

Textiles Ecosystem Transition Pathway

Best practices report

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Executive Summary

This is the first Best Practices Report in the context of the Textiles Ecosystem Transition Pathway. It showcases ten innovative practices that are driving the ecosystem's transition towards sustainability, circularity, and social responsibility, and which have been published on the <u>EU Textiles Ecosystem Platform</u>.

The ten best practices demonstrate diverse approaches to industry transformation. Five are collective actions led by partnerships, networks, or umbrella organisations operating from local to global scales. These include the Prato textile recycling hub infrastructure, RREUSE's European network bridging social enterprises and institutions, collaborative research initiatives like the BALI Chair and Gender Data Gap Partnership, and the global Discover Natural Fibres Initiative.

Five are individual company innovations showcasing how businesses can embed sustainability into their operations. Recover™ and Ege Carpets developed recycled fibres from cotton and nylon, respectively. Veja implemented comprehensive social responsibility across its footwear supply chain. Rino Mastrotto created resource-saving technology that reduces water consumption in leather tanning. Nudie Jeans built a complete repair and reuse business model for denim.

The practices address multiple areas of the Transition Pathway, with primary focus on sustainable competitiveness, social dimension, research and innovation, and infrastructure development. Geographically, they span across Europe with two international initiatives, and represent various stakeholder types from companies to academic institutions and non-profit organisations.

Practices like these showcase that the textiles industry transition is already underway through innovative approaches across the value chain. Future reports of best practices will monitor developments in featured practices and identify new practices across the ecosystem segments and areas of the Textiles Ecosystem Transition Pathway.

Introduction

This is the first **Best Practices Report** in the context of the Textiles Ecosystem Transition Pathway. It provides an overview of ten illustrative best practices identified to support the ecosystem's transition towards sustainability and circularity and published on the EU Textiles Ecosystem Platform.

The objective of this report is to showcase innovative and impactful actions that are driving the ecosystem's shift to a more sustainable, circular, and resilient textiles ecosystem. By showcasing these practices, the report aims to serve as both a reference and an inspiration for stakeholders across the textiles value chain.

The report includes a presentation of the methodology used to identify, assess, draft, and validate the best practices, a high-level overview of the ten best practices as well as a detailed presentation of each best practice.

Methodology

Best practices published on the <u>platform</u> are developed through a structured six-step process, as depicted below.

Figure 1 - The process to develop best practices



Step 1. Identification

The consortium team identifies possible best practices from different sources:

- Pledges published on the platform: the team reviews the pledges published on the Platform and checks whether the stakeholders have reported any implementation progress and targets' achievements. A pledge can be considered as a best practice either if it is completed, i.e., the expected actions have been implemented and the results are in line with expectations, or if there is clear evidence of progress and there are some initial results.
- Desk research: the team conducts focused desk research on specific topics relevant to the Textiles Ecosystem Transition Pathway. The desk research covers industry publications, academic literature, and the sustainability reports of the key players of the textiles ecosystem segments. Research topics are chosen to cover various segments of the textiles ecosystem and different areas of the Transition Pathway.
- Suggestions from the consortium network: the consortium network provides valuable insights, suggesting ideas for possible best practices, and leveraging on its expertise, contacts and continuous exchanges with the stakeholders.
- Proposals from the textiles ecosystem stakeholders: actors involved can propose best practices through the <u>platform's dedicated page</u>, by contacting the consortium team via email or engaging with them in events and fairs.

The table below highlights the sources of the 10 best practices published on the platform as of 15 July 2025.

Table 1 - Sources of the best practices published as of 15 July 2025

Best practice title	Source
1. Circular innovation in the Prato Textile District	Pledges ¹
2. New circular business models as drivers of growth: the case of Recover™	Desk research ²
3. VEJA: Transforming the Social Dimension of Footwear Manufacturing	Desk research ³

¹ Pledge received by Confartigianato Imprese.

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² Recover sustainability report.

³ Veja project.

