRCULAR FASHION ACTIVITIES



Source: Monitor for Circular Fashion Report 2022

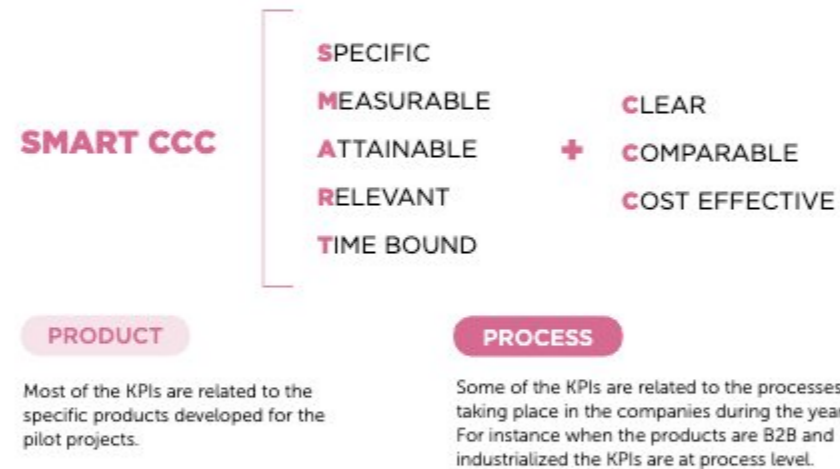
Together with the KPIs Committee members i.e. Bip, ICEC, PwC and UNIC, several other Partners participated to the KPIs Committee meetings, providing feedback on the adaptation of KPIs after implementing them with the pilot projects. Partners who mostly partici-

pated to this activity include Save The Duck, TOD'S Group, UL Solutions and Holding Moda.

KPIs have been tested through several pilot projects in 2022 and 3 pilot projects in 2023. **KPIs selection for pilot**

projects was made by implementing the SMART + CCC criteria: good KPIs need to be "specific", "measurable", "attainable", "relevant", "time-bound", "clear", "comparable", "cost effective". Some of the KPIs are "product" related, some are "process" related (figure 5).

FIGURE 5: KPIs MAIN CHARACTERISTICS



Source: Monitor for Circular Fashion Report 2022

Both in 2022 and 2023 the KPIs have been used to substantiate the sustainability claims chosen for each pilot project with the careful verification operated during several rounds by the Monitor for Circular Fashion Legal Advisor, the overall SDA Bocconi research team, the Sustainability claim task force and the KPIs Committee.

Semi-structured interviews with partners have been carried out by SDA

Bocconi research team for the KPIs selection and drafting of sustainability claims.

Temera, Partner in the implementation of all pilot projects, created the online experiences of the individual products. Through these customer journeys, Temera provided a digital voice to the items, sharing the traceability and transparency information, accessible by scanning the QR codes available in chapter 4.

The SDA Bocconi methodology to identify and test the KPIs and to build reliable sustainability claims is summarized in Table 1, presenting the overall methodology for the Monitor for Circular Fashion 2023.

The Monitor for Circular Fashion 2023 focused on adapting the circularity KPIs to the leather value chain* and will continue along the path of adapt-

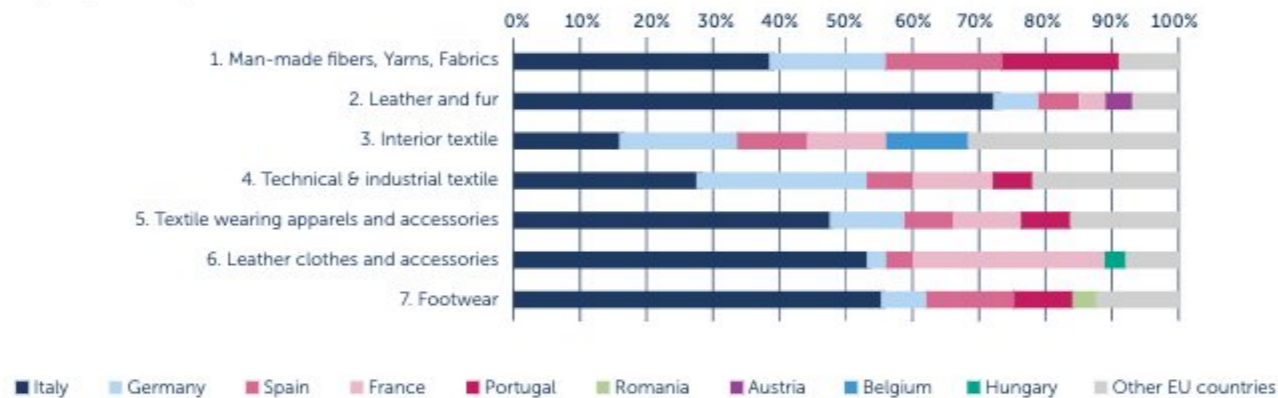
ing the KPIs in the coming years (Box 1). For instance it will be useful to extend the analysis to innovative materials and for the entry of new

value chains not yet represented in the Monitor, such as eyewear and jewellery.

BOX 1: NEED OF ADAPTING THE CIRCULARITY KPIS TO THE DIFFERENT VALUE CHAINS

The report of the European Commission DG GROW "Transition pathway for the Textiles ecosystem" published in May 2023 presents a cross-section of the weight of European producers for each sector (figure 6).

Figure 6
Top EU producers by subsector



Source: Based on data from Eurostat Structural Business Statistics. CSIL report on Data on the EU Textiles Ecosystem and its Competitiveness (shares of total EU production, average 2015-18).

Although the Monitor for Circular Fashion is not focused solely on the Made in Italy production model, considering the relevance of the sector for the main EU manufacturing countries, it has evaluated that it is essential to remodel the circularity KPIs and implement them in pilot projects of the leather and leather clothing-accessories-footwear sector.

The tanning business deals with recovering waste from the food industry, raw bovine, sheep and goat hides, and transforming it into finished leather for fashion, furniture, design and automotive. For this reason, leather is a circular material. Worldwide, 7 million tons of raw hides and skins are recovered every year (UNIDO, 2012)³, which otherwise would have to be treated as waste to be disposed of in landfills or incinerated with consequent economic and environmental costs. As in the other supply chains, the leather supply chain has launched numerous activities to reduce the environmental impact, improve social responsibility and ensure compliance with some specific ethical aspects of the supply chain, such as the protection of animal welfare. Sustainable innovation of processes and supply chain dynamics has recently focused on traceability of raw materials, safety of chemical substances, Life Cycle Assessment and environmental footprint, recovery and reuse of process water, recycling of production waste.

The KPIs and related implementation guidelines have been adapted to the leather supply chain with:

- assessment of the relevance of the KPIs to the specificities of the tanning process and the leather supply chain;
- elimination of irrelevant KPIs, modification of partially relevant KPIs, remodulation of KPIs for greater adherence to the leather matrix, insertion of new KPIs;
- addition of unit of measurement for leather;
- integration of relevant sources for the definition of criteria consistent with the performance characteristics of the leather;
- identification of certifications for leather traceability.

“Always available to collaborate with the supply chain to develop the subject of circularity and sustainability that the sector asks us to guarantee, we contribute to the development of new standards and promote the excellence of certified companies in compliance with the accreditation principles to which we scrupulously adhere.”

ICEC

“UNIC Italian Tanneries accompanies and supports the sustainable development of the Italian leather supply chain, adopting and promoting a scientific approach of inclusion and collaboration between stakeholders and also acting as a hub for sectoral evaluation and sharing of improving technologies, best practices and communication and guarantee initiatives. Our tanneries invest heavily to measure and minimize environmental impacts, resource consumption and waste production, also and above all through the use of raw materials recycled from other industries and the ever-increasing recovery of production waste for reuse in other sectors (agriculture, pharmaceuticals, construction...).”

UNIC

³The Monitor for Circular Fashion 2023 has remodelled the circularity KPIs for the leather supply chain. In this context, UNIC has contributed with the aim of underlining and clarifying the technical elements of evaluation and measurement of KPIs according to widespread and growing eco-design needs, principles of consumption durability, biodegradability of materials and production efficiency. The aspect of measurement, objective and independent evaluation of each process and/or product performance is essential in this context to avoid any form of greenwashing. To this end, the voluntary Certification Bodies contribute with their auditing activity. Among these, ICEC, with its 30 years of experience and competence, has been a reference in the implementation of the KPIs for the leather pilot projects, substantiating the claims with the due objective evidence based on the official, pertinent and active certifications, proposing the adaptation of the guidelines of the KPIs identified by the Monitor for Circular Fashion.

TABLE 1: COMPLETE METHODOLOGY OF SDA BOCCONI RESEARCH - MONITOR FOR CIRCULAR FASHION 2023

JANUARY 2023	DESK RESEARCH	Who: SDA Bocconi team	Analysis of 30+ updated sources focusing on circular fashion
	FIELD ANALYSIS	Pilot projects implementing the industry-specific KPIs and building the sustainability claims Who: SDA Bocconi team	<ol style="list-style-type: none"> 1. Brainstorming sessions with extended KPIs Committee 2. Testing the KPIs through pilot projects 3. Carrying out semi-structured interviews with partners
Survey, co-creation workshops and interviews on ESG factors in circularity management with special focus on: <ul style="list-style-type: none"> • sustainability governance • waste management Who: SDA Bocconi team		<ol style="list-style-type: none"> 1. Drafting, testing and distributing the survey 2. Drafting the guidelines and carrying out the co-creation workshops 3. Drafting the guidelines and carrying out the interviews 4. Analyzing the results 	
Circular fashion survey on New Generations by PwC and SDA Bocconi School of Management for the Monitor for Circular Fashion Report 2023 Who: PwC & SDA Bocconi team		<ol style="list-style-type: none"> 1. Drafting, testing and distributing the survey 2. Analyzing the results 	
SEPTEMBER 2023	RESULTS ANALYSIS AND VALIDATION	Who: SDA Bocconi team & KPIs Committee	SDA Bocconi team and KPIs Committee verification of KPIs implemented during pilot projects
			SDA Bocconi team and KPIs Committee review of KPIs implemented during pilot projects and verification of sustainability claims
			Plenary Meeting with Partners for collective discussion on: <ol style="list-style-type: none"> 1. Application of agreed criteria on KPIs selected for each pilot project 2. Application of agreed criteria on sustainability claims defined for each pilot project

3.2 Updated results from corporate and energy KPIs

The "Circular Economy Report" is an Enel X service, based on a methodology validated by the external certification body Rina and CESI and accredited by Accredia, that is able to identify the current level of circularity of a company and to propose a roadmap of innovative solutions to boost it.

The methodology, based on over 70 KPIs, is divided into two levels of analysis: Corporate and Energy Site.

The Corporate analysis aims to assess a company's strategic approach to sustainability and circular economy and how the underlying principles are implemented across organizational processes and in the daily business.

The areas of this level of analysis match with the key components of a value chain: design, procurement, production inputs, energy consumption, waste, logistics, sales, post consumption.

The Corporate analysis also provides an overview of the UN Sustainable Development Goals impacted by projects, initiatives or objectives carried on by the Company under analysis.

The Energy Site analysis represents a technical in-depth analysis of the energy performance of a specific building of the Company (e.g., headquarters, production site, warehouse, store, etc.)

The areas of this level of analysis evaluate energy sources and energy consuming systems, energy efficiency and energy management solutions in place, as well as services and solutions enabling a more circular energy and economy.

In order to measure the KPIs at the basis of the Corporate and Energy-Site analysis, two surveys containing qualitative and quantitative questions are submitted to the companies, aimed both at gathering information for the analysis and at defining and balancing the weights of the KPIs.



Data analysis

MAIN FINDINGS

- 4.1 SDA Bocconi research results
- 4.2 Mapping the textiles waste resources pipeline
- 4.3 Circular fashion survey on New Generations by PwC and SDA Bocconi
- 4.4 The influence of governance on sustainability and circularity performance

4



4.1 SDA Bocconi research results

During 2023 the partners of the Monitor for Circular Fashion have been asked to answer an extensive survey focused on the following topics: sustainability & circularity strategy, transparency and traceability, pre-consumer and post-consumer waste management,

circular fashion advantages, obstacles and trade-offs (see sections 4.1, 4.2) and governance, including board structure & characteristics, board and managerial incentives for sustainability and overall governance of sustainability and circularity practices (see section 4.4).

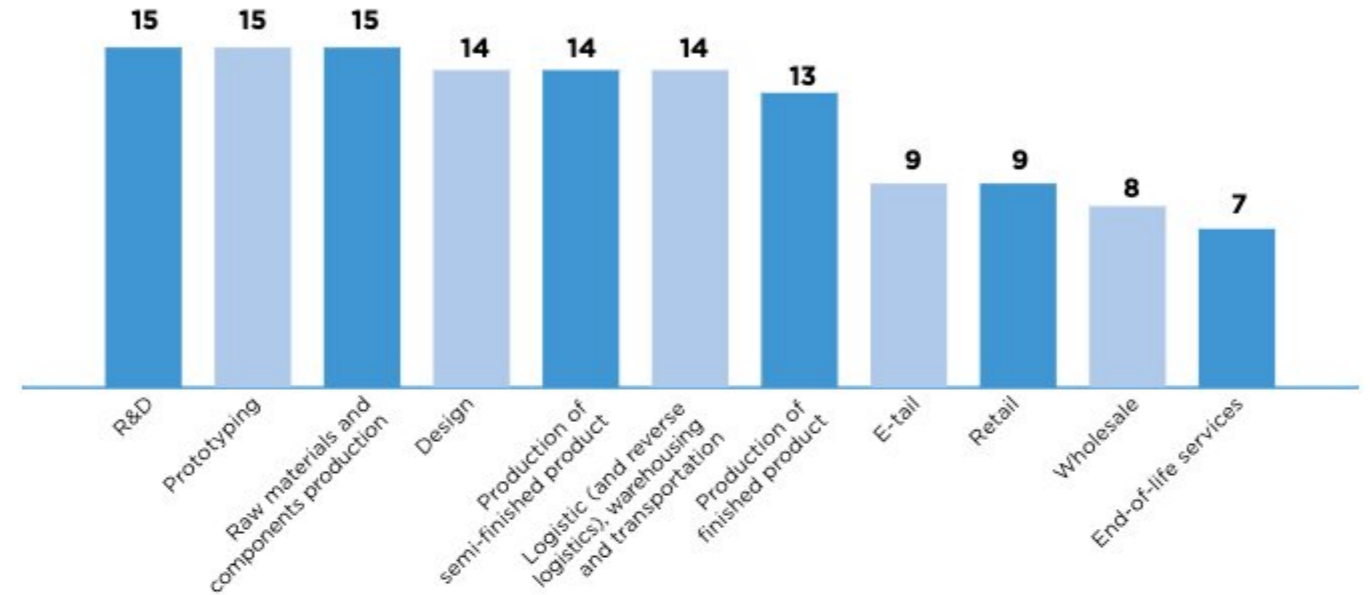
The Monitor for Circular Fashion pipeline respondents are both SMEs and Large companies (table 2) and cover both B2B and B2C business models. They cover all the value chain activities (figure 7).

TABLE 2: VENDORS, INGREDIENTS AND BRANDS & RETAILERS RESPONDENTS BY SIZE AND BUSINESS MODEL

15 VENDORS, INGREDIENTS AND BRANDS & RETAILERS	
SME	4
Large	11



FIGURE 7: ECO-DESIGN FRAMEWORK FOR CIRCULAR FASHION



The 11 service providers (table 3) partner of the Monitor bring the point of view of more than 29.000 fashion clients.

TABLE 3: SERVICE PROVIDERS RESPONDENTS BY SIZE AND BUSINESS MODEL

11 SERVICE PROVIDERS	
SME	5
Large	6

In addition, 15 EU experts on textiles waste management and EPR have been interviewed (see section 4.2.1).

In this report, the point of view of consumers has been considered as well, and will also be presented in this chapter (see section 4.3).

4.1.1 Circular fashion advantages

The advantages of circularity in fashion identified by the Monitor for Circular Fashion respondents¹ are summarized in table 4. While pipeline actors have been asked to reply to the survey for their own value chain, the service providers have been asked to reply to the survey considering the clients they serve.

Each respondent could select all the relevant advantages² linked to the following circular activities: design for circularity, sourcing of sustainable inputs, sourcing of circular inputs, co-creation and on-demand production, modularity solutions (single items or collections), waste management, repairing services, rental, subscription rental and leasing, re-commerce, peer-to-peer platforms, recycling and regeneration, upcycling, downcycling, other.

Respondents' answers are presented below by category, specifically pipeline actors and service providers.

The "ranking" column shows the overall combined relevance score for each advantage according to each category of actors while the "circular fashion activity" column lists the top voted circular fashion activities involved.

TABLE 4: CIRCULAR FASHION ADVANTAGES IDENTIFIED BY MONITOR FOR CIRCULAR FASHION PARTNERS

	Pipeline actors		Service providers	
	NUMBER OF RESPONDENTS: 14		NUMBER OF RESPONDENTS: 11	
	CIRCULAR FASHION ACTIVITY INVOLVED	RANKING	CIRCULAR FASHION ACTIVITY	RANKING
IMPROVED BRAND REPUTATION	<ul style="list-style-type: none"> Sourcing of circular inputs Sourcing of sustainable inputs Upcycling Recycling and regeneration Design for Circularity 	1	<ul style="list-style-type: none"> Sourcing of sustainable inputs Design for circularity Sourcing of circular inputs Recycling and regeneration 	1
NEW BUSINESS OPPORTUNITIES	<ul style="list-style-type: none"> Design for circularity Co-creation and on-demand production 	2	<ul style="list-style-type: none"> Design for circularity Waste management Co-creation and on-demand production 	3
INCREASED CONSUMER LOYALTY	<ul style="list-style-type: none"> Sourcing of circular inputs Sourcing of sustainable inputs 	3	<ul style="list-style-type: none"> Repairing services Re-commerce 	2
NEW JOBS	<ul style="list-style-type: none"> Recycling and regeneration Design for circularity Upcycling 	4	<ul style="list-style-type: none"> Re-commerce Repairing services 	5
COST REDUCTION	<ul style="list-style-type: none"> Waste management 	5	<ul style="list-style-type: none"> Waste management Re-commerce 	4

¹ 14 pipeline actors and 11 service providers.

² The same question structure has been used for the following questions about obstacles and trade-offs.

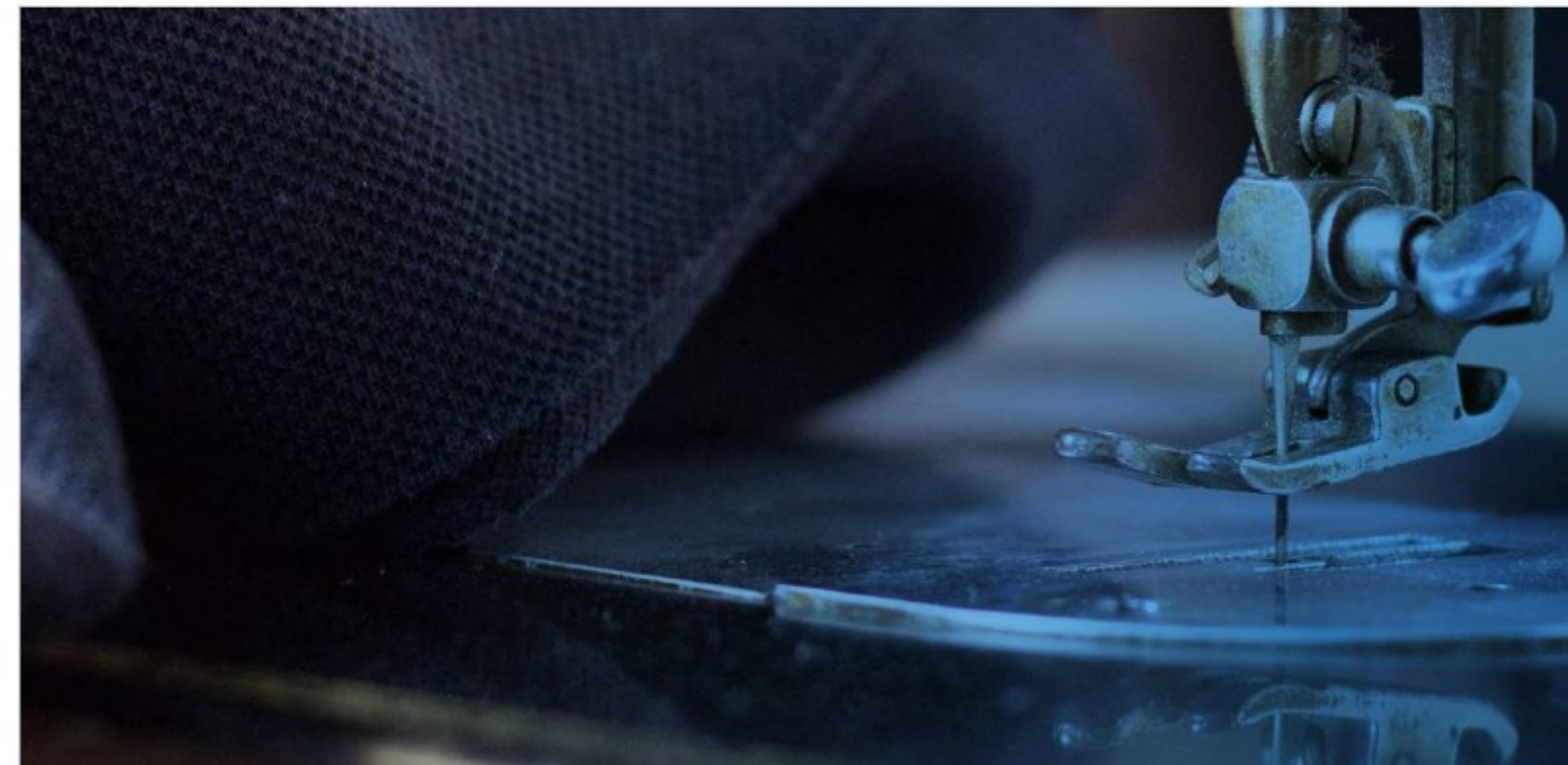
According to survey results, the main advantage associated with circularity initiatives, according to both pipeline players and service providers, is **an improvement of the brand reputation**³. Pipeline actors and service providers consider as main enablers the following activities: sourcing of circular and sustainable inputs, design for circularity, upcycling, recycling and regeneration.