4. Connecting the dots: How RREUSE bridges social enterprises and institutions for circular success	Pledges ⁴
5. Resource-Saving Innovation in the Tanning Industry: The Example of Hearth Leather by Rino Mastrotto	Stakeholders' input ⁵
6. Breaking the silence: how data is transforming gender equality in textile factories	Desk research ⁶
7. The Discover Natural Fibres Initiative: a model for textile industry collaboration	Consortium network ⁷
8. BALI Chair: Cooperation to Advance Circular Fashion and Local Industrial Skills	Pledges ⁸
9. Closing the loop in the carpet industry: Ege Carpets initiatives	Desk research ⁹
10. Prolonging the lifespan of denim: repair and reuse services at Nudie Jeans	Desk research ¹⁰

Step 2. Assessment

To assess whether the identified initiatives qualify as best practices, the team applies a set of criteria. Each initiative needs to meet at least two of the following criteria:

- Replicability: The initiative can be replicated or adapted by other organisations within the textiles ecosystem.
- Sustainability: The initiative demonstrates lasting effects over time.
- Impact orientation: The initiative includes measurable targets or indicators that allow for the quantification of its contribution to the industry's green or digital transition, or towards enhanced resilience and/or competitiveness.

Initiatives meeting the above criteria are then subject to a qualitative review conducted by experts within the project consortium before being selected as best practices.

Step 3. Drafting

If the assessment is positive, the team conducts a thorough desk research to gather information about the action's implementation and its achievements. Official reports published by the involved stakeholders are a key source. The drafting process focuses on presenting information in a straightforward, accessible manner that would enable platform's users to understand what was implemented and how they might adapt similar approaches to their specific contexts. To enhance usability, the team includes direct links to sources, reports, and additional resources, allowing readers to access more detailed information and supporting materials when needed.

Step 4. Validation

⁴ Pledge received by RREUSE.

⁵ Suggested by <u>LaConceria</u>.

⁶ Partnership for Sustainable Textiles.

⁷ Suggested by ITA Academy.

⁸ Pledge received by Région Nouvelle-Aquitaine.

⁹ Ege Carpets sustainability report.

¹⁰ Nudie Jeans sustainability report.

Before publication, internal quality checks ensure that all best practices meet the established standards and are presented in a consistent way. When possible, subject matter experts review the technical accuracy of the information presented.

Step 5. Stakeholder notification

The consortium team informs the stakeholders involved in each initiative via email 5-7 business days prior to publication, providing advance notice of the content and publication date.

Step 6. Publication

Validated best practices are published on the designated platform section.

The methodology is designed to ensure quality and consistency throughout the process while maintaining transparency and stakeholder engagement. The approach also includes mechanisms for collecting feedback and improving based on lessons learned.

Between May 2025 and 15 July 2025, the team published 10 best practices on the Platform using the approach described above.

Best practices overview

A snapshot of the best practices published as of 15 July 2025

The table below provides an overview of the ten best practices identified and published on the Textiles Ecosystem Platform by the cut-off date of 15 July 2025. It includes links to the relevant entries on the platform, the publication date, the main segment of the ecosystem covered by the best practice, and the topic of the best practice.

Table 2 - Snapshot of the best practices published as of 15 July 2025

Best practice title	Textiles Ecosystem Platform Link	Main ecosystem segment	Topic	Date of publication
Circular innovation in the Prato Textile District	<u>Prato</u>	Waste management, reuse and repair	Recycling infrastructure	May 2025
2. New circular business models as drivers of growth: the case of Recover ™	Recover	Fibres, yarns and fabrics	Recycled fibre	May 2025
3. VEJA: Transforming the Social Dimension of Footwear Manufacturing	<u>Veja</u>	Footwear	Social responsibility	June 2025
4. Connecting the dots: How RREUSE bridges social enterprises and institutions for circular success	RREUSE	Waste management, reuse and repair	Knowledge exchange	June 2025
5. Resource-Saving Innovation in the Tanning Industry: The Example of Hearth Leather by Rino Mastrotto	<u>Mastrotto</u>	Leather and fur	Resource-saving technology	June 2025
6. Breaking the silence: how data is transforming gender equality in textile factories	GenderGap	Apparel and clothing accessories	Knowledge exchange	June 2025

7. The Discover Natural Fibres Initiative : a model for textile industry collaboration	DNFI	Fibres, yarns and fabrics	Knowledge exchange	July 2025
8. BALI Chair : Cooperation to Advance Circular Fashion and Local Industrial Skills	BALIChair	Apparel and clothing accessories	Knowledge exchange	July 2025
9. Closing the loop in the carpet industry: Ege Carpets initiatives	Ege Carpets	Household/interior textiles	Recycled fibre	July 2025
10. Prolonging the lifespan of denim: repair and reuse services at Nudie Jeans	<u>NudieJeans</u>	Apparel and clothing accessories	Repair business model	July 2025

Transition Pathway's building blocks addressed

The published best practices cover several areas of the Transition Pathway. Each best practice was assigned to a 'primary' building block, where it has the most impact, and one or more 'secondary' building blocks, as shown in the chart below. The published best practices relate primarily to sustainable competitiveness (building block 1), social dimension (building block 3), R&I, techniques and technological solutions (building block 4), and infrastructure (building block 5). Only one best practice focused on skills (building block 6), but skills development is a cross-cutting aspect addressed in four other best practices.

5 2 2 3 7. Investments 8. Ecosystem's 2. Regulation 5. Infrastructure 6. Skills 1. Sustainable 3. Social 4. R&I, and public dimension techniques and and funding competitiveness readiness to governance technological support EU solutions strategic autonomy and defence efforts ■ Primary ■ Secondary

Figure 2 - Coverage of the Transition Pathway's building blocks by the best practices published as of 15 July 2025

Geographic coverage

Among the published best practices, two are international as they are led by international networks (RREUSE and the Discover Natural Fibres Initiative). The others can be linked to one country, where the main organisation leading the initiative is based. These initiatives, however, often affect stakeholders also in other countries, as they impact globalised value chains (e.g., Veja is based in France, but they source raw materials from South America and their production is mostly there).

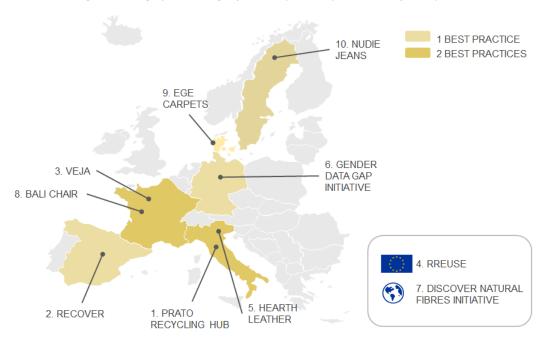


Figure 3 - Geographic coverage of the best practices published as of 15 July 2025

Types of stakeholders

The published best practices are often the result of initiatives involving multiple stakeholders. In some cases, they are shared initiatives implemented by umbrella organisations (e.g., cluster organisations) or by partnerships. In other cases, while one organisation initiates the action, it involves other stakeholders for support (such as performing research or testing solutions). The chart below shows the types of organisations leading the best practices.

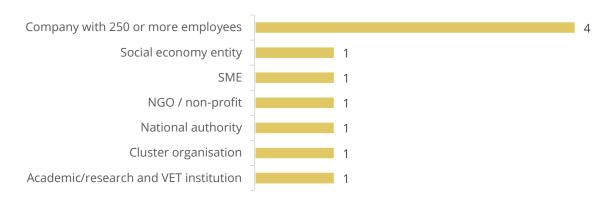


Figure 4 - Types of stakeholders leading the best practices published as of 15 July 2025

Some insights from the best practices published as of 15 July 2025

The ten best practices demonstrate diverse approaches to industry transformation. Five are collective actions led by partnerships, networks, or umbrella organisations, and five are initiatives of individual companies.