Although the top advantages are the same across all respondent types, pipe-

line actors prioritized new business opportunities, while service providers prioritized **increased consumer loyalty**⁴.

According to the 2023 survey results, there is an overall positive trend regarding the hiring of circularity roles within companies. In fact, the new employees (entirely or partially) dedicated to sustainability and circularity that have been hired in the last fiscal year are 36 for pipeline actors and also 36 for service providers. These numbers

are expected to grow: the new employees (entirely or partially) dedicated to sustainability and circularity that companies are planning to hire in the next 3 years are 71 for pipeline actors and 141 for service providers. **This means that the number of hirings dedicated to sustainability will have an increase in the next 3 years of 97% for supply chain actors and of 292% for service providers.**



³ Compared with 2021 survey results, improvement in brand reputation is still considered the top advantage of engaging in circular practices, still followed by new business opportunities. In 2021 new jobs was ranked as third overall advantage while in 2023 it is lower ranked.

⁴ According to pipeline actors, new business opportunities are enabled especially by design for circularity, co-creation and on-demand production while service providers consider repairing services and re-commerce as main enablers. When it comes to consumer loyalty enablers, pipeline actors and service providers have once again different perspectives. Pipeline actors identify sourcing of circular inputs and sustainable inputs as the main enabler, while service providers identify design for circularity, waste management and co-creation and on-demand production as the main enablers.

4.1.2 Circular fashion obstacles

The obstacles of circularity in fashion identified by the respondents⁵ are summarized in the table below (see table 5).

There is consensus amongst the obstacles that arise when it comes to en-

gaging with circular fashion initiatives.

Costs are considered as the main obstacle, which for both pipeline actors and service providers is mainly related to sourcing of sustainable and circular inputs, recycling and regeneration and upcycling.

At second place, **availability of technologies** is considered a relevant ob-

stacle across the same circular fashion activities.

At third place, **availability of infrastructure is considered a relevant obstacle mainly in waste management (according to pipeline actors) and sourcing of sustainable inputs (according to service providers)**.⁶

The "ranking" column shows the overall combined relevance score for each obstacle according to each category of actors while the "circular fashion activity" column lists the top voted circular fashion activities involved.



TABLE 5: CIRCULAR FASHION OBSTACLES IDENTIFIED BY MONITOR FOR CIRCULAR FASHION PARTNERS

Pipeline actors		Service providers	
NUMBER OF RESPONDENTS: 14		NUMBER OF RESPONDENTS: 11	
CIRCULAR FASHION ACTIVITY INVOLVED	RANKING	CIRCULAR FASHION ACTIVITY	RANKING
COSTS	<ul style="list-style-type: none"> Sourcing of sustainable inputs Sourcing of circular inputs Recycling and regeneration 	<ul style="list-style-type: none"> Sourcing of sustainable inputs Recycling and regeneration Upcycling 	1
AVAILABILITY OF TECHNOLOGIES	<ul style="list-style-type: none"> Sourcing of circular inputs Recycling and regeneration Upcycling 	<ul style="list-style-type: none"> Sourcing of circular inputs Recycling and regeneration 	2
AVAILABILITY OF INFRASTRUCTURE	<ul style="list-style-type: none"> Waste management 	<ul style="list-style-type: none"> Sourcing of sustainable inputs 	3
EXTERNAL CULTURAL OBSTACLES	<ul style="list-style-type: none"> Re-commerce / second hand market 	<ul style="list-style-type: none"> Sourcing of circular inputs 	7
INTERNAL PROCESSES INERTIA	<ul style="list-style-type: none"> Design for circularity 	<ul style="list-style-type: none"> Re-commerce / second hand market 	5
AVAILABILITY OF INTERNAL COMPETENCIES	<ul style="list-style-type: none"> Design for circularity 	<ul style="list-style-type: none"> Design for circularity Sourcing of circular inputs 	4
AVAILABILITY OF EXTERNAL COMPETENCIES	<ul style="list-style-type: none"> Design for circularity 	<ul style="list-style-type: none"> Design for circularity 	9
INTERNAL CULTURAL OBSTACLES	<ul style="list-style-type: none"> Rental, subscription rental and leasing 	<ul style="list-style-type: none"> Co-creation and on-demand production 	6
LAW / REGULATORY OBSTACLES	<ul style="list-style-type: none"> Waste management 	<ul style="list-style-type: none"> Waste management 	8
CONFIDENTIALITY	<ul style="list-style-type: none"> Peer-to-peer platform Co-creation and on-demand production Sourcing of sustainable inputs 	<ul style="list-style-type: none"> Recycling and regeneration Design for circularity 	10

⁵14 pipeline actors and 11 service providers.

⁶These top 3 has remained unvaried from the Monitor for Circular Fashion 2021 survey results.

4.1.3 Circular fashion trade-offs

The trade-offs of circularity in fashion identified by the respondents⁷ are summarized in the table below (see table 6). The "ranking" column shows the overall combined score of relevance for each advantage according to each actor type.

The data collected from the survey suggests that the trade-offs associated with engaging in circular fashion vary significantly according to the type of firm surveyed. Pipeline actors consider higher operational complexity, followed by availability of volumes and costs that outweigh profits as the main trade-offs, while service providers consider costs that outweigh profits as the main trade-off, followed by

higher operational complexity and quality issues.

Results may differ because while pipeline actors are manufacturing-focused, service providers are part of the tertiary sector and therefore have a different set of issues to tackle.

TABLE 6: CIRCULAR FASHION TRADE-OFFS IDENTIFIED BY MONITOR FOR CIRCULAR FASHION PARTNERS

	Pipeline actors	Service providers
	NUMBER OF RESPONDENTS: 14	NUMBER OF RESPONDENTS: 11
	RANKING	RANKING
HIGHER OPERATIONAL COMPLEXITY	1	2
AVAILABILITY OF VOLUMES	2	4
HIGH COSTS	3	1
QUALITY ISSUES	4	3
LEAD-TIMES AND TIME TO MARKET	5	6
ENVIRONMENTAL IMPACTS OF PROCESSES, INCLUDING LOGISTICS	6	5
JOB LOSSES	7	7

⁷14 pipeline actors and 11 service providers.

The following findings may be highlighted from Enel X survey results (box 2).

BOX 2 - AGGREGATE RESULTS FROM ENEL X CE REPORTS

Energy KPIs survey results from vendors, ingredient brands, brands & retailers of the Monitor for Circular Fashion⁸

With the fashion industry being one of the most polluting industries globally, energy can play a key role to achieve full circularity and decarbonization.

Further confirming the importance of energy for the fashion industry is a survey conducted in 2023 on the main concerns and risks for the fashion business in the coming year, which showed that energy price volatility is among the top 5 concerns, far eclipsing Covid-19: concern that could be countered by choosing self-production and energy-efficient solutions.

The Energy Circularity assessment aims to analyze a specific building of the company from the point of view of energy supply and energy management choices.

The outcome of the assessment shows a higher overall average score than in previous year. Below is the area-by-area analysis.

ENERGY INPUT. When choosing their energy sources, the sites analyzed are quite virtuous, since they all have plants for self-generation of energy from renewable sources, and specifically from photovoltaics. In addition, more than 70% of the energy purchased from the grid is covered by Guarantees of Origin.

A very interesting opportunity from a circular point of view, not yet explored, are Renewable Energy Communities, a program that none of the analysed companies have currently joined. Especially for companies that already purchase certified green electricity, it is strongly recommended to switch from buying from the grid to buying from off-site local generation, whenever technically feasible.

ENERGY EFFICIENCY AND MANAGEMENT. From the point of view of energy efficiency, only one of the companies analyzed claims to monitor its consumption. However, none of the companies have systems in place for targeted monitoring of consumption of various assets through dedicated meters.

Monitoring is a fundamental aspect from the point of view of energy circularity, as it serves to optimize consumption, prevent faults, and thus increase economic and energy savings.

⁸Enel X has produced company specific CE Reports for 10 pipeline partners of the Monitor for Circular Fashion, of which 7 completed in 2021, 2 refresh and 1 new completed in 2022 and 2 refreshes and 2 new completed in 2023, to generate the aggregated data analysis on Corporate and Energy KPIs. Source: Enel X Monitor for Circular Fashion Survey, 2021-2022-2023.

BOX 2 - AGGREGATE RESULTS FROM ENEL X CE REPORTS
cont.

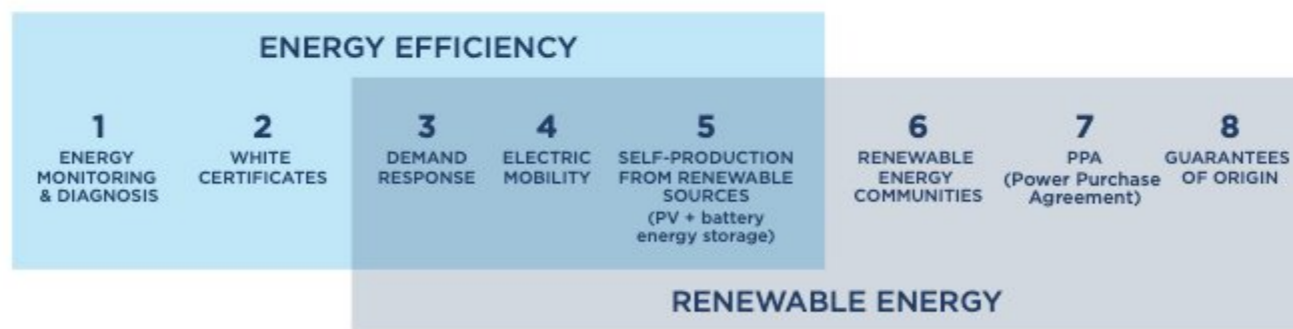
At the level of energy efficiency class, 50% of the sites in analysis boast an extremely high level. Regarding the Energy certifications, only one company, however, claims to be ISO 50001 certified. Adopting energy certification (e.g., ISO 50001) and carrying out energy audits can bring significant benefits to companies, both in terms of accurate management of internal processes and in terms of transparent communication to their external stakeholders.

ENABLERS. Circular energy enablers include innovative solutions facilitating circular energy behaviours. They include the presence of electric vehicle charging infrastructures and the grid flexibility services, such as Demand Response (DR). As of today, only one of the analysed sites has already installed charging stations in its car parks and none of them have joined DR programs.

As already mentioned in the 2022 report, energy efficiency and renewables are two cornerstones of circularity and decarbonization, minimizing energy waste while maximizing the exploitation of energy sources that naturally renew, or replenish themselves.

Moreover, they are levers that fashion companies can immediately commit to, as the solutions are varied and diverse, and some are immediately applicable (refer to the solutions listed in figure 8).

FIGURE 8: ENERGY EFFICIENCY AND RENEWABLE ENERGY SOLUTIONS



Source: Monitor for Circular Fashion 2022

4.2 Mapping the textiles waste resources pipeline

4.2.1 Desk analysis results

In the recent report "LCA-based assessment of the management of European used textiles" by Norion Consult for EuRIC Textiles⁹, data on EU updated to 2019 highlighted that about 5,4 million tons of textiles¹⁰ products are placed on the market. However, only about 2,1 million tons¹¹ are collected as post-consumer waste. Therefore, **of all used textiles, only about 38% are separately collected for reuse, recycling and disposal.** Currently, the destination of the collected waste is distributed as follows: 50-75% is aimed at reuse, between 10-30% is recycled and the remaining is used for energy recovery or is disposed of in landfills. The same report highlights that the remaining 62% is not collected separately and therefore either ends up directly incinerated, in landfill, being donated, being resold or stays in households unused.

In 2018 146.000 tons of textile waste resources were collected in Italy, of which approximately 68% was destined for reuse, approximately 29% was recycled, and approximately 3% was destined for landfill¹². The most updated data available on separately collected textile waste resources in Italy talks about 154,2 thousand tons in 2021¹³.

A McKinsey study "Scaling textile recycling in Europe- turning waste into value"¹⁴ published in 2022, estimated instead that between 7 and 7,5 million tons of textile waste were generated in Europe in 2020, with an average of 15 kg per person. About 85% is household post-consumer waste and only 30-35% is currently separately collected. Of the post-consumer waste resources collected in Europe, 40% is exported to markets outside Europe, and the remaining 60% is destined for the internal market (of which about 60% is sold in second-hand markets, while the remaining 40%, or about 0,5 million tons

is available for recycling). Unfortunately, due to the limits of the existing recycling technologies, part of this textile waste resources will eventually end up incinerated or landfilled.

Regardless of the estimates on the absolute numbers, on which there is still no certainty, there is still plenty to do and the legislation on EPR should guide the sector toward a better use of discarded textiles as resources.

The Figure 9 summarizes the waste resources pipeline mapping including:

- detailed activities in the waste resources pipeline;
- waste resources before and after reuse, repair and recycling.

The mapping also highlights the activities included in the EPR scope at EU level.

⁹ Norion Consult & Euric (2023). LCA-based assessment of the management of European used textiles.

¹⁰ Norion data is reported from Köhler et al (2021) Circular Economy Perspectives in the EU Textile sector. The 5.4 mln tons are splitted in: 4.4 mln tons of clothing and 1 mln ton of household textiles. For further details on composition of clothing and household textiles, please consult the document at page 32.

¹¹ The separate collected quantity could include footwear: collectors estimate that around 5 % to 7.5 % of weight is represented by footwear.

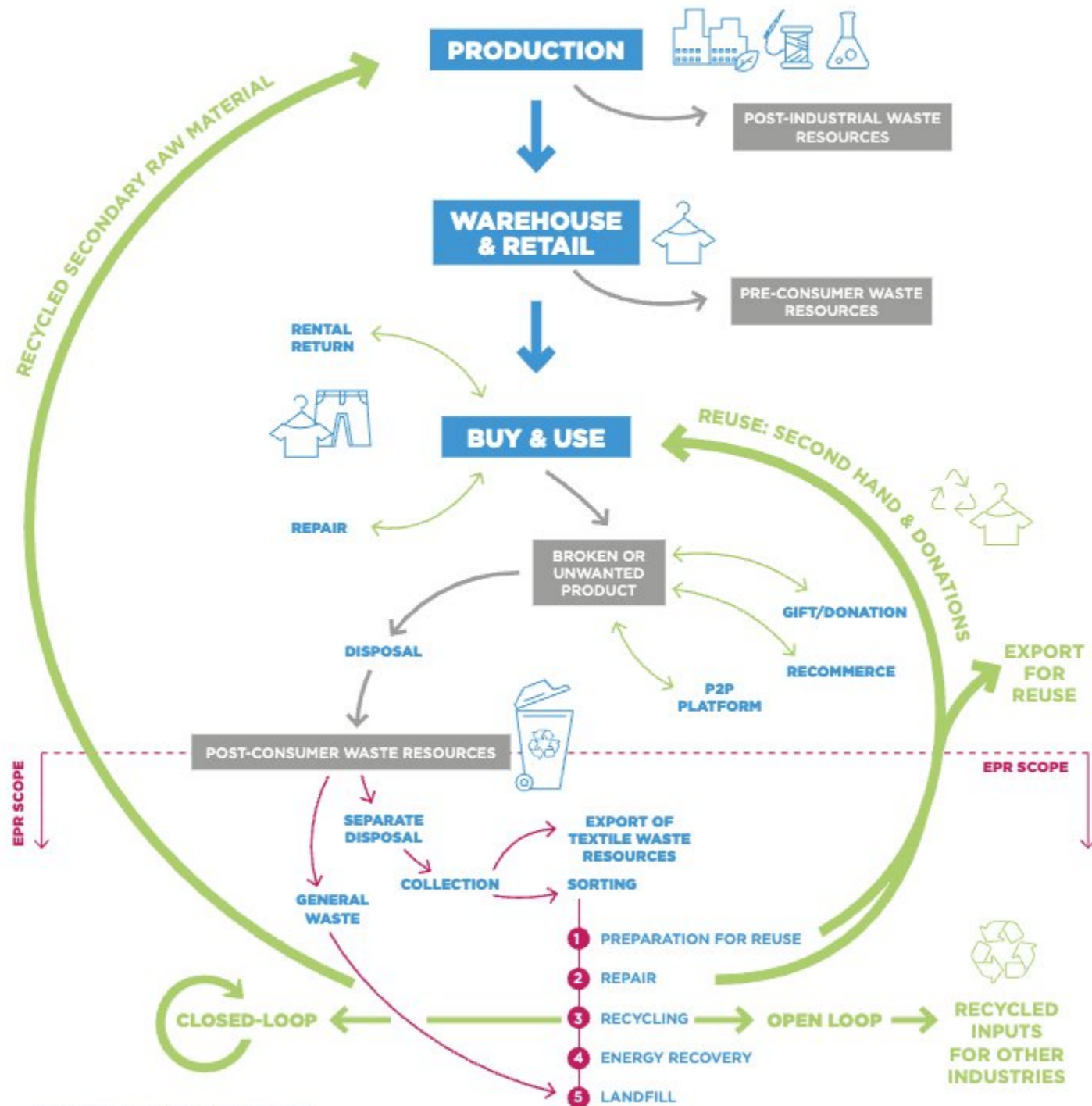
¹² Norion data is reported from ISPRA & Sistema Nazionale per la Protezione dell'Ambiente (2022). Rapporto Rifiuti Urbani Edizione 2022. Textile waste is identified with the categories of apparel (EER 200110) and textile products (EER 200111). EER 200110: Used clothing, bags, belts, hats and other used clothing materials, clothing, shoes in good condition; household textile materials (curtains, sheets, dishcloths); small leather goods; clothing accessories.

¹³ ISPRA & Sistema Nazionale per la Protezione dell'Ambiente (2022). Rapporto Rifiuti Urbani Edizione 2022. ISPRA report considers as textile waste:

"apparel"(EER 200110) and textile products (EER 200111). EER 200110: Used clothing, bags, belts, hats and other used clothing materials, clothing, shoes in good condition; household textile materials (curtains, sheets, dishcloths); small leather goods; clothing accessories.

¹⁴ McKinsey & Company (2022). Scaling textile recycling in Europe—turning waste into value. McKinsey data on the household post-consumer waste is obtained combining two main types of sources: the Joint Research Centre's 2021 report and a series of country specific reports for textile waste.

FIGURE 9: EU TEXTILE WASTE RESOURCES PIPELINE MAPPING



Source: Monitor for Circular Fashion 2023

4.2.2 Winning the battle for waste resources: interviews and survey results

To identify and understand the opportunities and challenges coming with the introduction of an EPR scheme, 15 European experts have been interviewed (i.e. 10 European organizations and 5 Italian EPR consortia) in May-July 2023. These players were selected to represent the point of view of organizations operating in waste management, collecting, sorting, preparation for reuse and resell, recycling, rental and R&D and innovation.

Opportunities and challenges in table 7 have been regrouped according to the European Commission 2023 Textiles Transition Pathway blueprint categories¹⁵ (most frequent are highlighted in bold).

In order to take advantage of the environmental and social opportunities coming from textile waste management & EPR implementation, several challenges need to be solved.

In particular, interview results (table 7; table 8) confirm a good number of challenges related to "Regulation and public governance": most Member States are waiting for the European directive to be in place before publishing a National legislation. France was the first EU country declaring a legal framework for managing textile waste resources through EPR policy, enriched with new obligations with a law in 2021¹⁶, while Sweden followed in 2022 with a legislation that will be effective from January 2024, and The Netherlands in 2023. Italy is working on a draft proposal of EPR decree, which is expected for 2025 (box 3).

Under the challenge "Sustainable competitiveness", **interviewees confirmed**

the need to provide incentives to recycled fibers, given the "low cost of virgin fibers compared to recycled ones". The interviewees also expressed a challenge in implementing the eco-design principles and effectively boosting durability and design for recycling: for instance, according to 2021 Refashion Activity Report, of the 2,8 billion items introduced in the French market, only the 1,75%¹⁷ benefitted from the eco-modulation related to the adoption of eco-design practices¹⁸.

Higher collection rates will also increase the quantity of low-quality material (not suitable for reuse or recycling), lowering the economic value of the materials collected and affecting the economic efficiency of waste management players. For this reason, the **availability of innovative and quality sorting and recycling technologies is essential**, just like the availability of sufficient volumes of homogenous textile waste streams to economically run fiber-to-fiber recycling.

¹⁵ European Commission (2023), "Transition Pathway for the Textiles Ecosystem" <https://op.europa.eu/en/publication-detail/-/publication/6392f189-0416-11ee-87ec-01aa75ed71a1>

¹⁶ https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043979280

¹⁷ Refashion (2022). 2021 Activity Report, Re_think production https://refashion.fr/rapport-activite/2021/public/pdf/rethink_production.pdf

¹⁸ In 2021 49 million items placed onto the market benefitted from eco-modulation, i.e. an increase of 180% compared to 2020.