The **collective actions** concern the Prato textile recycling hub, RREUSE, the Gender Data Gap Partnership initiative, the BALI Chair initiative and the Discover Natural Fibres Initiative. These best practices are initiated by a partnership of multiple stakeholders or by an umbrella organisation representing multiple actors (e.g., cluster organisation, confederation, network). Collective actions usually have a **broad scope**, which can span from the local level (e.g., Prato textile recycling hub) to the country level (e.g., BALI Chair and Gender Data Gap Partnership Initiative), EU level (e.g., RREUSE) or global level (e.g., Discover Natural Fibres Initiative).

Except for the case of the construction of the Prato recycling hub, all the other collective actions involve **knowledge exchange** activities. These initiatives bring together different stakeholders to better understand problems affecting the textiles ecosystem, identify possible solutions, and put them into practice. They cover issues such as circularity (e.g., RREUSE, BALI Chair), the use of sustainable materials (e.g., Discover Natural Fibres Initiative), and gender discrimination in factories (e.g., Gender Data Gap Partnership Initiative).

In research-oriented initiatives (e.g., BALI Chair and Gender Data Gap Partnership Initiative), academic institutions and industrial partners collaborate to develop methodologies and innovative solutions and test them in real environments.

When the focus is on knowledge and experience exchange, the RREUSE and the Discover Natural Fibres Initiatives are exemplary because they managed to **create communities** that overcome national borders, hence enhancing their impact.

In the case of the Prato Textile Recycling Hub, the project has benefited from the existence of a comprehensive ecosystem for material transformation. The district brings together thousands of companies covering the entire textile value chain, from spinning and weaving to finishing and garment production. This has allowed to **pull resources**, leverage on the companies' specialisations and design a technologically advanced infrastructure, which will centralise and enhance key recycling functions across the district.

Five best practices are **single actions**: they are initiatives of companies that have implemented **innovations** in their business models to contribute to a more sustainable and socially responsible textiles industry. The companies implementing these best practices are Recover, Veja, Rino Mastrotto, Ege Carpets, and Nudie Jeans.

Recover and Ege Carpets have developed **recycled fibres** (the first of cotton, the second of nylon) that have improved the sustainability of their businesses. Veja has applied **socially responsible practices** throughout their processes, from raw material sourcing to manufacturing and distribution. Rino Mastrotto has patented a **resource-saving technology** that drastically reduces water consumption and chemical usage during the retanning, dyeing, and fat-liquoring stages of leather manufacturing. Nudie Jeans has developed a business model that fully integrates **repair and reuse services**.

These best practices showcase **examples that can be replicated** by other industry stakeholders and cover multiple steps of the business cycle, from raw materials' sourcing to fibre preparation to finishing, distribution, use, and collection for reuse.

Best practices in detail

1. Circular Innovation in the Prato Textile District



Prato textile district in Tuscany, Italy, has established itself as a European leader in textile recycling innovation. Operating through an interconnected network of specialised companies, the district processes both pre-consumer and post-consumer textile waste. The district is now investing in a new technologically advanced recycling hub, which will process 34,000 tonnes of material yearly using AI and infrared technology for automated sorting. Set to begin operations by mid-2026, this facility will enhance the district's circular economy capabilities by enabling more efficient processing of previously challenging materials.

The Prato textile district

Located in Tuscany, Italy, the Prato textile district stands as one of Europe's most important textile manufacturing centres. The district is home to thousands of companies, covering the entire textile value chain — from spinning and weaving to finishing and garment production. Today, Prato is internationally recognised as a model of innovation in textile recycling, particularly in the reuse of textile processing waste and second-hand clothes, with a special emphasis on wool materials.

Recycling activities: a district-wide commitment

The Prato district is globally acknowledged as a pioneer in textile recycling. Leveraging centuries-old techniques combined with modern innovation, companies across Prato have developed advanced methods to recover fibres. The district functions through an interconnected network of businesses that collectively participate in the production and distribution of recycled fabrics. Each enterprise specialises in one segment of the manufacturing process – whether spinning, warping, weaving, dyeing, finishing, printing, or designing – creating a comprehensive ecosystem for material transformation.

What distinguishes Prato's approach is its management of both pre-consumer waste (manufacturing scraps) and post-consumer waste (used garments). Approximately 100 companies within the district specialise in recovering over 100 000 tonnes of material annually from these streams, with wool recycling at the heart of these efforts.