TABLE 7: SUM-UP OF OPPORTUNITIES AND CHALLENGES COMING FROM SDA BOCCONI INTERVIEWS TO WASTE MANAGEMENT & EPR EXPERTS

TTP BLUEPRINT CATEGORIES	OPPORTUNITIES	CHALLENGES
REGULATION AND PUBLIC GOVERNANCE	<ul style="list-style-type: none"> Necessary funding and organizational framework for the separate collection of all discarded textile products, diverting these from mixed municipal waste 	<ul style="list-style-type: none"> Harmonization of EPR systems across all Member States, avoiding the excess of bureaucracy Integration of the new waste management schemes with established social enterprises and private companies of waste management Fixing EPR fees that achieve the targeted results without overburdening the industry Dealing with trade-offs between reuse and recycling: importance to ensure the respect of waste hierarchy and at the same time the availability of enough textile to make recycling efficient Ensure free competition over access to waste resources Education of consumers about the proper disposal of textiles waste and on the consequences of fast fashion
SUSTAINABLE COMPETITIVENESS	<ul style="list-style-type: none"> More efficient and effective post-consumer textile waste management Higher collection rates, and consequently, higher rates of reuse and recycling Higher transparency and reliable data on textile waste generated across Europe and its composition Boost of the adoption of the eco-design principles, to extend the life of textiles and make them suitable for reuse-resell or recycling Higher adoption of more sustainable consumer behaviors like consumption reduction and repairing Acceleration for the circular economy in the fashion industry Reduction of the environmental impact, GHG, landfill waste, water, energy and chemical use in the fashion industry 	<ul style="list-style-type: none"> Low cost of virgin fibers compared to recycled ones Limited adoption of eco-design principles: effectively boosting durability and design from and for recycling of products placed on the market Risk that with higher collection rates, the quantity of low-quality material (not suitable for reuse or recycling) will increase, lowering the economic value of the materials collected and putting the economic efficiency of waste management players at risk
INFRASTRUCTURE	<ul style="list-style-type: none"> New infrastructures for the sorting, preparation for reuse and recycling activities 	<ul style="list-style-type: none"> Availability of innovative and quality sorting and recycling infrastructures
SKILLS & SOCIAL DIMENSION	<ul style="list-style-type: none"> Growing sector of reuse, repair, sorting and recycling, creating green jobs and training opportunities also for people distanced from the labor market or at risk of socio-economic exclusion Reduction of non-sorted waste exportation to third countries, ending up in illegal landfills 	<ul style="list-style-type: none"> Need for a higher number of trained people to manage the increasing quantities of collected textile waste, with special focus on sorting, repairing and recycling
INVESTMENT AND FUNDING	<ul style="list-style-type: none"> Higher investments in R&D for sorting, recycling and new infrastructures 	<ul style="list-style-type: none"> Lack of incentives for secondary raw materials
R&I, TECHNIQUES AND TECHNOLOGICAL SOLUTIONS	<ul style="list-style-type: none"> Boost the development of new or improved sorting technologies, and recycling technologies 	<ul style="list-style-type: none"> Availability of innovative and quality sorting and recycling technologies Availability of sufficient volumes of homogenous textile waste streams to economically run fiber-to-fiber recycling

TABLE 8: RELEVANT QUOTES FROM EU EXPERTS ON TEXTILES WASTE MANAGEMENT AND EPR

POINT OF VIEW ON TEXTILES WASTE MANAGEMENT AND EPR

The two biggest practical barriers for a functioning textile circular economy are the availability of sufficient volumes of homogenous textile waste streams to economically run fiber-to-fiber recycling and the low cost of virgin fibers with which recycled fibers will not be able to compete, unless recycled fibers are incentivized, or virgin fibers are financially disincentivized (taxed).

LUTZ WALTER
Secretary General Textile ETP - The European Technology Platform for the Future of Textiles and Clothing

The circular business model of the textile service industry, its well-developed control over textile flows, and the existing transfer of used textiles for material recovery should be recognized as a solution for promoting circular textile management. Existing recovery activities between the textile service industry and other industries should be incentivized and further debated as part of the EU-level framework EPR for textiles.

ELENA LAI
Secretary General ETSA - European Textile Services Association

There should be transparent and close cooperation along the whole waste value chain in order to ensure that the recovery of waste textile materials is at its most efficient at each step. Without engagement and cooperation at every stage, success will be elusive. In the case of waste textiles, as social enterprises and charities already play a large role in their recovery, they should also be included around the decision-making table together with municipalities.

VANYA VERAS
Secretary General Municipal Waste Europe

Legislation/measures that establish or promote ownership or restricted access over specific waste streams must be avoided as it restricts the free market and competition, which compromises the quality of the recycling process. The free functioning of markets for waste and recycling is key for a circular economy, as it ensures competition on a level playing field and it allows for further innovation both in the production processes, and in the subsequent management of the waste.

AIZEA ASTOR HOSCHEN
Legal & Policy Officer FEAD - European Waste Management Association

One critical aspect arising from the first versions of the Italian EPR regulations is "cherry picking": establishing selective collection systems in stores and centers for reuse. This first collection of reusable textiles performed at small scale is costly and have less opportunity to be valorized on large markets if compared to the possibilities of the large industrial sorting plants. This selective collection will also leave a lower quality stream in the municipal collection which would lose interest in the purchase by the industrial sorting and preparation for reuse operators.

ANDREA FLUTTERO
President UNIRAU - Unione Imprese Raccolta Riuso e Riciclo Abbigliamento Usato

The introduction of Extended Producer Responsibility schemes should take into account schemes that have become consolidated and efficient by virtue of the natural dynamics of the market, without introducing reforms that undermine the existing supply chain. The elements of effectiveness and efficiency must be protected and safeguarded and surgical measures must be introduced to resolve the weaknesses and critical points of the sector with the aim of increasing environmental results. Rather than redesigning reuse channels at the desk, it will surely be more useful to take a snapshot of those that already exist and see how they can contribute to the new environmental goals the government is setting.

GIANFRANCO BONGIOVANNI
Secretary Rete O.N.U. - Rete Nazionali Operatori dell'Usato

TABLE 8: RELEVANT QUOTES FROM EU EXPERTS ON TEXTILES WASTE MANAGEMENT AND EPR
cont.

POINT OF VIEW ON TEXTILES WASTE MANAGEMENT AND EPR

“It is crucial to ensure a proper representation of social economy actors in the governance of EPR schemes to guarantee the implementation of the waste hierarchy while maximizing social employment in the sector. Unlike other actors, social enterprises always follow the waste hierarchy and maximize local re-use by following the proximity principle. In contrast, when brands control their products' end-of-life, they tend to favor recycling which leads to premature recycling of products that could be reused.”

MARIE-JEANNE GAERTNER
Project and Advocacy Officer RREUSE

“It is essential to ensure that EPR Schemes effectively boost design for recycling of products placed on the market and are managed in a way which does not result in unfair competition between recyclers and EPR Schemes.”

JULIA BLEES
Policy Director EuRIC - European Recycling Industries' Confederation

“One of the challenges for the EPR implementation is the impossibility of chemical testing on post-consumer materials before the specific selection, shredding, and proper fiber blending of a given production lot. This homogenization of the fibers is necessary in order to have a reasonable certainty of obtaining the same result throughout the final product, (of course these processes represent an important economic investment). The progressively restrictive limits on product chemical content that ECHA is pursuing with REACH regulations are rendering failures very probable on the final result, since the post-consumer materials in question may have been produced 20 or 30 years before, at a time when the current limitations did not apply to the production cycle.”

FABRIZIO TESI
President ASTRI - Associazione Tessile Riciclato Italiana



BOX 3 - EPR FOR TEXTILES IN ITALY

Even if in Italy the EPR scheme is not yet available in a national decree, 5 consortia have already been established (table 9). Unlike France, Italy has decided to adopt a competitive approach that will permit the coexistence of the different consortia. The consortia will guarantee the compliance with the EPR regulations in Italy to its members by managing on behalf of the member producers, the end of life of textile and other fashion products.

EPR consortia can be described looking at several differentiating factors:

MEMBER TYPE: some consortia accept only the producers as members (mandatory stakeholders required by law) while others are also open to additional stakeholders from the industry on a voluntary basis (such as ingredient brands, recyclers...).

INTERESTS REPRESENTED: some associations could balance the interests of the producers with those of other stakeholders such as ingredients brands, while others could favor just the interests of the producers.

ORGANIZATIONAL STRUCTURE: consortia working on multiple sectors may be able to generate economies of scale and synergies across sectors.

BACKGROUND: looking at the Italian scenario, consortia have been established either by players already active in the EPR and waste management activities or by Italian fashion industry's associations. The first ones have the advantage of having a well-established network of partners working in waste management and information technology systems already in place, while others have more experience working with players of the fashion industry and are more familiar with their peculiarities and interests.

LEVEL OF VERTICAL INTEGRATION: while the consortia created by organizations with a background in EPR and waste management tend to have an internal control over the activities related to collection, sorting, preparation for reuse, recycling and disposal (vertical integration), the others had externalized them to a general contractor (externalization of waste management activities).

SERVICES OFFERED: all the consortia interviewed have declared that they will support companies not only with post-consumer waste management, but also with pre-consumer waste management services. What can distinguish one from another is the variety and level of other services offered. Eco-design consulting, public awareness, legal consulting, circular economy ad hoc projects are just some examples of additional services that consortia can offer to their members, and that should be considered while evaluating a consortium.

COSTS (I.E. THE ECO-CONTRIBUTION): producers will be required to pay a contribution proportional to the quantity of products placed on the market. The contribution should be sufficient to cover the costs of managing post-consumer waste resources. The more efficiently the consortium can manage these activities, the lower the contribution to be paid. Without an official legislation on EPR, and with uncertain information on how the scheme will be implemented, consortia are not able to define a contribution, but this variable will be critical to consider as soon as the consortia are able to start their activity.

LONG TERM STRATEGIC PLAN: the last variable to consider is what the consortium expects to accomplish in the long run and what key activities are mainly going to be supported through investments. The focus could be, for instance, optimizing the collection and sorting for reuse, investing on research activities for recycling, or collaborating with its members to work on eco-design.

Without an official law on EPR that sets guidelines for the producers and consortia, the strategic plan of the Italian consortia cannot be certain, but may need to be revised and adapted in the future. The table below shows the suggestions that the consortia want to share with policy makers (including both the Italian Government and the European Commission) on key priority actions to enable the implementation of the waste hierarchy.



TABLE 9: KEY PRIORITY ACTIONS FOR POLICY MAKERS (ITALIAN GOVERNMENT / EUROPEAN COMMISSION) TO ENABLE THE IMPLEMENTATION OF THE WASTE HIERARCHY

<p>COBAT TESSILE</p> <p>Michele Zilla, General Manager Cobat Tessile</p>	<ul style="list-style-type: none"> • Harmonizing of the European regulations/guidelines for the PROs (producer responsibility organizations) with their applicability in each Member State in order to create a similar legislative framework in different EU Member States • Promoting the circular economy vision in the eco-concept of reuse of textile designed to have a longer durability and adaptable to be re-manufactured for a secondary use • Promoting the best available technologies for recycling in conjunction with Eco-design initiatives in order to apply the 100% circular economy concept to the textile industry • Implementing simplified procedures for waste management in order to facilitate the waste collection
<p>CONSORZIO ECOTESSILI</p>	<ul style="list-style-type: none"> • Allow large retailers to play an active role in the collection of textile waste • Avoid the obligation of unnecessary waste flows, in order to minimize the costs and environmental impact of transport • Introduce simplified methods similar to those in place for WEEE, to allow more effective collection of textile waste at distributors • Ensure that eco fees serve to finance the development of industrial recycling activities, the only textile waste activity still behind in Italy • Increase controls especially for producers who exclusively use the e-commerce channel
<p>ERION TEXTILES</p> <p>Luca Campadello, Strategic Development & Innovation Manager Erion</p>	<ul style="list-style-type: none"> • Securing a dedicated budget on communication to citizens about the correct disposal of waste and education on sustainable consumption • Establishing repair and reuse initiatives to prolong the life of the products • Supporting Producers working on eco-design of recyclable textiles, for reusing secondary materials and implementing new circular economy business models through eco modulation • Simplifying the administrative obligations for collection and transportation of used and waste textiles • Securing a dedicated budget for innovative solutions for the recycling of waste that cannot be reused • Harmonizing the targets on reuse, collection, preparation for reuse and recycling around Europe (to avoid different responsibilities and focus for Producers in different Countries)

<p>RE.CREA</p> <p>Roberto Tognoli, CEO Re.Crea</p>	<ul style="list-style-type: none"> • Supporting companies so that the new legislation, which regulates waste management and the end of life of products, becomes a competitive advantage over non-EU competitors. The legislation of EU Member States should be harmonized • Supporting eco-design and repair investments • Supporting research and development in innovative recycling technologies • Supporting national second hand sales channels • Supporting research and development in innovative post-consumer sorting technologies • Simplifying waste management regulatory requirements
<p>RETEX.GREEN</p> <p>Mauro Chezzi, Deputy Director at Sistema Moda Italia</p>	<ul style="list-style-type: none"> • Encouraging investments in industrial transition from a linear to a circular production system (Innovation, Digitalization, Skills) • Supporting the increasing demand for recycled materials through favorable directives and regulations (Green public procurement) and targeting consumer behavior • Facilitating standardization of activities concerning secondary raw materials and remove the regulatory constraints that hinder the circulation of waste in the European Market; • Creating a realistic, enforceable, coherent and, above all, SME friendly regulatory framework • Ensuring market surveillance to avoid unfair competition



The full mapping will be available to partners of the Monitor for Circular Fashion

4.2.3 SDA Bocconi survey results: the point of view of the Monitor for Circular Fashion partners

Given the relevance of waste management for the companies of the fashion value chain due to the upcoming EPR legislation, several questions of the survey and part of the co-creation workshops were dedicated to this topic.

The questions about waste management were answered by 15 partners of the Monitor for Circular Fashion, representing the ingredients, vendors and brands & retailers' perspective through a survey in May 2023. The partners were invited in June 2023 to attend a co-creation workshop to further discuss the topic from their experience and point of view.

Current waste management practices

When asked about waste management, 93% of partner companies already perform activities related to waste management. During the co-creation workshops (see quotes) companies highlighted that they especially focus on the reduction of the post-industrial and pre-consumer waste, since they can have effective control especially on that portion of waste resources. Internal reuse, upcycling and recycling activities (both closed-loop or in an industrial symbiosis perspective) and donations appear to be the most common ways to manage the pre-consumer waste.

Ecodesign and made-to-order production model were highlighted as ways to reduce the generation of pre-consumer waste:

“Eco-design has careful planning and high-quality standards as its founding principles and one of the first results is to reduce material waste. The adoption of virtuous processes within the value chain allows Vitale Barberis Canonico to achieve a 90.4% raw material yield, 8.9% reuse of textile by-products, and only 0.7% waste disposal in 2022.”

LUCIA BIANCHI MAIOCCHI
Sustainability Manager di Vitale Barberis Canonico S.p.A.

“Sustainability is part of the corporate strategy and is thus monitored quickly and effectively. The implementation of the strategy gradually led us to monitor the number of articles we develop within our collections and to shorten our supply chain. At the operational level, departmental KPIs are defined and monitored in line with the company's strategic objectives.”

Our business model is already mostly made-to-order, with a constant tracking of raw materials. We are constantly evaluating new opportunities for optimization to streamline processes and further reduce waste. A seasonal selection of leftover fabrics is reintroduced into the design stage for upcoming collections, for example as lining fabric or as a base for new seasonal prints, as well as resold or donated to our business partners.”

GIORGIO RAVASIO
Country Manager Vivienne Westwood Srl

“Internal production wastages are recovered and used for new productions. After the recovery and the sorting the wastages become a new input raw material lot. In 2022 Manteco recovered 215.372 Kg. of internal waste and the 71.5% of this returned to the production cycle.”

GIUSEPPE PICERNO
Head of Innovation & Sustainability
Manteco S.p.A.

“A priority for Vibram is to reduce the impact through efficiency and maintenance. In addition, we are currently running projects with external companies to reuse our pre-consumer waste. We aim at partnering with footwear players to improve products through design, processes, use and end of life of the whole shoe, continuously inspiring circular principles.”

MARCO GUAZZONI
Sustainability Director Vibram Group

The lower level of control over post-consumer waste, and the lack of an official legislation on EPR, makes it harder for companies to directly manage waste.

Companies can already put in place some activities to extend the life of their products and prevent the generation of post-consumer waste: 5/15 of the responding partners already offer **repair-**

ing activities while 4/15 declare to be interested in performing this activity in the near future, while only 2/15 of them currently activate consumer participation through **take-back schemes**.

Future plans for waste management and preparation for EPR

Internal reuse, and partnerships with upcycling players followed by joining a consortium for recycling/upcycling and implementation of 4.0 technologies are the preferred actions ac-

ording to the companies when asked about their future plans on optimization of pre-consumer waste management (Figure 10).

When questioned about plans to have a more efficient post-consumer waste in the future, partnership with existing, partnership with upcycling play-

ers and join a consortium for EPR/recycling/upcycling were the preferred options. The expertise of existing players working with post-consumer products seems crucial to support brands in this stage of waste management (Figure 11).

As emerged from the co-creation workshops, the entry into force of the EPR is considered by the partners as an opportunity not only to optimize the management and destination of post-consumer waste resources but also to improve:

- the reduction of waste generated during production;
- the collaboration among actors of the value chain;
- the pre-consumer waste management

FIGURE 10: FUTURE PLANS TO HAVE A MORE EFFICIENT PRE-CONSUMER WASTE MANAGEMENT

WHAT ARE YOUR FUTURE PLANS TO HAVE A MORE EFFICIENT PRE-CONSUMER WASTE MANAGEMENT?

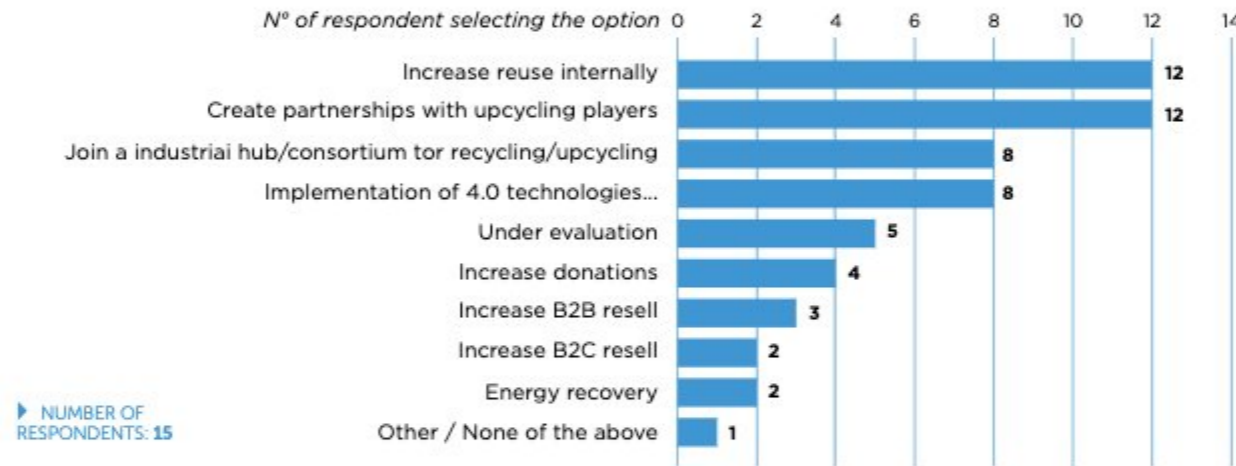
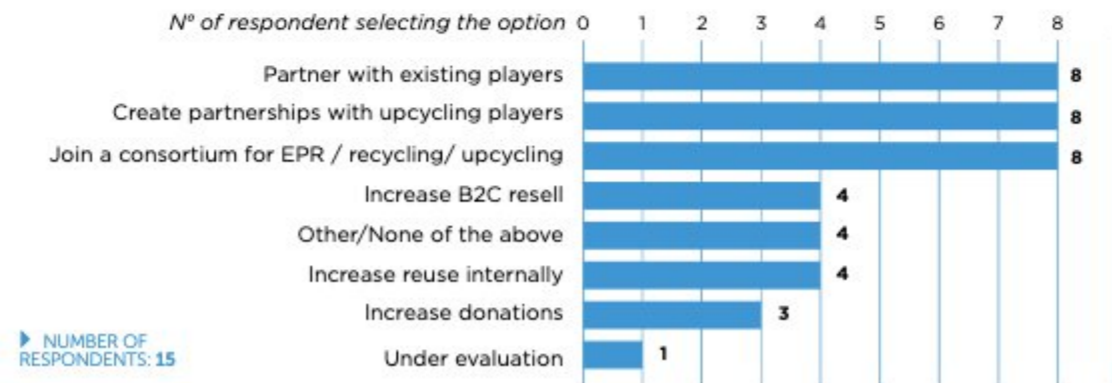


FIGURE 11: FUTURE PLANS TO HAVE A MORE EFFICIENT POST-CONSUMER WASTE MANAGEMENT

WHAT ARE YOUR FUTURE PLANS TO HAVE A MORE EFFICIENT POST-CONSUMER WASTE MANAGEMENT?



We are currently evaluating the availability of plants and technologies that will allow us to disassemble pre and post-consumer products, in order to recycle their components within our production cycles and through industrial symbiosis initiatives. In order to create strategic synergies for the recovery and reuse of raw materials and recycle of processing by-products, it would be important to further encourage the collaboration among partners of fashion value chain and other industries. To this purpose, in the first quarter of 2023, we joined Re.Crea consortium, established under the coordination of CNMI.

CHIARA MURANO
Head of Sustainability & Corporate Social Responsibility, TOD'S Group

At Oscalito we are preparing for the entry into force of the EPR legislation, with the aim of rigorously applying the EU waste hierarchy. We want to actively contribute to the management of waste or used textiles, even before they become waste, giving them new life through upcycling or downcycling, at least recycling solutions and limiting as far as possible the "delegation" to emerging countries of the burden of actually disposing of our waste.

DARIO CASALINI
CEO Oscalito

EPR will be an important step for the entire textile and apparel sector. RadiciGroup, both as an ingredient with its yarn and as a player in the end-of-life recycling phases, is available to the value chain for the co-creation of suitable products, from an eco-design perspective, and for the end-of-life recycling of its materials.

RADICIGROUP

During the co-creation workshop ingredient brands highlighted that even if not targeted by the EPR legislation, they

are expecting to be influenced by the law, especially regarding the eco-design of textiles and the related recycla-

bility of fibers used and the availability of certifications on raw materials and semi-finished goods.

“We are noticing increasing pressures from brands already. Probably because in some destination markets (e.g. France) EPR is a reality already and, in any case, some brands are voluntarily extending their responsibility to a wider number of life-cycle phases. We expect this to largely broaden in future months and years. Brands are asking -and will more and more ask- for detailed information on the composition of products, content and provenance of recycled materials, certifications, conformity to PRSL, LCA, etc. For ingredient suppliers, on the one hand these represent additional burdens; on the other hand, also opportunities to differentiate from less responsible actors.”

ENRICO DEGARA
Chief Sustainability Officer - YKK Italia S.p.A.



The relevance of social aspects in the waste resources pipeline needs to be investigated as well (box 4).

BOX 4 - THE RELEVANCE OF SOCIAL ASPECTS IN THE WASTE RESOURCES PIPELINE

The relevance of social aspects in the waste resources pipeline is highlighted by the European Commission in the Textiles Transition Pathway Policy Report.

Following the waste hierarchy, reuse through donations or second-hand markets should be prioritised over other solutions of waste management such as recycling or energy recovery. The LCA study conducted by Norion consult group for Euric confirms that the impact of reuse is primarily linked to logistics and transportation, making local reuse the most sustainable solution.

According to Rreuse¹⁸ report 2023, **social enterprises are crucial for the sector as they follow the waste hierarchy, the proximity principle and create training opportunities and new jobs for vulnerable people in the community:**

“By putting local re-use at the heart of their activities, social enterprises running textile collection, sorting, repair, resale and upcycling operations deliver environmental benefits and provide job and training opportunities for people distanced from the labour market or at risk of socio-economic exclusion. Indeed, a social enterprise creates between 20 and 35 jobs for 1000 tonnes of textile collected in view of being reused”.¹⁹

We have asked Humana People to People Italy, and Progetto Quid, their point of view to be shared with policy makers on key priority actions to enable the implementation of the waste hierarchy.

Humana People to People Italy is a no profit organization founded in 1998, that contributes to the development of people in the Global South Countries with humanitarian projects. It contributes to environmental protection through the collection, sale and donation of used clothing and, thanks to this activity, finances and implements projects that empower people to build a better future for themselves and their community.

Humana People to People Italy is member of The Federation for Associations connected to the International Humana People to People Movement, founded in 1996, which now coordinates the work of 29 organizations active in 46 countries and employing 20.000 people around the world.²⁰

¹⁸ Over half of RREUSE's 33 members work with used textiles, collectively managing 341,000 tonnes across Europe annually.

¹⁹ RREUSE (2023). Valorising used textiles locally through re-use and recycling activities: The contribution of social enterprises.

²⁰ <https://www.humanaitalia.org/>

BOX 4 - THE RELEVANCE OF SOCIAL ASPECTS IN THE WASTE RESOURCES PIPELINE - cont.

“To enable the implementation of the waste hierarchy it is important to put clear objectives for reuse, recycling and energy recovery, enhance the skills acquired over decades by operators in the collection, transport, selection and recovery of textiles and do not complicate logistics and harmonize procedures as much as possible at European level. It is also important that, according to the Sustainable Development Goals, the textile sector continues to generate those social impacts that have historically characterized a large part of the post-consumer supply chains both nationally and internationally.”

KARINA BOLIN
President Humana People to People Italia

Progetto Quid is an ethical fashion brand founded in 2013 in Verona, Italy. It creates fashion collections through the recovery of surplus fabrics donated or made available at a courtesy price by prestigious fashion and textile companies. Thanks to their 52 partner brands it has recovered 1.500 km of unused textile in 10 years. Progetto Quid is not only committed to achieving environmental sustainability but also social inclusion: of their 144 employees over 60% has experienced labor marginalization and the 80% are women.²¹

“A job is not just a job. A job is an opportunity to get to know each other, grow, connect and transform one's limits into starting points. For this reason, through fashion we design inclusive employment processes in all our units, from offices to prison laboratories, from the warehouse to our shops and across all contractual frameworks. Our integrated model of training and on-the-job support is designed to support the most isolated or less connected workers in accessing quality services and benefits, with the aim of catalyzing the impact of inclusive employment. We create new possibilities through local, national and international philanthropic and recruiting partnerships.”

ANNA FISCALE
Founder and President of Quid

²¹ <https://www.progettoquid.com/>

4.3 Circular fashion survey on New Generations by PwC and SDA Bocconi School of Management for the Monitor for Circular Fashion Report 2023

During 2023 the Monitor for Circular Fashion organized the ReFashionNow event on May 5th involving the Bocconi University students' associations and SDA Bocconi fashion sustainability students engaged in sustainability activities and interested in sustainable and circular fashion (see picture below).

During the event more than 100 students have been invited to give feedback and share their point of view on several topics such as the level of transparency of fashion brands, greenwashing behaviors and the digital product passport.

Box 5 highlights the most relevant results of the Circular Fashion Survey on New Generations by PwC and SDA Bocconi School of Management for the Monitor for Circular Fashion Report 2023.



The full research will be available to partners of the Monitor for Circular Fashion

BOX 5 - CIRCULAR FASHION SURVEY ON NEW GENERATIONS

What follows is an extract of the complete survey results.

Between May and July 2023, over 2,400 people were interviewed including GenZ (61%), Millennials (27%) and Boomers and Gen X (11%)

THE NEW GENERATIONS SEEM GETTING MORE AND MORE USED TO SECOND-HAND



NEW GENERATIONS ARE BECOMING MORE AWARE OF SECOND-HAND PRODUCTS DUE TO ECONOMIC ISSUES AND SUSTAINABLE MATTERS



Source: Circular Fashion Survey on New Generations 2023

SECOND-HAND: AN HANDY WAY TO GET RID OF THE SUPERFLOUS AND REDUCE WASTE...



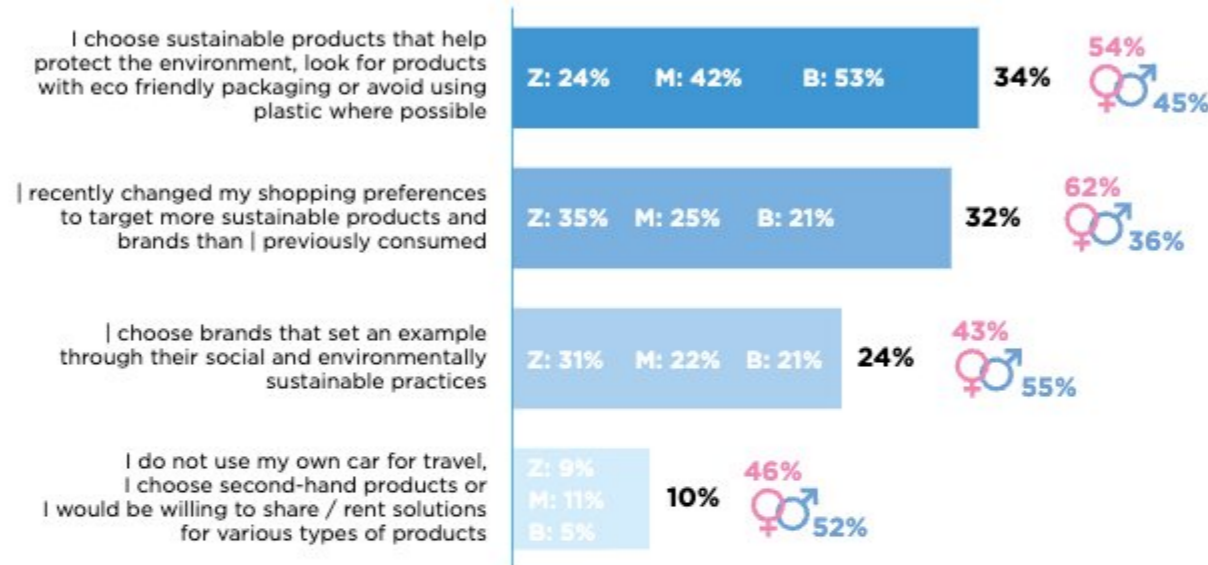
Source: Circular Fashion Survey on New Generations 2023

Reduced purchasing power due to inflation in Europe is driving the younger generations to buy more and more second-hand products. About 40% of the sample also claimed environmental protection as the main motivation for buying. On the other hand, tech and logistic platforms to support this market are now available and mature.

OMAR CADAMURO
Partner PwC

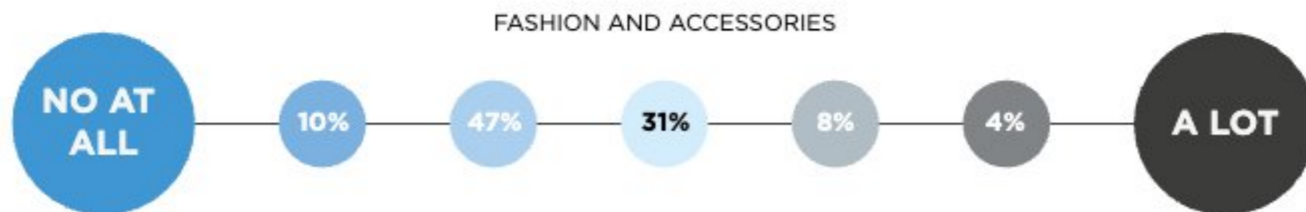
BOX 5 - CIRCULAR FASHION SURVEY ON NEW GENERATIONS - cont.

MORE THAN 34% OF NEW GENERATIONS CHOOSE SUSTAINABLE PRODUCTS THAT HELP TO PROTECT THE ENVIRONMENT, LOOK FOR PRODUCTS WITH AN ECO-FRIENDLY PACKAGING, AND AVOID USING PLASTIC WHEN POSSIBLE



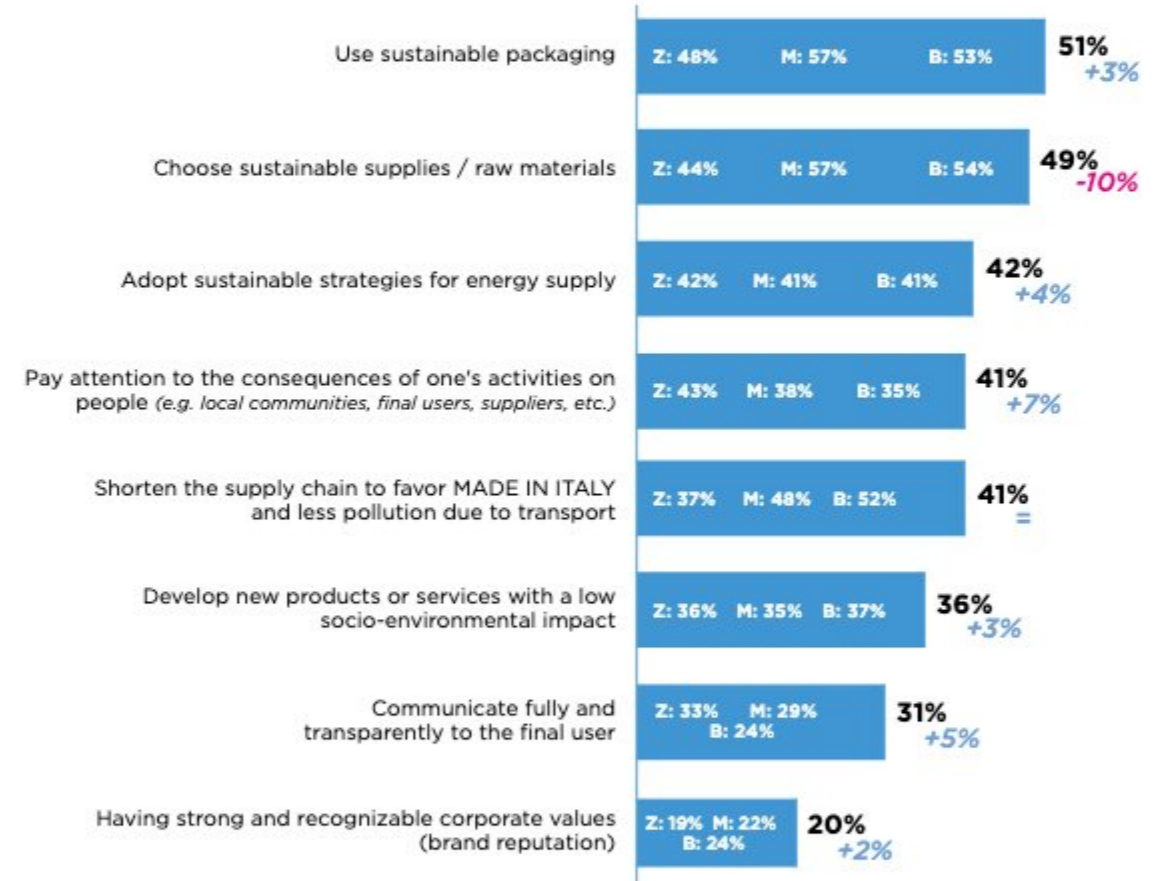
▶ Indicate which statement reflects the most your purchasing behavior in terms of environmental and social responsibility.

57% OF NEW GENERATIONS THINK THAT FASHION COMPANIES DO NOT TRANSPARENTLY SHARE INFORMATION ABOUT PRODUCTS



▶ How much do you believe companies communicate transparently the product and the manufacturing process? Fashion and Accessories

THE USE OF SUSTAINABLE PACKAGING AND THE CHOICE OF SUSTAINABLE SUPPLIES AND RAW MATERIALS ARE CRUCIAL FOR A COMPANY TO BE CONSIDERED AS SUSTAINABLE

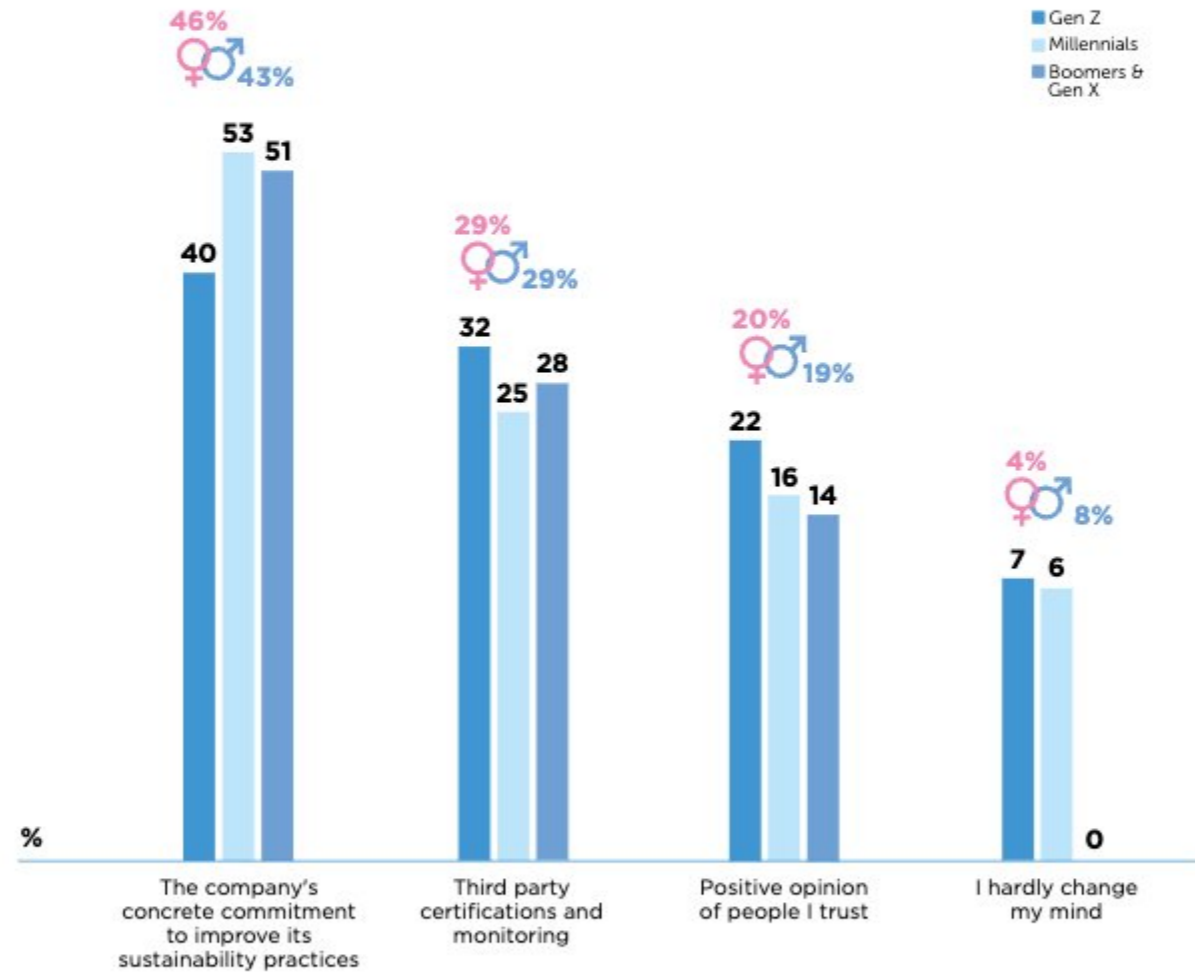


■ Var. % 2023 ■ Var. % 2023/2022

▶ Which of the following aspects do you consider the most while deciding if a company is sustainable or not?

BOX 5 - CIRCULAR FASHION SURVEY ON NEW GENERATIONS - cont.

FOR THE NEW GENERATIONS, THE **COMPANY'S CONCRETE COMMITMENT TO IMPROVE ITS SUSTAINABILITY PRACTICES MATTERS MORE** THAN THIRD PARTY CERTIFICATIONS AND MONITORING...



▶ What can make you change your opinion on the sustainability of a company or a brand?

THE MOST IMPORTANT **BENEFITS** ARE INCREASED TRUST IN THE BRAND AND MORE CONSCIOUS DECISIONS

- 1 Increase in trust and brand loyalty
- 2 More informed decisions
- 3 Combat counterfeiting in reselling platforms
- 4 Promote virtuous consumption behavior
- 5 Reduce greenwashing practices among brands
- 6 Enhance circularity and sustainability practices

▶ Rank the benefits you would derive from the DPP

ENVIRONMENTAL IMPACT AND PRODUCT COMPOSITION ARE THE MOST RELEVANT INFORMATION FOR ALL GENERATIONS

- 1 Environmental impact
- 2 Product composition and authentication
- 3 User-generated content
- 4 Care and maintenance instructions
- 5 Ethical information
- 6 Health and safety information
- 7 Ecodesign indicators

▶ Arrange in order of importance the information you would like to see in the DPP

BOX 5 - CIRCULAR FASHION SURVEY ON NEW GENERATIONS - cont.

Sustainability increasingly represents both an opportunity and a risk for business.

Different **business practices** influence consumers and can push them to stop purchasing a product or service.

MILLENNIALS ARE VERY SENSITIVE TO GREENWASHING.

THEY WOULD NO LONGER WANT TO PURCHASE AN ECO-FRIENDLY PRODUCT OR BRAND THAT:



MAKES CLAIMS BY DELIBERATELY LEAVING OUT OR MASKING IMPORTANT INFORMATION ABOUT THE ENVIRONMENT.

(vs 55% GenZ e 61% Boomers and Gen X)



MISLEADS FINAL USERS WITH WORDS OR PHRASES THAT PROMOTE ITS ENVIRONMENTAL FEATURES.