When used clothing arrives at one of the district's 50 specialised first plants, it undergoes careful sorting and processing. About 65% of incoming materials are directed to reuse, 33% to recycling, with only 3-4% ultimately sent for disposal. The economic impact of these recycling activities is substantial, generating approximately 20% of the district's total turnover.

The New Textile Recycling Hub: a strategic infrastructure for the district

Recognising the need to further strengthen its leadership in sustainable textile manufacturing, Prato is investing EUR 29.5 million in a new textile recycling hub. This strategic infrastructure project, co-funded by the Italian Recovery and Resilience Fund, represents a collective commitment to advancing the district's circular economy capabilities.

The hub, scheduled to begin operations by mid-2026, will centralise and enhance key recycling functions across the district. With the capacity to process 34 000 tonnes of material annually – 20 000 tonnes from post-consumer sources and 14 000 tonnes from pre-consumer waste - it will significantly expand the district's recycling capacity.

What makes this facility particularly innovative is its technological sophistication. Automatic sorting systems combining artificial intelligence and sophisticated infrared technology will separate materials by fibre type and colour. This will dramatically improve efficiency and enable the recovery of materials that were previously difficult to process manually. The hub will also include pre-tearing lines to prepare materials for mechanical recycling, ensuring that even challenging textile waste can be transformed into valuable new resources.

For post-consumer materials, the facility will enable about 60% (12 000 tonnes) of incoming garments to be sanitised and directed to specialised companies for reuse. The remaining 40%, consisting of non-reusable garments, will have components like zippers and buttons removed before undergoing sorting and processing. Similarly, pre-consumer waste that currently often ends up in landfills or incinerators will be systematically processed to recover usable fibres.

The project also includes the construction of a recovery plant for non-hazardous special waste from textile waste and used clothing. This waste will be treated in a first warehouse. This will house the storage areas for incoming and intermediate waste, the automatic and semi-automatic sorting lines for textile waste, as well as the presses for reducing the volume of the products. A second warehouse will house a shredding line and part of the intermediate waste storage facilities. The waste produced during processing will be stored in a shed next to this building.

A model for industrial sustainability

As the global textile industry faces increasing pressure to address its environmental footprint, Prato stands as proof that government support for infrastructure development, combined with business-led operations, creates a powerful engine for sustainable industrial transformation.

Through its collective recycling initiatives and continued investment in advanced infrastructure, Prato is not only preserving its rich textile heritage but also creating a blueprint for how traditional manufacturing sectors can thrive in a resource-constrained future. As the new recycling hub becomes operational and technologies continue to advance, Prato's model will likely become even more influential in shaping sustainable manufacturing practices worldwide.

2. New Circular Business Models as Drivers of Growth: The Case of Recover™



Recover™, originally part of traditional textile manufacturer Ferre Yarns, has transformed into one of Europe's largest cotton recyclers for textile-to-textile applications by embracing circular business principles. The company has continued to innovate through strategic partnerships, including a 2023 collaboration with Rieter and Polopique to produce fine ring and compact yarns with higher percentages of recycled content. By early 2024, Recover™ had achieved a global mechanical recycling capacity of 65 000 MT annually, employed 350 workers worldwide, and served 322 customers including major brands. Environmental impact assessments show significant sustainability benefits on reduction of water consumption CO2 emissions and energy use. It demonstrates how a legacy business successfully pivoted to make sustainability a commercial growth driver.

The company

Recover[™] is today among the largest European cotton recyclers for textile-to-textile applications. Recover[™] fibres are used on a broad array of applications, most notably apparel, accessories and home textiles. The Recover[™] process enables the industry to divert industrial textile waste and end-of-use garments from landfills and incineration by creating recycled cotton fibres that can replace the need for virgin cotton.

A long history rooted in the traditional textile sector

Recover™ story starts with Ferre Yarns, a traditional textile manufacturer with a long history in Spain, founded in 1914 and producing cotton yarns for generations. The second generation of the Ferre family first began recycling textile waste into cotton yarns in 1947.