(vs 57% GenZ e 74% Boomers and Gen X)



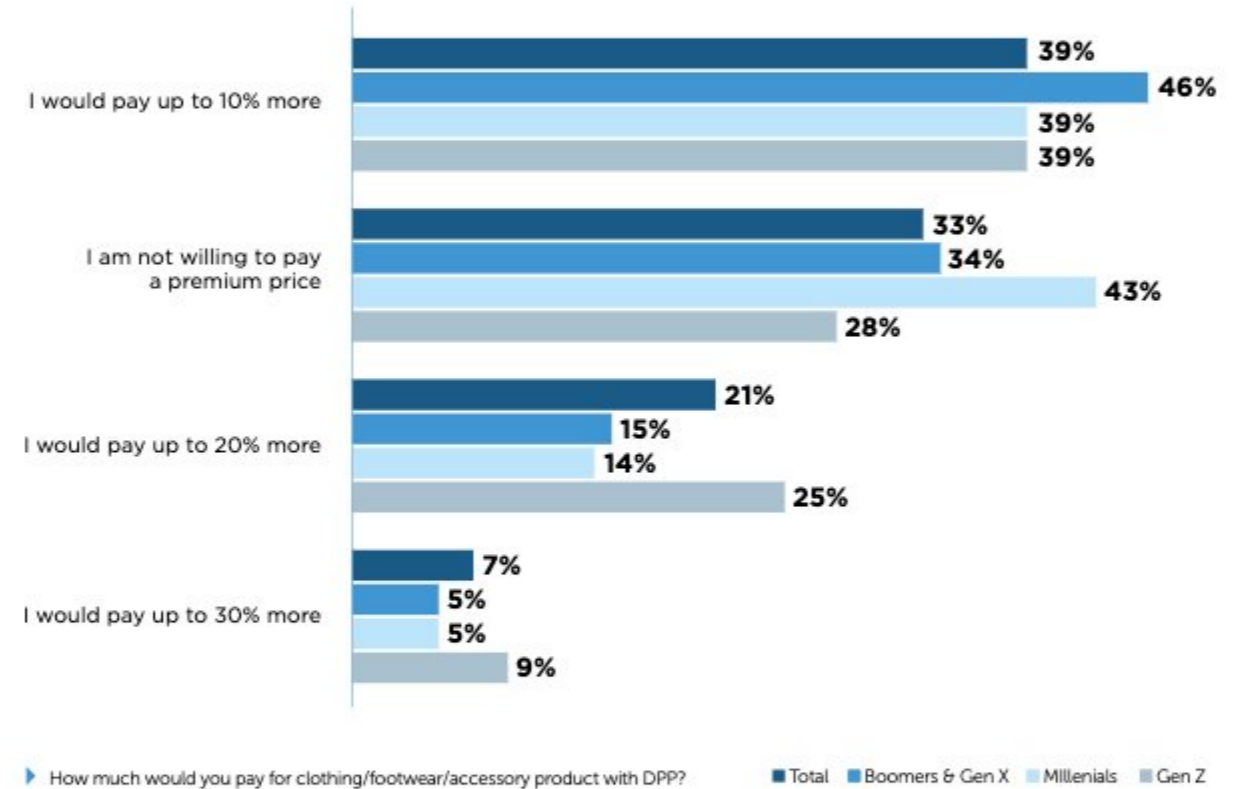
OVERSTATES OR EXAGGERATES ITS FUNCTIONALITY IN TERMS OF SUPPORTING THE ENVIRONMENT.

(vs 57% GenZ e 58% Boomers and Gen X)

▶ How much these common corporate practices negatively influence your willingness to buy a product/service? Answers are sum of «very much», «a lot» and «enough».

Source: Circular Fashion Survey on New Generations 2023

39% IS WILLING TO PAY UP TO 10% MORE FOR A PRODUCT WITH DPP, ALTHOUGH BOOMERS ARE THE ONES MORE ATTENTIVE TO THE ISSUE (46%)



According to all generations in aggregate, the information considered most important to be included in the DPP is the environmental impact and the composition and authentication of the product. The main benefits identified from the DPP are increased trust and loyalty, more informed decisions and combating counterfeiting in resale platforms.

4.4 The influence of governance on sustainability and circularity performance

One section of the survey completed by the pipeline partners of the SDA Monitor for Circular Fashion) focused on corporate governance and corporate sustainability, board of directors' structure and practices.

The Corporate Governance (CG) independent variables were: board size, CEO duality²², board family affiliation²³, board independence²⁴, board diversity²⁵, board activity²⁶, executives' remuneration linked to sustainability²⁷, board sustainability involvement²⁸, and sustainability committee's presence²⁹.

The sustainability indexes (dependent variables) were the following:

- environmental performance at the corporate level (ECPI);
- circularity performance (CPI);

- environmental performance at the product level (EPPI);
- traceability & transparency (TTPI);
- circularity and traceability & transparency (CTTPI)³⁰

Results have been processed through both quantitative methods (simple linear regression analysis testing each CG variable on each sustainability index) and qualitative methods (content analysis of inputs collected during 2 co-creation workshops with 14 partners of the Monitor for Circular Fashion).

Statistically relevant results are commented below.

The analyses reported board size, CEO duality, executives' remuneration are positively correlated to sustainability performance.

Board size

(i.e., size of the board represents the number of members sitting on the board of directors, including executive and non-executive directors)

PROS: a larger board is usually more diverse considering all stakeholders' interests

CONS: a larger board brings along higher complexity and slower decision-making process

FINDINGS: Board size is positively correlated to sustainability performance in terms of environmental performance at the corporate level (ECPI).

Results from previous studies confirm that Board size positively impacts sustainability performance³¹.

CEO duality

(i.e. CEO duality refers to the practice where the CEO of the company also serves as the chairman of the board of directors)

PROS: CEO duality brings along higher flexibility and smoother decision-making process.

CONS: CEO duality may bring to an unbalanced system and less effective agents' control.

RELEVANT QUOTE FROM CO-CREATION WORKSHOPS: "In an extremely complex and challenging macroeconomic and regulatory context, duality could guarantee greater streamlining of decision-making processes for the launch of the most important and impactful sustainability projects, positively influencing company performance."

FINDINGS: CEO duality is positively correlated to sustainability performance (CPI) and circularity and traceability & transparency (CTTPI).

Results from previous studies did not find a positive impact of CEO Duality on sustainability performance.³²

Executives' remuneration

(i.e. Executives' remuneration linked to sustainability refers to the presence of a link between executive directors and the sustainable goals of company's strategy)

PROS: monetary incentives are the most effective

CONS: boards are not always involved in sustainability

QUOTE: "To ensure competitiveness in the market and relevance of sustainability in the Group's strategy, Ferragamo embarked on a process to update its Remuneration Policy, effective from 2023, to include short- and long-term incentives linked to the achievement of the goals defined in the Strategic Plan and the Sustainability Plan. This adds to the journey to spread out a culture on sustainability, which encompassed the development of internal training and the creation of a dedicated interfunctional team – called Green Team."

FINDINGS: Executives' remuneration linked to sustainability is positively correlated to sustainability performance in terms of environmental performance at the product level (EPPI).

Results from previous studies confirm that executives' remuneration linked to sustainability positively impacts sustainability performance.³³

During the co-creation workshops the following questions have been asked:

- How is ownership structure affecting sustainability decisions and performance?
- Are family businesses naturally more engaged with local territory and communities?
- How does the CEO duality (CEO of the company also serves as the chairman of the Board of directors) affect sustainability decisions and performance in your organization?
- Given that sustainability decisions are well represented in the boards, how important is it to have board members' independence for sustainability decisions?
- How do you interpret diversity within the board and how does it affect sustainability decisions?
- Which are the most effective incentives to boost sustainability decisions and performance? Why?



The full research will be available to partners of the Monitor for Circular Fashion

²² CEO duality refers to the practice where the CEO of the company also serves as the chairman of the board of directors.

²³ Board family affiliation refers to the presence of family members in the board of directors (i.e., at least two members of the same family).

²⁴ Board independence refers to the proportion of independent directors within the board of directors. The independent directors are non-executive directors who, unlike the executive directors, are not involved in the day-to-day operation of the companies.

²⁵ Board diversity incorporates gender diversity (presence of at least one female director on the board), generational diversity (presence of at least three different age classes on the board), and educational diversity (presence of at least three different areas of studies about directors' educational background).

²⁶ Board activity refers to the frequency of board meetings.

²⁷ Executives' remuneration linked to sustainability refers to the presence of a link between executive directors and the sustainable goals of company's strategy.

²⁸ Board sustainability involvement refers to the proportion of directors in charge of sustainability within the board of directors.

²⁹ Presence of a Sustainability committee connected to the board of directors.

³⁰ CTTPI is a combined index of CPI and TTPI incorporating the circularity and traceability & transparency performance. The index is calculated as the multiplication of the two scores. Description and measurement of sustainability performance can be found in Box 6.

³¹ Munir, A., Khan, F. U., Usman, M., & Khuram, S. (2019). Relationship between Corporate Governance, Corporate Sustainability and Financial Performance. Pakistan Journal of Commerce & Social Sciences, 13(4), 915–933.

³² Hussain, N., Rigoni, U., & Ori, R. P. (2018). Corporate Governance and Sustainability Performance: Analysis of Triple Bottom Line Performance. Journal of Business Ethics, 149(2), 411–432. <https://doi.org/10.1007/s10551-016-3099-5>

³³ Cavaco, S., Crifo, P., & Guidoux, A. (2020). Corporate Social Responsibility and Governance: The Role of Executive Compensation. Industrial Relations, 59(2), 240–274. <https://doi.org/10.1111/irel.12254>

Some key findings and relevant quotes from the Monitor for Circular Fashion Partners on the key variables tested with the survey and discussed during the co-creation workshops are available below.

Main findings about family ownership and family affiliation:

Strong connection with local communities and territory.

Family-owned businesses are deeply tied to their original roots. This strong relationship leads these companies to commit themselves to positively influencing the surrounding environment. All the above is transformed into practical activities through collaborations with the local communities. For example, having many local people employed,

supporting significant restoration projects, and allocating a percentage of the annual profits to numerous charitable initiatives for many local causes.

Integration of sustainability into the core strategy.

Ownership structure affects companies' strategic decisions, including ESG strategies. Family businesses are aware of their role in the territory and local communities, and they see it as a driver for innovation and business relationships. Family companies have an intrinsic mission that is reflected in the

board's vision and a responsibility that goes beyond economic performance.

Heritage for the world and long-term vision.

Family businesses are aware that their business decisions impact not only their neighbors but the wider community at large and their territory overall. They recognize their value in their heritage, which is shared with the local communities, and the company's success is strictly related to them. Therefore, family companies have a long-term vision that embraces sustainability and social value.

“*Candiani is a family owned and operated company that has deep ties to the surrounding community. The strong connection and commitment to the territory positively influences the company's perceived responsibility that goes beyond just economic performance. From the beginning we've had to consider how our business decisions impact not only our neighbors but the wider community at large and territory overall.*”

ALBERTO CANDIANI
President Candiani Denim

Main findings about board independence:

Transparency and solidity.

Board independence gives the board a more solid structure. Independent directors (i.e. non-executive directors) ensure that the decision-making process is transparent, considering different kinds of stakeholders and their needs. These kinds of board members tend to have a more practical approach, and they add the most measured solution possible.

Ideal sustainability advisors.

Independent members with skills related to sustainability can support the development of a shared vision for sustainability and direct efforts. Their characteristic of independence is highly significant when it comes to sustainability decisions. For this reason, big companies usually create specific committees (e.g. the Control and Risk Committee) composed of independent directors who act as advisors and support the board in sustainability matters.

Not a common practice.

Including independent members on the board of directors is not always common. Indeed, they are not always present or involved in sustainability. Their role as independent directors, in some cases, focuses more on other subjects, such as finance. Due to the fact that board independence is not a constant mechanism on the board, the role played by each board member becomes even more important when it comes to sustainability decisions.

“*Independent directors are considered crucial in ensuring that the decision-making process is transparent and considers different kind of stakeholders, each one with different needs.*”

HOLDING MODA

Some key findings and relevant quotes from the Monitor for Circular Fashion Partners...

Cont.

Main findings about board diversity:

A diverse definition.

Diversity within the board stands for the inclusion of members belonging to different generations and genders. Board diversity must also be intended to embrace different cultural backgrounds and beliefs. Finally, diversity refers to the

diverse competences and expertise of the board members.

Source of richness.

Diversity within the board represents a significant advantage in embracing different kinds of people and their specific needs by including multiple points of view in the decision-making process. Other than enriching the discussion

within the board, diversity helps to check and balance the competing priorities of the company.

Barriers to overcome.

The company's cultural background and business sector can act as barriers to achieving diversity in the organization, especially on the board of directors.

Main findings about role of incentives:

Incentives must align profit with sustainability.

A widespread system of incentives (i.e. variable remuneration) may play a key role in speeding up the sustainability journey. They are able to integrate the sustainability plan into the business strategy by setting objectives linked to KPIs. Nevertheless, profits represent

a crucial lever when identifying goals and, therefore, incentives for the board and managers.

External and internal pressures act as incentives.

National and supranational legislation and regulations, as well as customers' sustainability awareness, represent the main external forces that drive companies' decisions. Regarding internal forces, shareholders and stakehold-

ers' pressures can impact decisions in terms of sustainability.

Incentives stay at the management level.

In most cases, the system of incentives does not involve the board of directors. The incentives mainly concern the managers and the operational teams, especially in the case of sustainability.

"We don't believe in "mandatory diversity". The deep meaning of this affirmation lies in the fact that in the selection of board members their merits, qualifications, competence and alignment with the organization's sensitivity should be prioritized rather than solely focusing on meeting diversity requirements. Diversity is essential in our increasingly global and interconnected world. A diverse board can better understand different markets, improving their ability to adapt to customer preferences and cultural nuances. But most of all, board members should be chosen based on their individual contributions to the Company's sustainable growth strategy."

SAVE THE DUCK

"At Kering, sustainability is represented at every level of our governance, from the Board of Directors and the Sustainability Committee to the managers of our Houses and the Sustainability Leads. Altogether, around ninety members of our staff are involved in the implementation of our roadmap."

MARIE-CLAIRE DAVEU
Chief Sustainability and Institutional Affairs
OFFICER

"To ensure competitiveness in the market and relevance of sustainability in the Group's strategy, Ferragamo embarked on a process to update its Remuneration Policy, effective from 2023, to include short- and long-term incentives linked to the achievement of the goals defined in the Strategic Plan and the Sustainability Plan. This adds to the journey to spread out a culture on sustainability, which encompassed the development of internal training and the creation of a dedicated interfunctional team – called Green Team."

FERRAGAMO

BOX 6 - DESCRIPTION AND MEASUREMENT OF SUSTAINABILITY PERFORMANCE.

INDEX	COMPONENTS	DESCRIPTION AND MEASUREMENT
ENVIRONMENTAL CORPORATE PERFORMANCE (ECPL)	Risks monitored - Insecticide, pesticide and fertilizer use	The index is based on the Business Process Analysis for Sustainability and Circularity in Textile Value Chains (UNECE, 2022).
	Risks monitored - Hazardous and toxic chemical use	
	Risks monitored - Water use	The index measures the environmental performance of each company at the corporate level. It assigns 1 point per each risk monitored, assuming that this involves activities having a positive impact on the surrounding environment both mitigating the risks and improving the current situation.
	Risks monitored - Water pollution	
	Risks monitored - Health & safety / PPE	
	Risks monitored - Greenhouse gas emissions and air pollution	
	Risks monitored - Energy consumption and efficiency	
	Risks monitored - Soil and land degradation	Data to calculate the index was collected through the survey distributed to 14 companies.
	Risks monitored - Biodiversity and ecosystem depletion	
	Risks monitored - Deforestation and habitat loss	
	Risks monitored - Solid waste	
	Risks monitored - Animal welfare	

INDEX	COMPONENTS	DESCRIPTION AND MEASUREMENT
ENVIRONMENTAL PRODUCT PERFORMANCE (EPP)	Material footprint aspects - Raw materials	The index is based on the material footprint framework created by the UN and is related to the 12 th SDG about ensuring sustainable consumption and production patterns.
	Material footprint aspects - Energy	
	Material footprint aspects - Emissions	
	Material footprint aspects - Chemical substances	The index measures the environmental performance of each company at the product level. It assigns 1 point per measured aspect, assuming that this involves activities that improve product sustainability.
	Material footprint aspects - Circularity	
	Material footprint aspects - Water resources	
	Material footprint aspects - Packaging	
	Material footprint aspects - Transportation	
	Internal social initiatives - Health & Safety	
	Internal social initiatives - Training	Data to calculate the index was collected through the survey distributed to 14 companies.
	Internal social initiatives - Diversity & Inclusion	
	Social initiatives related to community and territory	
	Code of Ethics presence	
	Code of Conducts for company's suppliers presence	
	Risks monitored - Human rights	
	Risks monitored - Labour risks	
	Post-sale activity - Broadcast behavioural campaigns	
	Post-sale activity - Educate and raise awareness of consumers by providing data on fashion industry impacts	

INDEX	COMPONENTS	DESCRIPTION AND MEASUREMENT
CIRCULARITY PERFORMANCE (CPI)	Design for circularity	The index is based on the studies and knowledge developed by the SDA Bocconi Monitor for Circular Fashion.
	Sourcing of sustainable inputs	
	Sourcing of circular inputs	The index measures the circularity performance of each company. Circularity is a key aspect of sustainability in the fashion industry. This index assigns 1 point for each activity that companies do in terms of circularity.
	Co-creation and on-demand production	
	Modularity solutions	
	Waste management	Data to calculate the index was collected through the survey distributed to 14 companies.
	Repairing services	
	Rental, subscription rental and leasing	
	Re-commerce / second-hand	
	Peer-to-peer platform	
	Recycling and regeneration	
	Upcycling	
	Downcycling	
	Post-sale activities for circularity	

INDEX	COMPONENTS	DESCRIPTION AND MEASUREMENT
TRACEABILITY & TRANSPARENCY PERFORMANCE (TTPI)	Traceability & Transparency - Design	The index is based on the fact that sustainability performance and companies' traceability & transparency are positively correlated (Herbohn et al. 2014).
	Traceability & Transparency - R&D	
	Traceability & Transparency - Prototyping	
	Traceability & Transparency - Raw materials and components production	
	Traceability & Transparency - Production of semi-finished products	
	Traceability & Transparency - Production of finished products	
	Traceability & Transparency - Logistics (and reverse logistics), warehousing and transportation	
	Traceability & Transparency - Wholesale	
	Traceability & Transparency - Retail	
	Traceability & Transparency - E-tail	
	Traceability & Transparency - End-of-life services	The index measures the level of traceability and transparency of each company in terms of sustainability performance. It is calculated as the percentage of traced and disclosed activities over the overall number of activities that each company does.
	Traceability & Transparency - Waste	
	Transparency - Design for circularity	
	Transparency - Sustainable inputs (sourcing)	
	Transparency - Circular inputs (sourcing)	
	Transparency - Co-creation and on-demand production	
	Transparency - Modularity solutions (single items or collections)	
	Transparency - Waste management	
	Transparency - Repairing services	
	Transparency - Rental, subscription rental and leasing	
Transparency - Re-commerce / second hand market	Data to calculate the index was collected through the survey distributed to 14 companies.	
Transparency - Peer-to-peer platform		
Transparency - Recycling and regeneration		
Transparency - Upcycling		
Transparency - Downcycling		

Actions towards 2030

MOVING FROM COMMITMENTS TO ACTIONS

- 5.1 Circular Fashion Manifesto and related Textiles Transition Pathway Actions
- 5.2 Circularity & traceability technologies enabling the twin transition
- 5.3 Circular Fashion Roadmap
- 5.4 Next steps



5.1 Circular Fashion Manifesto and related Textiles Transition Pathway Actions

The "Circular Fashion Manifesto: Best Practices Update 2023" available on the website www.sdabocconi.it/circularfashion is the commitment officially presented to UNECE and the European Commission by the companies of the Monitor for Circular Fashion on September 19th 2023.

It answers to the UNECE "Sustainability Pledge" inviting all actors in the garment and footwear industry to take ac-

tion for traceability and transparency in order to accelerate the sustainability and circularity of value chains, in line with the United Nations 2030 Agenda for Sustainable Development.

The Textiles Ecosystem Transition Pathway was published by European Commission on 6 June 2023. The policy report includes 50 specific actions to support the twin transitions and the long-term resilience and competitive-

ness of the textiles ecosystem. The Companies of the Monitor for Circular Fashion are presenting their Pledge also to the European Commission call for commitments for stakeholders in the textiles ecosystem, highlighting the consistency of the existing "Circular Fashion Manifesto" and the related actions already implemented since 2021 with 8 actions identified in the Transition Pathway for the Textiles ecosystem.



THE 8 SELECTED ACTIONS ARE RELATED TO 5 OUT OF 8 TTP BUILDING BLOCKS.

BUILDING BLOCK 1: SUSTAINABLE COMPETITIVENESS

1. Promote, support and implement circular and sustainability practices, services and business models, including social economy enterprises (such as product-as-service models, take-back services, second-hand and repair services, innovative sorting and recycling) including through Horizon Europe, LIFE, and the 'ReSet the Trend #ReFashionNow' campaign and actions from the Social Economy Action Plan.
11. Create more demand for sustainable products and onboard consumers in the green transition by launching consumer campaigns to create awareness and to reshape consumption patterns including under the motto ReSet the Trend #ReFashionNow, as well as supporting emotional durability by designing products that people want to keep.

BUILDING BLOCK 2: REGULATION AND PUBLIC GOVERNANCE

14. Follow-up on actions in the EU Strategy for Sustainable and Circular Textiles, including specific ecodesign requirements, the Digital Product Passport, circular and sustainable management of textile waste and possible extended producer responsibility rules, and encourage industry participation in the relevant consultations.
16. Finding common methods to assess and compare the sustainability performance of textile products in the context of the foreseen ecodesign requirements.
17. Improving traceability and transparency in the textile value chain through the proposed Digital Product Passport.

BUILDING BLOCK 3: SOCIAL DIMENSION

21. Support up-and reskilling, access to lifelong learning and training opportunities through for example, the EU Pact for Skills for the Textiles ecosystem, to ensure workers are skilled for the twin transition.

BUILDING BLOCK 4: R&I, TECHNIQUES AND TECHNOLOGICAL SOLUTIONS

25. Increase access and interaction of SMEs in the textiles ecosystem to/with tech support structures (for example through tech federations, digital innovation hubs, campuses, incubators, clusters, industry alliances).

BUILDING BLOCK 6: SKILLS

40. Organise events and awareness-raising activities on the attractiveness of the sector and new opportunities to work in the industry around the European Year of Skills.

The overall activities of the Monitor for Circular Fashion will go on in the next years to continue providing concrete results with special focus on the TTP 8 Actions defined above, coherently with the Circular Fashion Manifesto

pledge firstly published in 2021 and updated on a yearly basis.

The partners of the Monitor for Circular Fashion worked in 2022 and 2023 on the following pilot projects in order to

test circularity and traceability KPIs identified during the years.



The 10 Pilot Projects of the Circular Fashion Manifesto are available in Annex II.

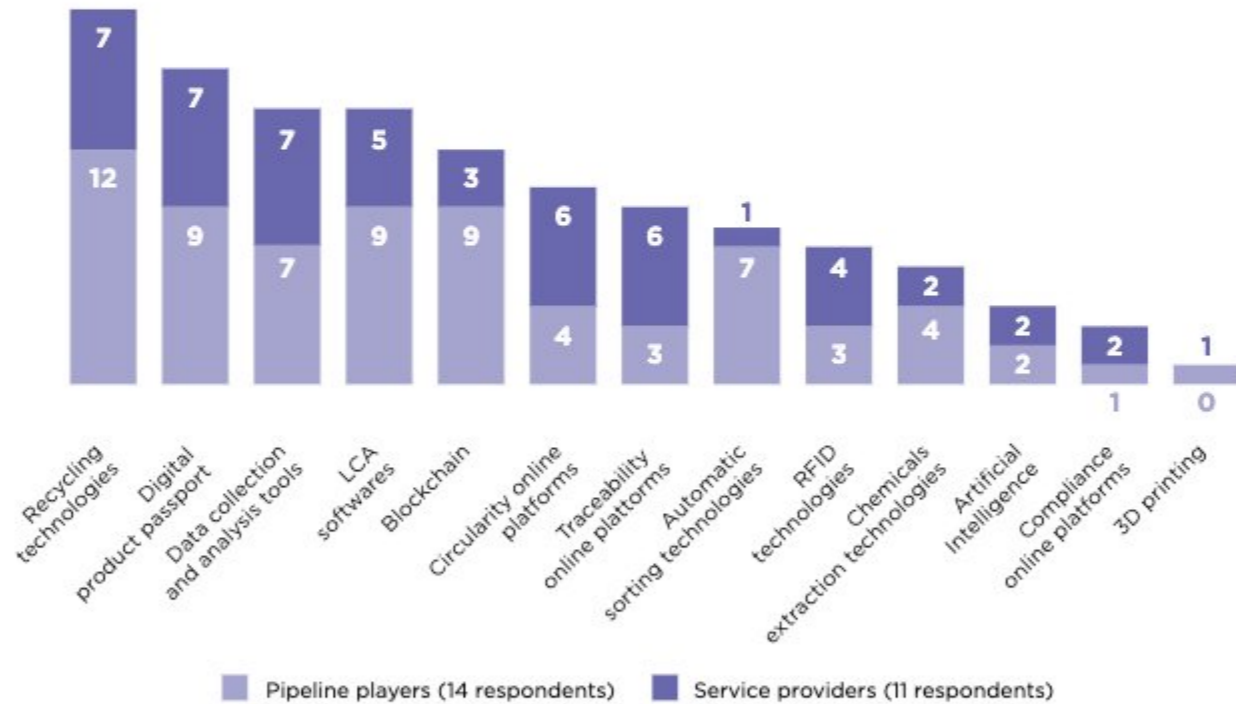
5.2 Circularity & traceability technologies enabling the twin transition

As already mentioned in all Monitor for Circular Fashion reports, technologies are to be considered as essential enablers for the sustainable and circular transition, including traceability technologies and circularity technologies.

Companies of the Monitor for Circular Fashion, both pipeline players and service providers, have been asked to provide an answer to key technologies to enable the transition of fashion towards circularity.

The most popular identified are **recycling technologies, digital product passport, data collection and analysis tools and LCA softwares** (figure 12).

FIGURE 12: TECHNOLOGIES ACROSS THE VALUE CHAIN



However, the most relevant technologies vary depending on the kind of organization interviewed. The technological priorities of the organizations are clearly linked to the type of processes related to their core business.

An overall mapping on the key circularity and traceability technologies enabling the twin transition in the fashion industry are presented in figure 13, applying them to the value chain perspective.



The complete results of the co-creation workshops with service providers will be available to the Monitor for Circular Fashion partners

“Addressing the availability of competencies as an obstacle requires a multi-faceted approach. It involves investing in education and training programs that focus on circular fashion, both at academic institutions and within the industry. Collaboration between educational institutions, industry organizations, and governments can help develop and disseminate circular fashion competencies. Additionally, fostering knowledge sharing, mentorship, and collaboration platforms within the fashion industry can help build a community of professionals with circular expertise. By investing in the development of competencies, the fashion industry can overcome this obstacle and accelerate the transition towards circular practices.”

AVERY DENNISON

“Process complexity with increasing costs and internal company culture affecting a financial statement's priorities may become critical obstacles to circular approach adoption. As the new legislative framework boosts change, the lack of incentives and support from regulatory parties might jeopardize the fashion industry and require more effort on their part. The new priorities of agility, transparency, traceability, and continuous dialogue touch various parts of the Supply Chain. It is precisely where the need for a single ecosystem comes from, one that allows the exchange of information, approaches, and inspirations that all lead to the same goal: to build business models in line with the needs of sustainability to preserve the planet.”

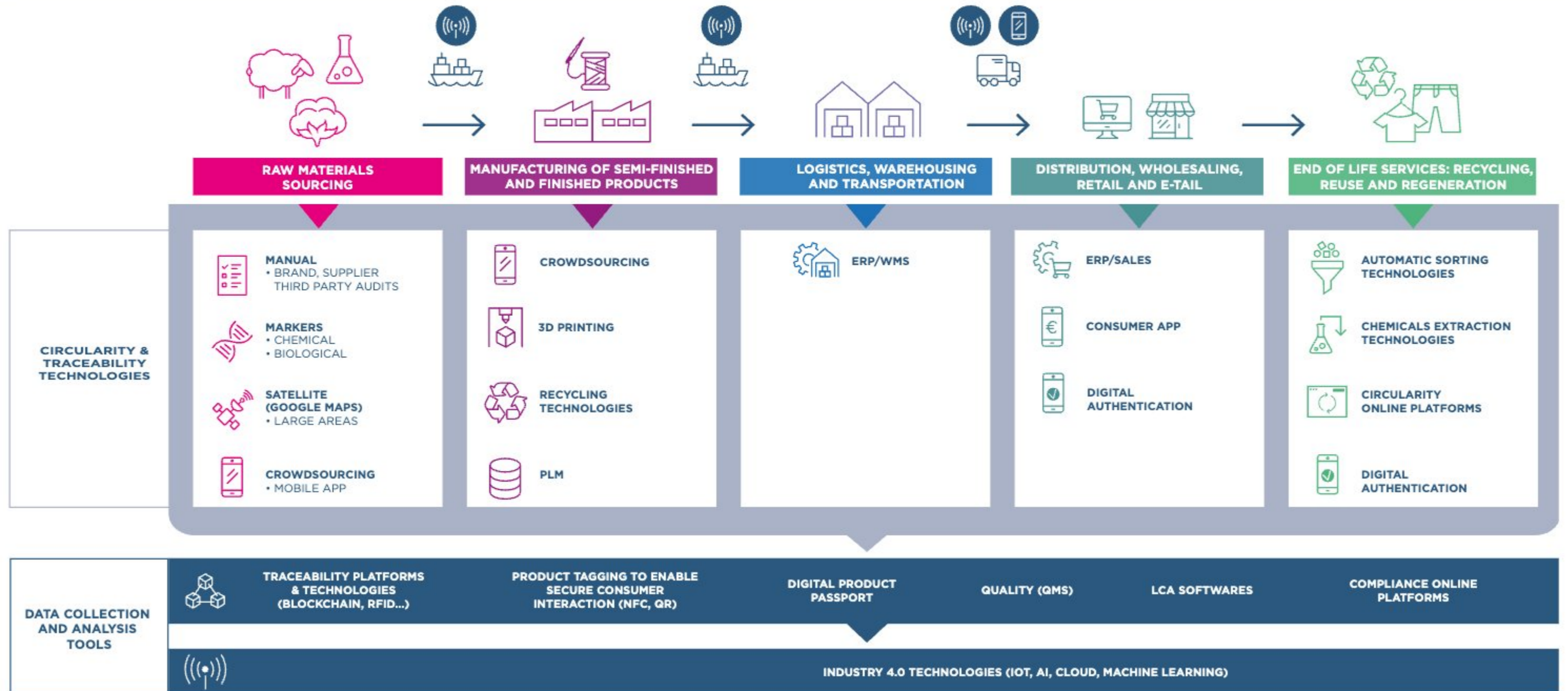
DEDA STEALTH

“In order to support the success of the Digital Product Passport initiative, it is necessary to develop an innovative and global technological approach based on the 4 pillars of industry 4.0: cloud, big data, IOT and AI. It is essential to ensure measures of interoperability among technological and data platforms which are currently partially addressing the subsets of those complex processes. Access to data, authentication capacity, traceability and real-time verification are the major challenges associated with the Digital Product Passport. A dedicated technological contribution and the common desire for harmonization, will contribute to the success of the transformation process. Without this foundation transformation might not take place.”

PHILIPPE RIBERA
VP Innovation Lectra

FIGURE 13: MAPPING ON THE KEY CIRCULARITY AND TRACEABILITY TECHNOLOGIES ENABLING THE TWIN TRANSITION IN THE FASHION INDUSTRY

CIRCULARITY & TRACEABILITY TECHNOLOGIES ENABLING THE TWIN TRANSITION



Source: Monitor for Circular Fashion 2023

“A cohesive and transparent company policy on sustainability certainly improves the perception of the brand in front of the most sensitive targets such as Gen Z and Millennials. The new generations are willing to spend more on a sustainable garment, that is, produced with innovative materials, from traceable resources, through environmentally friendly processes and from a solidarity-based production.”

MICHAEL CASALI
PLM Impianti

“Maximising customer lifetime value will become of paramount importance. Identifying passionate and loyal consumers, and nurturing the relationship with them will help reduce mass production (and costs) and improve quality.

Circularity through reuse and recommerce is a readily accessible opportunity for brands to embed sustainable practices into their revenue models. Traceability is one of the foundational elements of circular models, however, it does not solve the problem of making product information and circular services accessible to consumers in a secure and frictionless way. To influence consumer behavior, brands will need an ecosystem of services that are enabled by complementary, interoperable technologies, that allow them to maximize customer lifetime value and return on investment in the long-term. Embracing circularity can improve a brand's reputation and strengthen its position as a responsible and sustainable player in the fashion industry, building loyalty and trust with consumers, thus growing CLV faster.”

CERTILOGO

“Traditionally, most products were designed in a take-make-waste system where materials became products that were disposed of at end of life. However, many companies are beginning to adopt a circular mindset by creating products that are “made to be made again.” Embracing this product circularity demonstrates a growing commitment to sustainability and accelerates the transition to a more environmentally prosperous future.”

UL SOLUTIONS

“Circularity and a full traceability approach can offer significant opportunities to strengthen firms' reputation and open up new lines of business and interaction with their customers but the circularity transition requires significant investment in new technologies, infrastructure and staff training. The ability to improve the skills of its employees, both soft skills and hard skills, has always been a delicate and complex issue. Due to its holistic nature, the circular approach should require the involvement of all company personnel while trying to avoid verticalisation of competencies in only a few specific roles. This adds further complexity to the brand, expanding the need for training through a global view and not the individual employee.”

TEMERA

5.3 Circular Fashion Roadmap

During the several plenary meetings with the companies of the Monitor for Circular Fashion it became clear that investment priorities need to be identified, considering both the **requirements coming from upcoming textiles regulations on sustainability and circularity** (i.e. urgency) and the **com-**

plexity generated implementing a circularity approach along the value chain activities involved (i.e. number of value chain activities involved). The level of complexity can also be identified by looking at the **stakeholders involved** considering internal stakeholders (generally less complex and time

consuming) vs external stakeholders (generally more complex and time consuming).

Figure 14 may provide a methodology to the partners of the Monitor for Circular Fashion and the overall fashion industry to prioritize the circularity investments.

In recent years, with the COVID pandemic, the increase in the cost of raw materials, geopolitical tensions, between the West and China, and later with the war in Ukraine and the resulting sanctions on the Russian market, the entire value chain, from producer to consumer in the fashion sector has suffered significant repercussions, which have inevitably triggered rethinking and strategic changes within the industry. To recover from the aforementioned events, compared to the strategic plans of 2 or more year ago, companies have started leveraging the following:

- 1) New long-term strategies, prioritizing near-shoring and repositioning/diversifying suppliers and services.
- 2) New technologies to meet traceability requirements or improve polluting production processes.
- 3) Defining a risk assessment process to address future challenges.
- 4) Developing business cases for planned investments, including sustainability initiatives. Circular initiatives have positive impacts, but they may not always yield short-term profitability and require a review of expected profitability models. For the future, fashion brands are advised to optimize their knowledge by synergizing with partners and suppliers to develop cohesive environments aimed at achieving common goals.

BIP

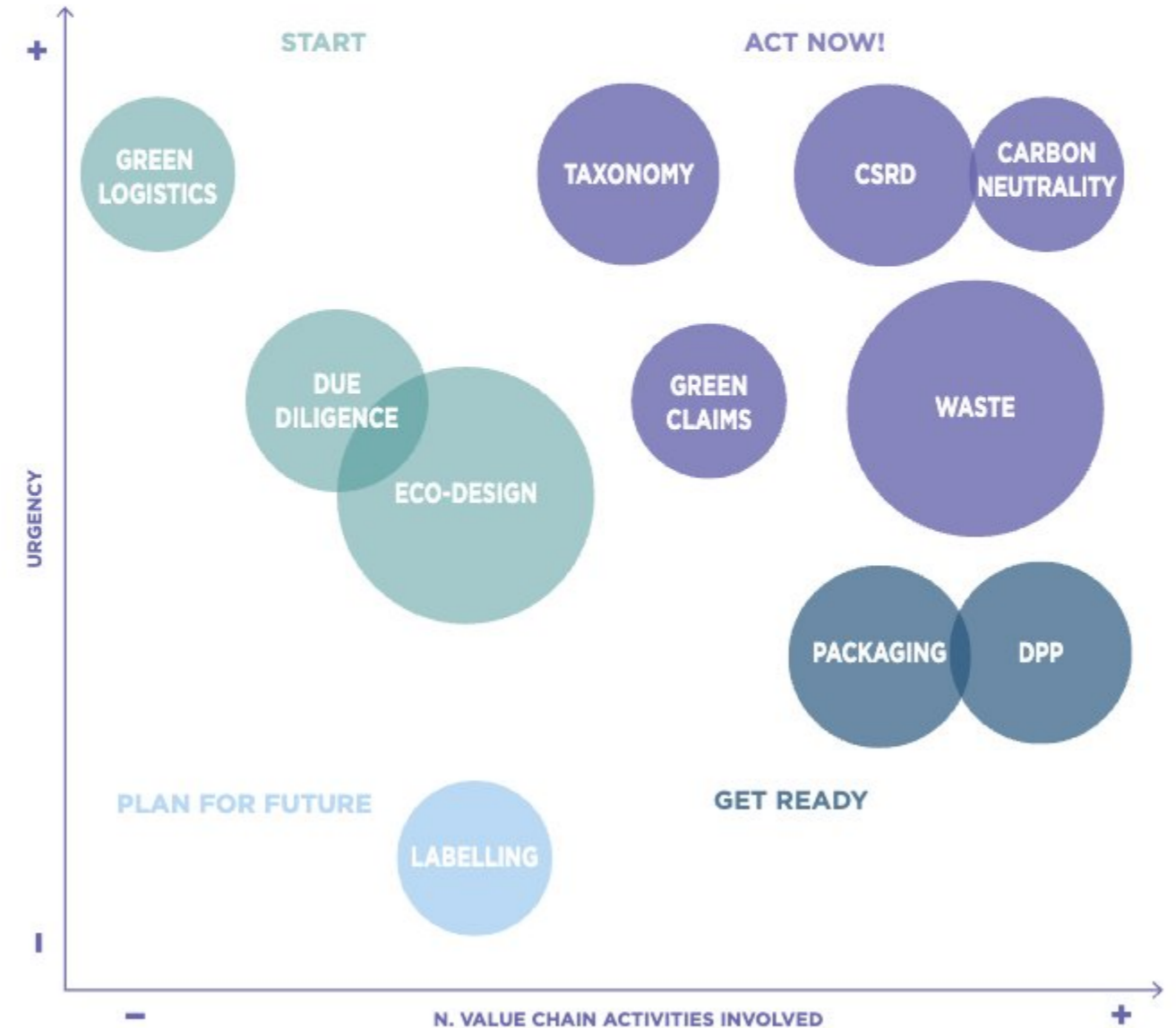


FIGURE 14: CIRCULAR FASHION ROADMAP

LEGENDA | COMPLEXITY LEVEL (STAKEHOLDERS INVOLVED) IS REPRESENTED BY BUBBLE SIZE:

LARGE - HIGH COMPLEXITY

SMALL - LOW COMPLEXITY



Source: Monitor for Circular Fashion 2023

5.4 Next steps

During the third year of activities, the Monitor for Circular Fashion adapted the circular fashion KPIs to new value chains, starting from leather and continued testing selected KPIs through 3 additional pilot projects, strengthened the community for Circular Fashion and the cooperation activities with key stakeholders, published the "Circular Fashion Manifesto 2023 Best Practices Update" and the annual Report to be presented to companies and industry associations, institutions and other key stakeholders.

During the next months and years new value chains will be explored to cover step by step all value chains of the Textile, Clothing, Leather and Footwear (TCLF) sector.

The Monitor is also willing to extend the geographical reach focusing on Europe. Companies will be invited to participate in the Monitor for Circular Fashion, if they meet the following criteria:

- reporting system of sustainability aligned to a national or international standard;
- availability of governance for sustainability management;

- alignment to Agenda 2030 goals with periodical measuring.

As Partners, the companies of the Monitor for Circular Fashion will:

- keep on monitoring their circularity performance by testing the industry-specific KPIs;
- keep on implementing the industry-specific KPIs in pilot projects and industrialized products;
- contribute to define the fashion industry Best Available Techniques (BAT on circularity).

During the next months and years the Monitor for Circular Fashion concretely aims at:

- acting as a community of frontrunners to implement eco-design principles, measure the environmental impacts of a product or service through LCA, substantiate the sustainability claims, enhance traceability and transparency in fashion;
- increasing the level of cooperation with relevant consortia and alliances

on the topic of waste management and existing NGOs;

- encouraging Policy Makers to adopt a harmonized policy framework to support circular fashion initiatives;
- collaborating with existing organizations focused on social dimension of sustainability and circularity, with a particular focus on due diligence initiatives;
- increasing the level of cooperation with born circular SMEs.

The Monitor for Circular Fashion is willing to continue supporting born circular SMEs, especially small companies and startups, since they are the ones that can bring innovative solutions to challenges like the climate crisis, and help spread these solutions throughout Italy, Europe and the World through its C-Factor initiative (see Annex I).

“During the next months and years the Monitor for Circular Fashion aims at acting as a community of frontrunners to implement eco-design principles, substantiate the sustainability claims, enhance traceability and transparency in fashion and increase the level of cooperation with born circular SMEs and relevant consortia and alliances on the topic of waste management. The Monitor will also encourage Policy Makers to adopt a harmonized policy framework to support circular fashion initiatives.”

FRANCESCA ROMANA RINALDI
Director Monitor for Circular Fashion
SDA Bocconi School of Management

Annex I

INTRODUCING THE MONITOR FOR CIRCULAR FASHION C-FACTOR



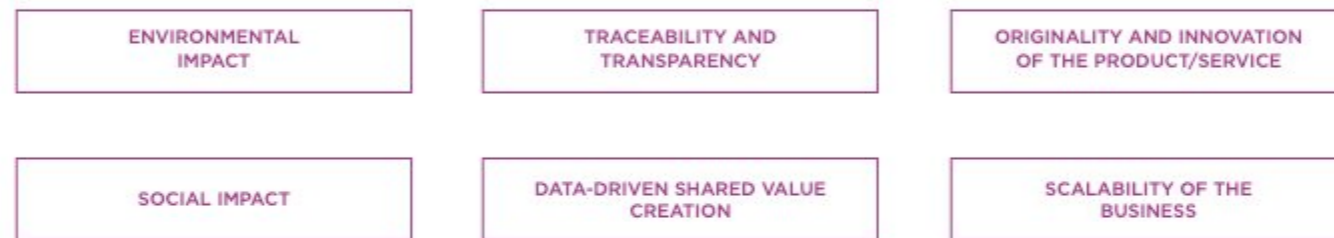
Annex I C-Factor

C-Factor is an initiative part of the Monitor for Circular Fashion. Its goal is to promote circular fashion startups and SMEs, create a network among

sustainability innovators and provide opportunities to multiple stakeholders of the fashion industry.

During the 2023 Monitor for Circular Fashion, 16 startups and SMEs have pitched their business to the member firms of the Monitor.

The startups and SMEs were evaluated by the Monitor according to the following criteria:



The startups and SMEs that participated are social enterprises or orchestrate social enterprises (Belt Bag, Il Filo Colorato, Ethica Rei), scaleups (Renewcell, Resortecs, Fairly Made) and startups (Reflaunt, Re4Circular, Primal Soles,

Artknit Studios, The Running Republic, SEAY, CDC_Studio, Gaia Segattini, ZEROW, dotzer0).

Artknit Studios, The Running Republic, SEAY, CDC_Studio, Gaia Segattini, ZEROW, dotzer0).