Like many companies in the sector, the company faced the challenge of adapting to increasing environmental pressures and shifting market demands. Rather than remaining anchored to its historical model, it transformed its operations by adopting a circular business model focused on textile-to-textile recycling. This strategic move allowed the company to align its activities with sustainability goals while opening new avenues for growth. In 2006, it introduced the 'Recover' brand for their recycled products and by 2020 Recover™ was established as an independent entity, focusing on mechanical recycling of post-industrial and post-consumer textile waste into high-quality fibres while Ferre Yarns continued specialising in yarn spinning. The process includes cutting the material into smaller pieces, treating it only with a preparatory anti-static spray and finally processing them inside the Recover™ recycling machine.

Innovation as a response to the challenges of the transition

The company's extensive experience in yarn manufacturing provided crucial insights into both the technical requirements and innovation challenges of introducing recycled materials. This enabled them to develop advanced technologies for sorting, processing, and regenerating discarded fabrics. In 2023 Recover™ announced a new partnership and groundbreaking project with Rieter and Polopique. The project was created in response to a major challenge facing the textile industry: producing fine ring and compact yarns with a higher proportion of mechanically recycled fibres. By combining Recover's mastery of advanced recycling technology, Rieter's expertise in textile machinery, and Polopiqué's proficiency in textile manufacturing, the project created a high-quality sustainable solution that is both combed and ring spun.

The company has maturated long-term experience in collaborating with brands, suppliers, processors, and retailers. This ensured its recycled fibres met industry quality requirements and quality optimisation, while enabling large-scale commercial adoption and driving the scaling of circular fashion.

Some results

At the beginning of 2024 the company's total shredding capacity for mechanically recycling accounted for 65 000 MT / year globally and it employs 350 workers worldwide. The company counts 322 customers globally, including major brands and suppliers.

As for the impact on the environment, it was calculated that each kilogram of Recover™ RBlue fibre delivers substantial sustainability advantages over conventional alternatives: reducing water consumption (more than 1 000 litres saved), decreasing carbon emissions (6.38 kg CO2 equivalent saved), and reducing energy consumption (35.57 kWh saved).

Recover™ demonstrates how a legacy business can turn sustainability into a growth driver by adopting a circular model that is both commercially viable and environmentally effective.

3. VEJA: Transforming the Social Dimension of Footwear Manufacturing



VEJA revolutionises footwear manufacturing through comprehensive social responsibility across its entire value chain. The French sneaker brand sources organic cotton and rubber directly from Brazilian and Peruvian communities, offering market-decorrelated prices and pre-financing up to 50% of harvests. Manufacturing adheres to enhanced labour standards with annual social audits. VEJA employs vulnerable populations in logistics operations, helping socially excluded individuals secure employment. This integrated approach demonstrates that ethical practices and commercial success can coexist, establishing VEJA as a blueprint for industry transformation

Founded in 2005, VEJA has challenged traditional footwear production models by embedding social and environmental values at the heart of its operations. What sets VEJA apart is its long-term commitment to reshaping not only what shoes are made of, but how and by whom they are made.

The French sneaker brand has reimagined what it means to operate responsibly in the footwear sector, creating a comprehensive model that prioritises social equity from raw material sourcing to final delivery.

Redefining Supply Chain Ethics Through Direct Partnerships

VEJA's attention for the social dimension starts at the very foundation of its supply chain. VEJA has built direct relationships with producer communities across Brazil and Peru.

The company sources organic cotton directly from farmer associations in Brazil's Northeast region and wild rubber from Amazonian communities. Rather than subjecting these producers to volatile market prices, VEJA establishes yearly contracts at the beginning of each production cycle, guaranteeing purchase commitments that allow small-scale farmers to plan sustainably. By setting mutually agreed prices in advance, VEJA creates predictable income streams and ensures that producer families can maintain decent living standards. The company pre-finances up to 50% of each harvest, providing crucial capital that enables producers to invest in their operations.

In 2019, VEJA's rubber has obtained the "Fair for Life" certification, a standard that guarantees long-term direct trade relationships, fair prices, good working conditions, and the prohibition of forced labour.