Social Enterprises (- orchestrators)

Belt Bag

www.beltbag.it

Belt Bag is the eco-sustainable upcycling fashion brand of Occhio del Riciclone. Non-profit social cooperative founded in 2005 as part of a project to spread the practice of reuse. Each Belt Bag is a unique piece in terms of shape and colour and is made in Italy at the Pregnana Milanese site, with pre- and post-consumer recycled materials. The objective is to do social and ethical business through the reuse of recycled materials and the systematisation of the practice of reuse as a new production paradigm for healthy recycling, low environmental impact and ethical fashion.

Il Filo Colorato

www.ilfilocolorato.it

Il Filo Colorato is a social cooperative which supports people in fragile condition through training and employment, and collaborated with companies that need to improve their waste management and want to be involved in socially responsible initiatives.

The two main activities of Il Filo Colorato are:

- involvement of companies to generate social and environmental positive impact through professional training of resources and support to manufacturers;

- waste management support to companies through upcycling and recycling of resources and waste.

Ethicarei

www.ethicarei.com

Ethicarei aims to create an ecosystem (ETHICAREI) which, starting from training and information, stimulates brands to in-depth reflection on social inclusion issues. ETHICAREI promotes tangible results such as the creation of an ethical production chain, guaranteed by WFTO (World Fair Trade Organization), capable of ensuring quality levels in line with the highest standards of the luxury industry and at the same time intends to stimulate luxury brands to make their production chains mature in the name of the principles of ethics and social inclusion through training and information courses that facilitate the inclusion in the workforce of brands and/or their production chains of resources from fragile categories.

Startups

Re4Circular

www.re4circular.com

Re4Circular is an innovative social startup, founded in 2020, with the mission of reducing the environmental and social impact of the fashion industry through the circular economy. They define themselves as "The first digital marketplace for the wholesale commerce of

dismissed clothing, powered by an AI tech for clothes classification and data transmission along the supply chain".

Re4Circular provides:

- Sorting services and a related marketplace
- Waste digitalization through data transmission, to boost transparency and circularity

PRIMAL Soles

<https://primalsoles.com>

PRIMAL Soles circular cork insoles are designed for maximum comfort without the environmental footprint. No harm is done by harvesting cork bark from the cork oak tree. By removing the bark every natural cycle (nine years), it increases CO2 absorption while aiding the regenerative capabilities of the tree. PRIMAL Soles products are certified and able to be fully recycled at their cork supply partners.

Artknit (<https://artknit-studios.com>)

Artknit Studios was founded in 2018 with a clear purpose: to inspire and educate its community towards conscious consumption. From day one, they support Italian boutique manufacturing workshop and collaborate with them to create high-quality products using only natural, biodegradable and regenerated fibers.

The Running Republic

<https://therunningrepublic.com>

The Running Republic was born to provide an option to all runners and athletes looking for an outstanding hyper-technical apparel and made with sustainable and ethical criteria. All the products are made with recycled materials from plastic bottles and garbage from the Ocean.

SEAY

<https://soseaty.com>

SEAY designs, produces and distributes clothing and sustainable beachwear adopting only certified fabrics, a Made in Italy supply chain, a compostable and organic packaging, a carbon neutral distribution and the Re3 Model: a patented circular system, engineered to take-back and track the used clothes of its customers.

CDC studio

www.cdc-studio.it

CDC Studio is the developer of a new patented technology which allows the regeneration of textile waste by creating a new material through recycled plastic. CDC studio transform inventories into resources, gives new life to unsold or defective fabrics and leathers, reuse plastic packaging destined for landfill and reduces CO₂ emissions and water usage through their technological solutions.

Reflaunt

www.reflaunt.com

Reflaunt offers a white-label, effortless resale experience for the brand's customers to send in their pre-loved items. They receive items from brands' customers and sell them on the Reflaunt's global network. They build a branded resale site, enrich the journey with the customer's order history (optional) and enable resale from the Digital ID scan experience (optional).

Gaia Segattini Knotwear

<https://gaiasegattiniknotwear.it>

Gaia Segattini Knotwear is an innovative business model that is responsible, circular and puts people at its heart. Since April 2022, they have become a Benefit Company. The corporate purpose is to generate a positive impact on the community, people and the environment. In April 2023, they were awarded the valuable "Business and Environment" prize, being selected amongst micro and small enterprises for the "Best management of sustainable development".

Zerow

<https://zerow.it>

Zerow is a digital platform to revalue surplus material in fashion industry. Zerow is a platform for exchanging materials, knowledge and skills to reuse and recapture the value of formerly disposed materials. The goal is to cre-

ate a broad and diverse community able to find better innovative solutions to recover waste and transform them into valuable, ecological and sellable products. These products will belong to the accessories, clothing, and furniture categories and they will be co-designed with artisans thus leveraging their competencies and experience and benefiting the local economy.

Dotzer0

www.dotzer0.com

Dotzer0 creates plastic-free, organic and water-free circular sneakers hand-made in Italy, in Florence. The brand collaborates with upcycling artisans who blend traditional craftsmanship with innovative technology, adding value to their unique creations.

Scaleups

Renewcell

www.renewcell.com

Renewcell is a scale-up specialized in the recycling of cellulose. The firm buys pre-sorted waste to make Circulose®, a pulp raw material that we sell to fiber producers. Circulose® is a 'dissolving pulp' made from 100% textile waste, like worn-out jeans and production scraps. It is used to make staple fiber or filament viscose, lyocell, modal, acetate or other types of manmade cellulosic fibres.

Resortecs

<https://resortecs.com>

Resortecs makes garment recycling possible on an industrial scale and at a higher quality. The company developed Smart Stitch™, heat-dissolvable threads melting at high temperatures (150-200°C) and making the seams disappear automatically, and Smart Disassembly™, a patented thermal systems to dismantle garments 5x faster.

Fairly Made

www.fairlymade.com

Fairly Made is a green tech start-up created in 2018 with a mission: to improve the impact of the textile industry. They aim to advance brands' purchasing practices from an environmental and social perspective through the analysis of their products, and supply chains via Fairly Made's tech platform. Fairly Made Impact enables brands to identify action levers in order to effectively initiate an eco-design approach and communicate transparently to consumers.

Results

The participants selected by the Monitor for Circular Fashion for the first edition of the C-Factor are Resortecs, Re4Circular and Belt Bag.

Must Had, an innovative refashioning platform partner of the Monitor for Circular Fashion, has furthermore selected Re4Circular and Renewcell as a partners for a refashioning collaboration.

Must Had

Must Had is a SaaS platform that enables T&C companies to manage their excess materials responsibly and in compliance with the new regulations. It simplifies the activation of circular solutions by leveraging an innovative network of recyclers, upcyclers and resellers, while measuring and tracking the environmental & social impacts generated.

Annex II

THE MONITOR FOR CIRCULAR FASHION PILOT PROJECTS 2022 AND 2023



Monitor for Circular Fashion

PILOT PROJECTS 2022 AND 2023

- **Think Leather**
- **Eco-designed jeans**
- **Trace me**
- **Repairing T-shirt**
- **Component shoe**
- **Anima**
- **M-Pocket**
- **Re-Gen H**
- **Ela Sweatshirt**
- **Traced Leather Varina ballet flat**

Think Leather

Leather accessories made from leftovers

B2B

Leather leftovers, which would have ended up in disposal, turn into upcycling small leather goods (pen case, PC enclosure, tablet/document case) made with few components (leather, zips, thread, snaps buttons).

These products have been manufactured by a social enterprise which fosters inclusive employment and creates empowerment possibilities for vulnerable people.

PARTNERS

The logo for MODA, featuring a stylized 'M' icon followed by the word 'MODA' in a bold, sans-serif font.The logo for Quid, featuring the word 'Quid' in a stylized, handwritten font above a simple line drawing of a sewing needle and thread.The logo for Temera, featuring the word 'Temera' in a bold, sans-serif font with a small yellow dot above the 'e'.The logo for GAB, featuring the word 'GAB' in a bold, serif font.

Discover more about this project at this [LINK](#)

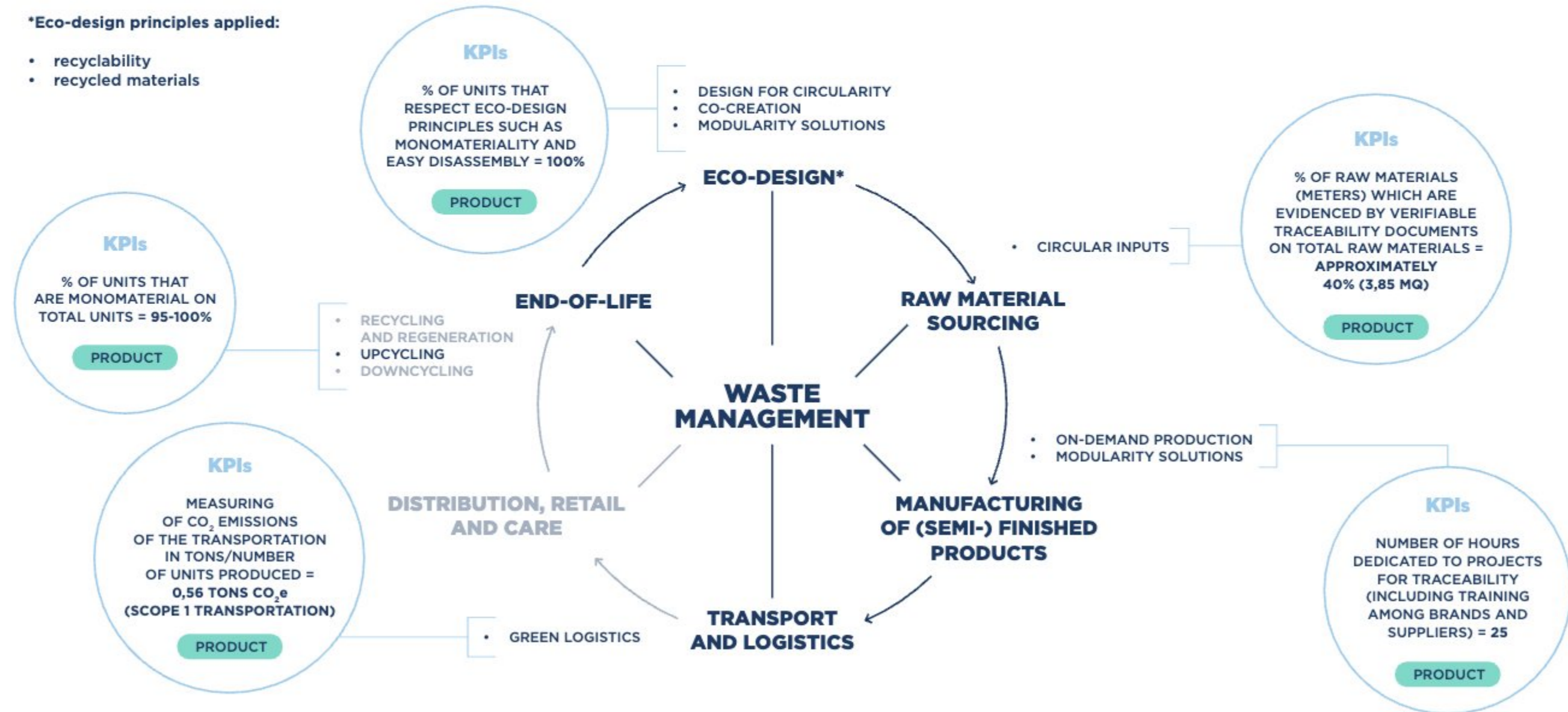


Think Leather

circular fashion activities and KPIs

*Eco-design principles applied:

- recyclability
- recycled materials



Eco-designed jeans

B2B

Integrated supply chain collaboration for light-washed denim jeans, made with 100% certified organic cotton, conceived using eco-design principles and tested for increased durability. Compared to conventionally designed jeans, this eco-designed pair utilizes -84% chemicals and -53% water while actively addressing hazards to worker health and safety.

PARTNERS



Candiani
DENIM

Temera

Discover more about
this project at this [LINK](#)



Eco-designed jeans

circular fashion activities and KPIs

***Eco-design principles applied:**

- durability
- safe chemical substances
- resources reduction

- DESIGN FOR CIRCULARITY
- CO-CREATION
- MODULARITY SOLUTIONS

KPIs

% OF FIBERS (KG) INCLUDING SUSTAINABLE CERTIFICATION ON TOTAL USED IN FABRIC COMPOSITION = 100%

PRODUCT

CHEMICAL MANAGEMENT

% OF THE PRODUCTS THAT SHALL BE IN COMPLIANCE WITH MRSL = 100%

PRODUCT

WERE HAZARDS TO WORKER HEALTH AND SAFETY ACTIVELY ADDRESSED? YES***

PROCESS

CHEMICAL PRODUCTS USED FOR ECO-DESIGNED JEANS WHICH ARE IN COMPLIANCE WITH THE ZDHC MRSL= 100%

PROCESS

% CHEMICALS CONSUMED USING ECO-DESIGN COMPARED TO CONVENTIONAL DESIGN (OF A SUSTAINABLE DENIM) FOR LIGHT WASH JEANS = 126,3 g VERSUS 792 g (A REDUCTION IN CHEMICAL USAGE OF -84%)

PRODUCT

- CIRCULAR INPUTS

- ON-DEMAND PRODUCTION
- MODULARITY SOLUTIONS

KPIs

% OF WATER CONSUMED USING ECO-DESIGN PRINCIPLES COMPARED A CONVENTIONALLY DESIGN (OF A SUSTAINABLE DENIM)

for light wash jeans:
28,2 L versus 59,6 L
(eco-design jeans versus conventional design:
-53% WATER USAGE)

PRODUCT

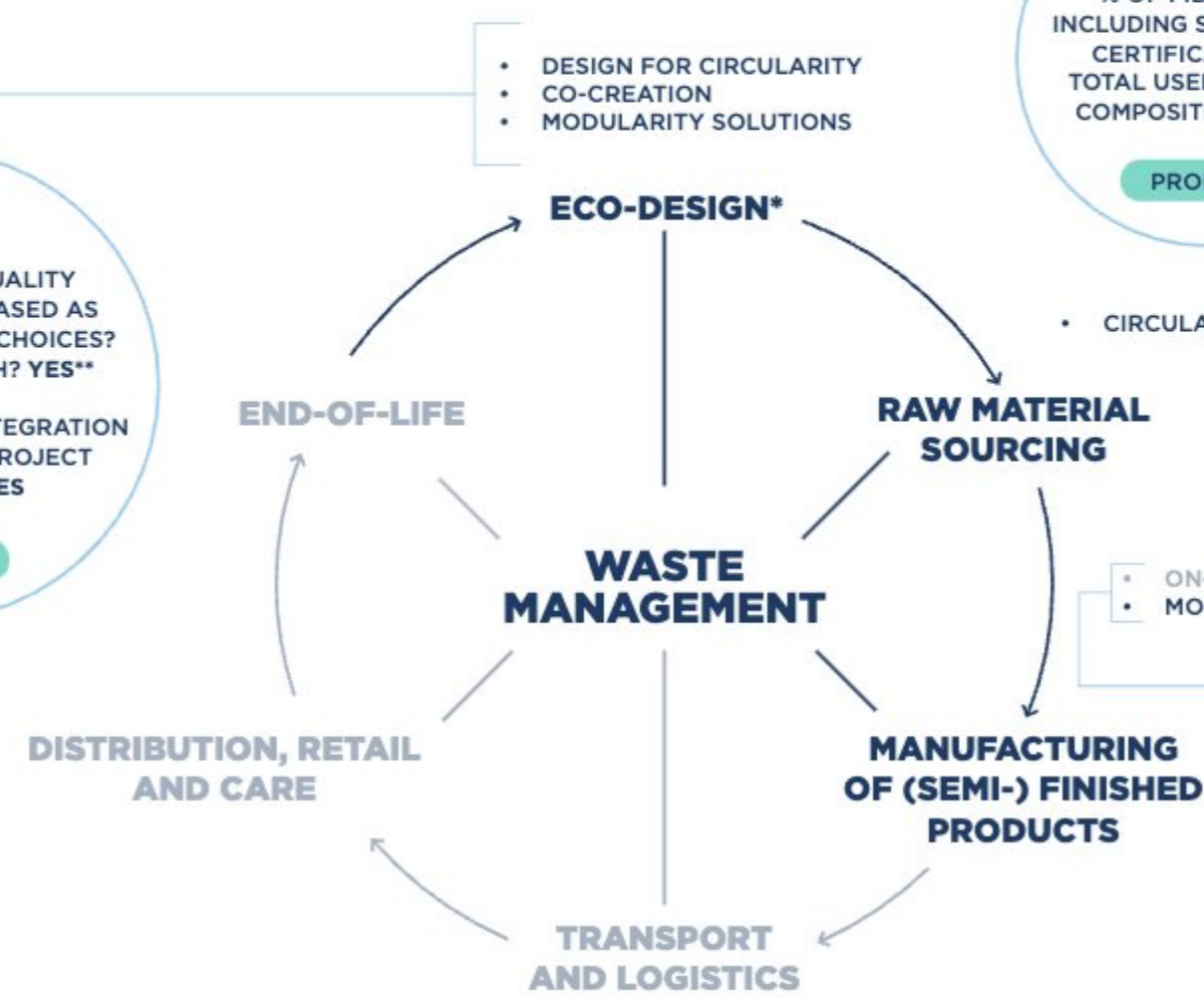
KPIs

WERE MINIMUM QUALITY THRESHOLDS INCREASED AS A RESULT OF DESIGN CHOICES? IF SO, BY HOW MUCH? YES**

WAS SUPPLY CHAIN INTEGRATION USED TO ACHIEVE PROJECT OUTCOMES? YES

PRODUCT

HAS TRACEABILITY BEEN IMPLEMENTED?
YES



** please refer to the online page for further details.

*** the following substances/practices have been avoided: sodium hypochlorite, potassiumpermanganate, sand blasting treatment (silica dust), hand-scraping, no manual physical labour-work.

Trace me

B2B

Shopper made with recovered fabric in traceable wool fibres, designed for recycling, manufactured in Italy through fully traceable production steps and assembled by an Italian social enterprise.

PARTNERS

VITALE 1663
BARBERIS
CANONICO



Temera

Discover more about
this project at this [LINK](#)

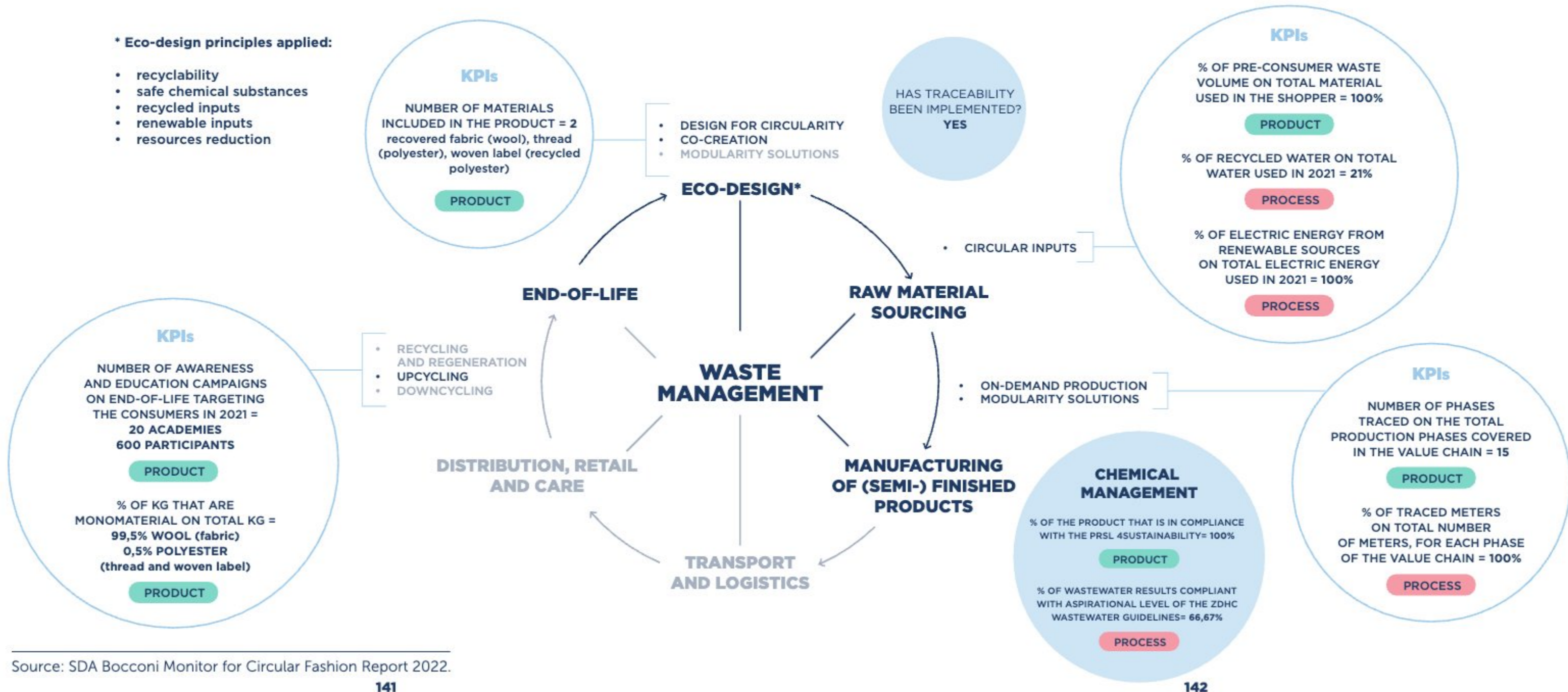


Trace me

circular fashion activities and KPIs

* Eco-design principles applied:

- recyclability
- safe chemical substances
- recycled inputs
- renewable inputs
- resources reduction



Repairing T-shirt

B2C

T-shirt made of certified 100% organic cotton yarn and upcycled woven patches from waste, fully traceable from farm to shop. Designed to minimize environmental and social impacts and to last for a long time. Repair your t-shirt with the spare patch or return it to the shop for repairing or creative mending services.