Manufacturing with Dignity and Transparency

VEJA's commitment to social responsibility continues through its manufacturing processes. The company produces its sneakers in Brazilian factories and workshops that adhere to International Labour Organization standards. it requires that workers enjoy fair wages, reasonable hours, union representation, and benefits like paid vacation. Annual social audits ensure ongoing compliance with these standards, with results made publicly available in a demonstration of transparency. When areas for improvement are identified, VEJA works collaboratively with manufacturing partners to implement corrective action plans. Since 2023, VEJA has expanded production to Portugal, extending its ethical manufacturing model to European operations.

Logistics and Social Integration

Since 2004, the company has deliberately chosen to entrust its warehousing and distribution to vulnerable populations, including disabled individuals and those facing social exclusion. In France, VEJA partners with

Atelier Sans Frontières, a non-profit organisation focused on reintegrating socially excluded individuals into the workforce.

More recently, VEJA has expanded this model through its partnership with Log'ins (Logistics & Insertion), an organisation specialising in employing individuals with disabilities while supporting their social integration. Since 2020, this initiative has helped more than 380 people secure employment and stable situations after working in VEJA's logistics operations.

Setting New Standards for Corporate Responsibility

VEJA offers detailed information on its supply chains, materials, prices, and audits. This openness enables consumers, investors, and industry peers to evaluate the company's claims and holds VEJA ac countable to its stated values. VEJA sets an example of radical transparency for companies seeking to align their operations with evolving social expectations.

A Blueprint for Industry Transformation

VEJA's comprehensive approach to social responsibility across its entire value chain offers a compelling blueprint for transformation within the footwear and broader fashion industries. VEJA's model suggests that integrating social responsibility into core business operations can create competitive advantages through enhanced brand loyalty, supply chain resilience, and access to conscious consumers.

4. Connecting the dots: How RREUSE bridges social enterprises and institutions for circular success



RREUSE is a European network uniting social enterprises in the field of reuse and recycling, especially textiles. Actively engaged in EU policy development, RREUSE provides expert guidance on new regulatory frameworks, including the revised Waste Framework Directive and EPR schemes. Its newly published guidelines offer practical advice for textile stakeholders on adapting to the upcoming requirements.

About RREUSE

RREUSE is a network of social enterprises active in reuse, repair, and recycling across Europe. With 34 members, over half engaged in textile waste management, RREUSE members collectively handle 337 000 tonnes of textiles annually, with 47 000 tonnes being reused locally.

Recently appointed to the European Commission's expert group on waste, RREUSE actively shapes EU policies through collaboration with policymakers and stakeholders. The organisation serves as a bridge between social enterprises and EU institutions, facilitating cross-border networking and knowledge exchange on best practices and policy developments through member sessions and tailored communication channels.

A Guidance to Navigate the Revised Waste Framework Directive

In May 2025, RREUSE published a practical guidance document on the revised EU Waste Framework Directive, focusing on new EPR obligations for textiles. The resource is intended to help RREUSE members understand and adapt to the forthcoming regulatory changes that will affect how textile waste is managed across the European Union.

Structured in an FAQ format, the document covers key aspects such as implementation timelines, EPR requirements and obligations for textile producers, the role of various stakeholders including social economy entities, fee structures including eco-modulation based on sustainability criteria, separate collection systems, sorting requirements, regulations for textile shipments, reporting obligations, and transparency requirements. The document also mentions the planned revision of the directive by the end of 2029, which will evaluate the effectiveness of these schemes and potentially introduce new targets and financial contribution requirements.

RREUSE's Projects: Building Circular Solutions Across Sectors

Through its active involvement in a diverse portfolio of initiatives, RREUSE drives forward a social and circular economy on multiple fronts. EU funded projects like <u>CISUTAC</u>, <u>BuySocCirc</u>, and <u>LOWaste</u> focus on developing and scaling circular business models in textiles, reuse partnerships, and second-life product markets. Digital innovation is at the core of <u>DigiSocCirc</u> project, helping social enterprises harness technology to enhance their impact and resilience. Policy and systemic