PARTNERS

Oscalito
1936

Albini
GROUP

C R U L E

Temera

Discover more about
this project at this [LINK](#)



Component shoe

B2C

This shoe, made using only five components, can be easily assembled at home. The upper is made of 100% upcycled cotton denim and cotton thread. The sole is made of natural FSC certified materials. The upper is secured to the sole by a lace made of a blend of cotton and TENCEL™. Fewer overall components enable easy disassembly, reparability, and recyclability at the end-of-life, helping to create a shoe designed with circularity principles.

PARTNERS

Candiani
DENIM



Temera

Discover more about
this project at this [LINK](#)

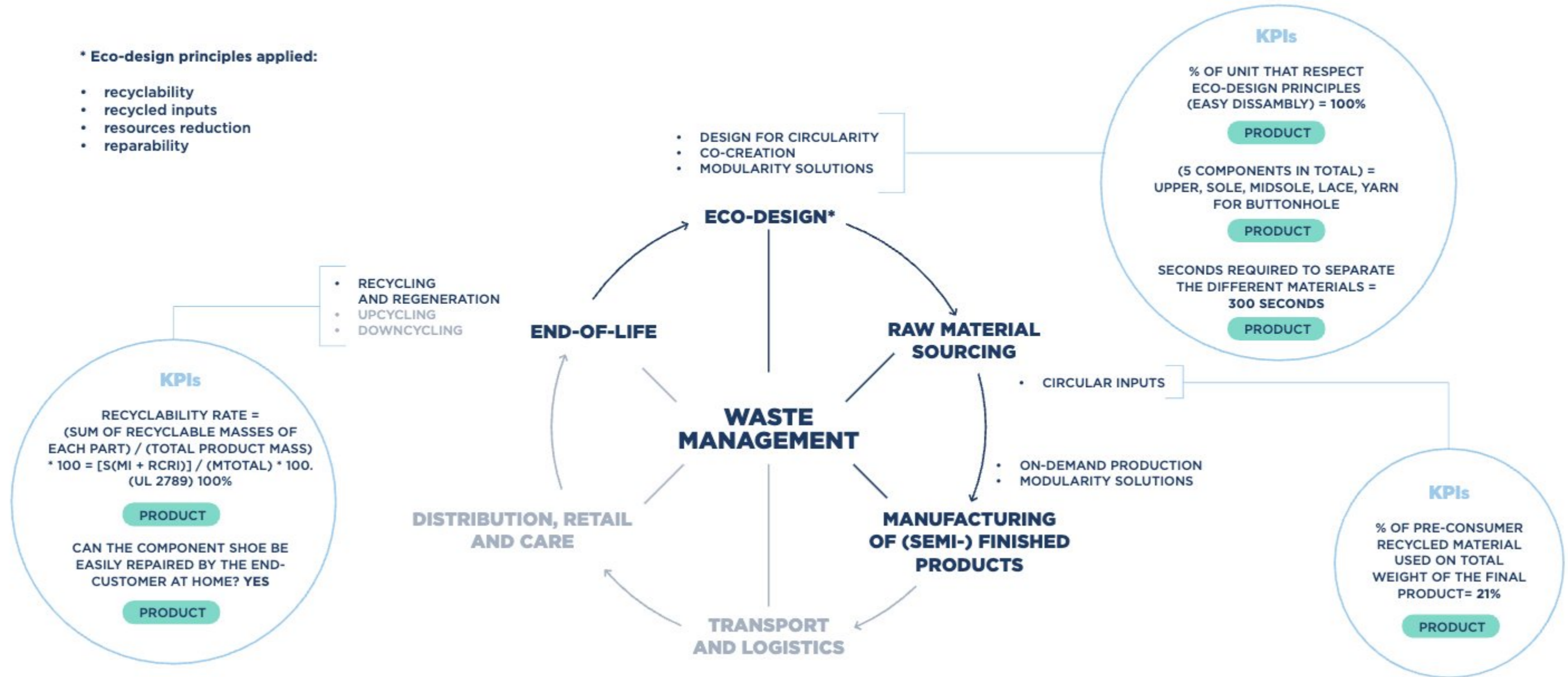


Component shoe

circular fashion activities and KPIs

* Eco-design principles applied:

- recyclability
- recycled inputs
- resources reduction
- reparability



Anima

double skin for waste saving

B2C

Anima is a bi-material backpack composed of 100% recycled polyamide fabric, made of 100% recycled polyamide yarn GRS certified and in compliance with Oeko-tex standard 100 for responsible manufacturing, and 100% recycled rubber coming from ISO-compliant standard plants.

PARTNERS



Discover more about this project at this [LINK](#)

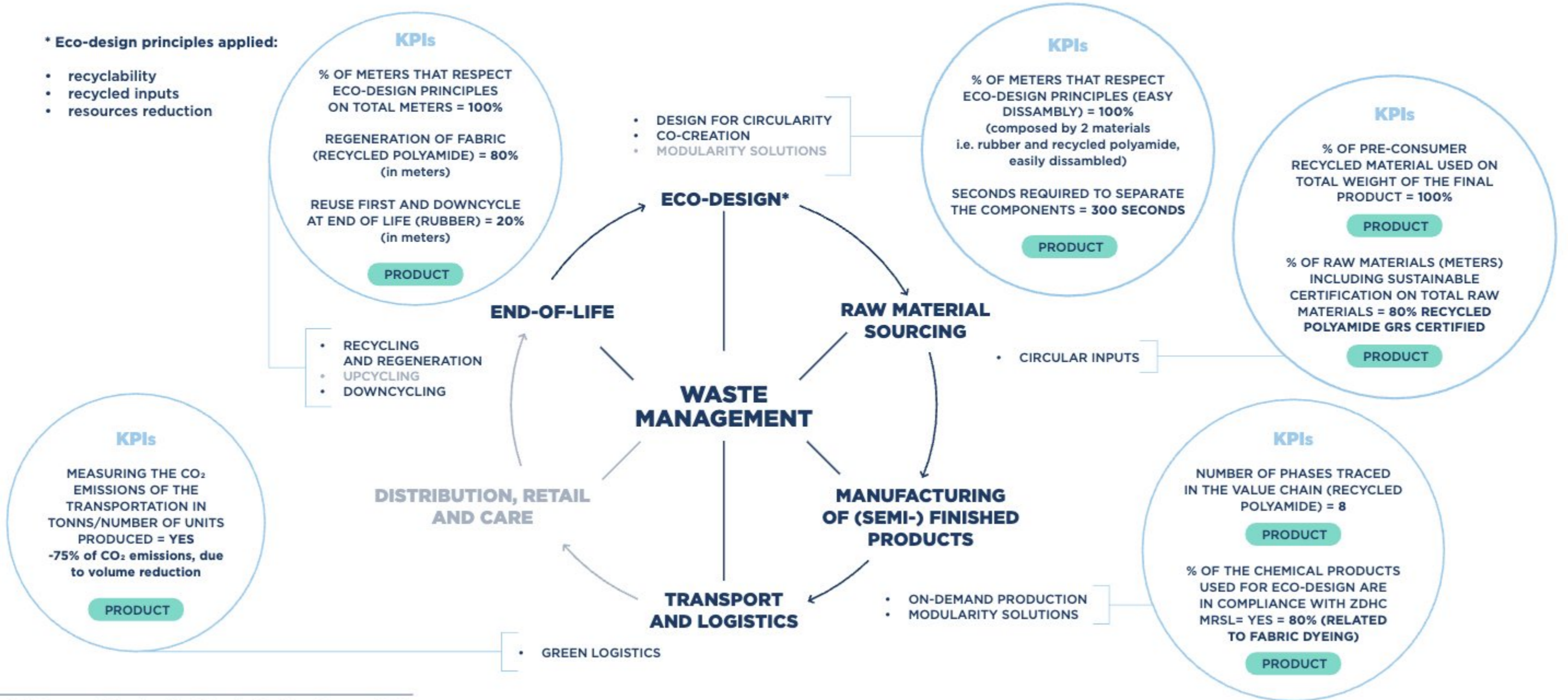


Anima

circular fashion activities and KPIs

* Eco-design principles applied:

- recyclability
- recycled inputs
- resources reduction



Source: SDA Bocconi Monitor for Circular Fashion Report 2022.

M-Pocket

B2B

Completely recyclable tablet pockets, produced with production waste from industrialized processes. The pocket is produced with M Wool® or ReviWool® by Manteco® and Radilon® or Renycle® by RadiciGroup®, depending on the ongoing production.

PARTNERS

MANTECO®



Temera

Discover more about
this project at this [LINK](#)



M-Pocket

circular fashion activities and KPIs

* Eco-design principles applied:

- recyclability
- recycled inputs
- resources reduction



Re-Gen H

B2C

The Re-Gen H project, lead by Hogan, focuses on the development of a shoe that uses, for the upper, Evolo leather from Sciarada tannery, which reuses production waste (9.13%, calculated on the mass of the finished product) otherwise destined to become industrial waste. The new process allows a reduction of 47.7% of CO₂eq and 68.47% of water compared to the production of the traditional "Softy" product. The sole, produced by Finproject, is made up of EVA (Ethylene Vinyl Acetate) resin obtained from bionaphtha from food biorefineries through the recovery of processing waste from vegetable oils, used cooking oils and other organic waste. Compared to the traditional bottom produced with non-bionaphtha EVA resin, it allows a reduction of 10.30% of CO₂eq kg and 18.90% of fossil resources use.

PARTNERS

HOGAN

SCIARADA

UNIC
ITALIAN TANNERIES

ICEC

Temera

Discover more about
this project at this [LINK](#)



Re-Gen H

circular fashion activities and KPIs

*** Eco-design principles applied:**

- safe chemical substances
- recycled inputs
- resources reduction

* The KPIs include industrial wastes, the packaging and the product as well.

KPIs

- 74% OF UNITS THAT ARE MONOMATERIAL ON TOTAL UNIT
- 17 MATERIALS (DIFFERENT COMPOSITION) INCLUDED IN THE PRODUCT

PRODUCT

- RECYCLING AND REGENERATION
- UPCYCLING
- DOWNCYCLING

HAS TRACEABILITY BEEN IMPLEMENTED?
YES

- DESIGN FOR CIRCULARITY
- CO-CREATION
- MODULARITY SOLUTIONS

KPIs

- 74% OF UNITS THAT ARE MONOMATERIAL ON TOTAL UNITS
- 17 MATERIALS (DIFFERENT COMPOSITION) INCLUDED IN THE PRODUCT

PRODUCT

- 100% OF KG THAT RESPECT ECO-DESIGN PRINCIPLE OF SAFE CHEMICAL SUBSTANCES ON TOTAL KG
- 34% OF KG THAT RESPECT ECO-DESIGN PRINCIPLE OF USE OF RECYCLED INPUTS ON TOTAL KG

PROCESS

KPIs

- 100% OF RAW MATERIALS (KG) WHICH ARE EVIDENCED BY VERIFIABLE TRACEABILITY DOCUMENTS ON TOTAL RAW MATERIALS
- 63% OF RAW MATERIALS (KG) INCLUDING SUSTAINABLE CERTIFICATION ON TOTAL RAW MATERIALS

PRODUCT

- 33% POST-CONSUMER WASTE (KG) ON TOTAL MATERIAL USED IN THE PRODUCT

PROCESS



- CIRCULAR INPUTS

- ON-DEMAND PRODUCTION
- MODULARITY SOLUTIONS

KPIs

- 100% OF TRACED UNITS ON TOTAL NUMBER UNITS, FOR EACH PHASE OF THE VALUE CHAIN
- 100% NUMBER OF PHASES TRACED ON THE TOTAL PRODUCTION PHASES COVERED IN THE VALUE CHAIN
- 100% OF ENERGY FROM RENEWABLE SOURCES USED ON TOTAL ENERGY

PRODUCT

PROCESS

CHEMICAL MANAGEMENT

- 100% OF THE CHEMICALS WITH HAZARD INFORMATION INPUT IN THE CHEMICAL INVENTORY
- 100% OF THE PRODUCTS THAT SHALL BE IN COMPLIANCE WITH PRSL OR SPECIFIC PARAMETERS

PROCESS

PRODUCT

Ela Sweatshirt

B2B

B2C

Sweatshirt composed by 50% organic cotton and 50% mulesing free extra fine merino wool. The product is fully traceable from farm to shop.

PARTNERS



Discover more about this project at this [LINK](#)



Ela Sweatshirt

circular fashion activities and KPIs

Eco-design principles applied:

- durability
- reparability
- safe chemical substances

HAS TRACEABILITY BEEN IMPLEMENTED?
YES

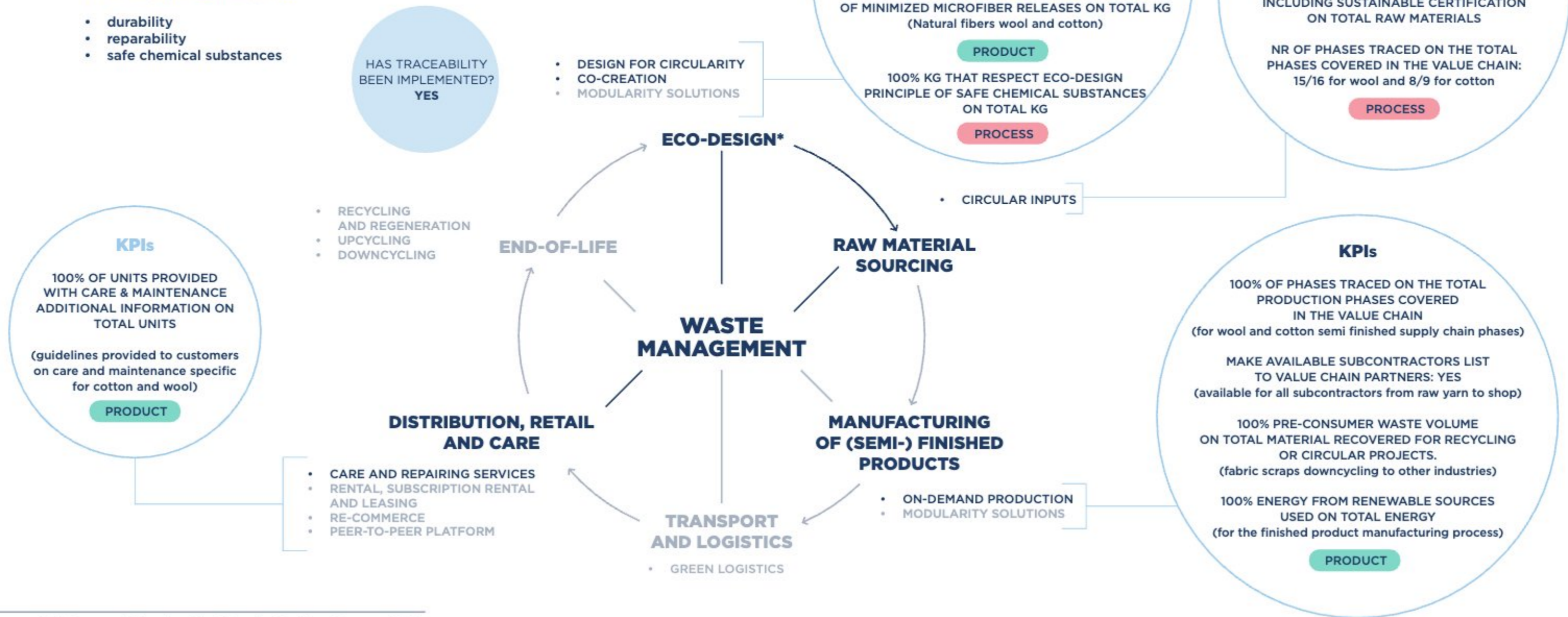
- DESIGN FOR CIRCULARITY
- CO-CREATION
- MODULARITY SOLUTIONS

- RECYCLING AND REGENERATION
- UPCYCLING
- DOWNCYCLING

- CIRCULAR INPUTS

- CARE AND REPAIRING SERVICES
- RENTAL, SUBSCRIPTION RENTAL AND LEASING
- RE-COMMERCE
- PEER-TO-PEER PLATFORM

- GREEN LOGISTICS



Traced leather Varina ballet flat

B2C

The leather sole of this ballerina is UNI 11427* certified and the viscose used for the Varina bow is FSC certified. 100% of the upper leather has been traced from farming to product assembly.

This last phase of the value chain occurred in Ferragamo's Florentine Headquarters, where 100% of energy used comes from renewable sources (solar, ocean and biomass energy), thanks to the purchase of certified energy through guarantees of origin.

*UNI 11427:2022 Cuoio - Criteri per la definizione delle caratteristiche di prestazione di cuoi a ridotto impatto ambientale.

PARTNERS

FERRAGAMO

UNIC
ITALIAN TANNERIES



Temera

Discover more about this project at this [LINK](#)

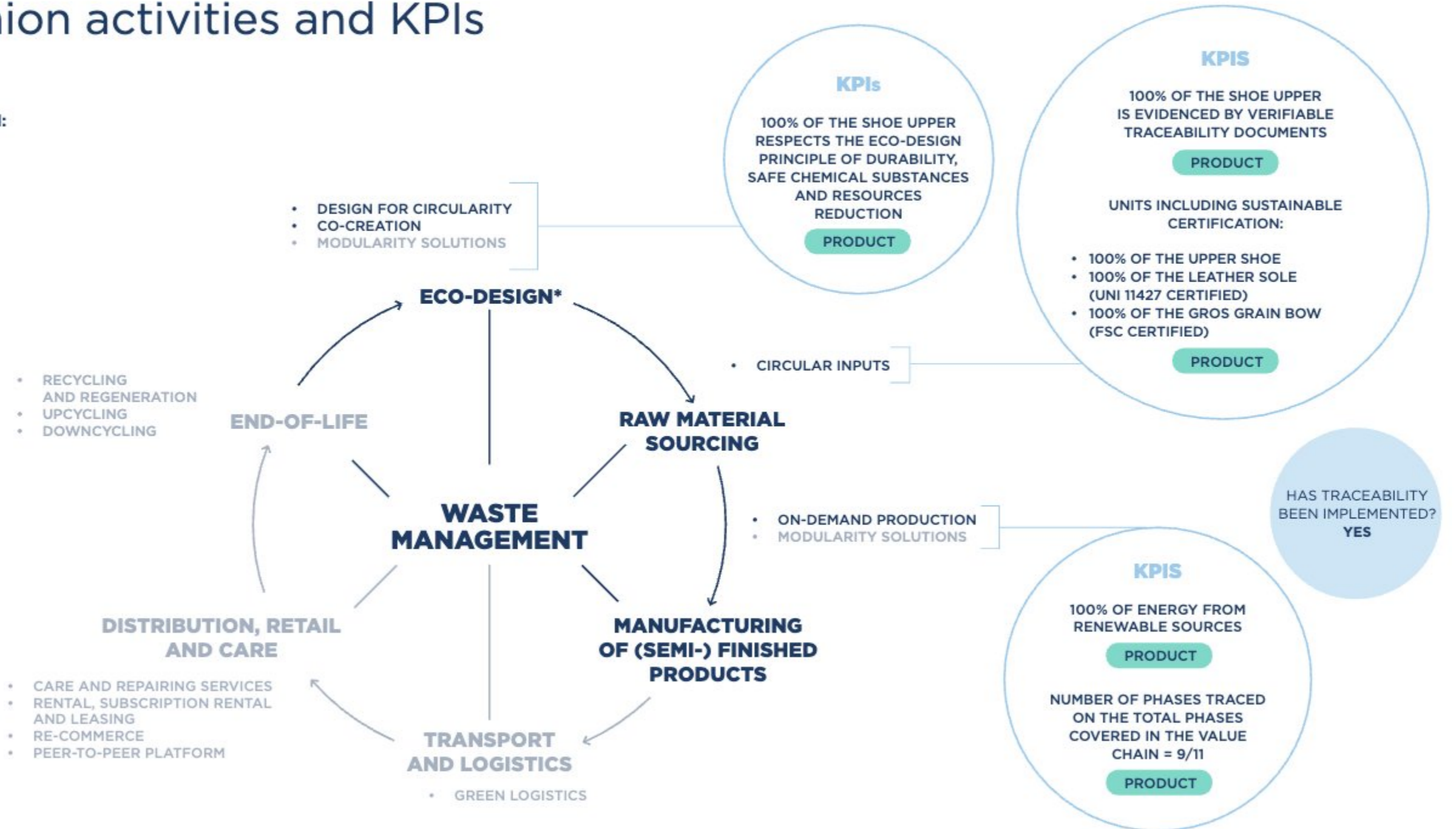


Traced leather Varina ballet flat

circular fashion activities and KPIs

*** Eco-design principles applied:**

- durability
- safe chemical substances
- resources reduction



Next steps

- 1.** Scaling-up the circular pilot projects
- 2.** Extending the test of KPIs to the companies products and processes
- 3.** Collaborating with new Partners with focus on additional product categories (i.e. eyewear & accessories) and processes (i.e. logistics, retail & etail)



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2. European Commission "Textiles Ecosystem Transition Pathway – Co-creation and co-implementation process" https://single-market-economy.ec.europa.eu/sectors/textiles-ecosystem/textiles-transition-pathway_en

PHOTO CREDITS

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Sustainable Development Goals considered
for this report and in the Monitor for Circular
Fashion activities:

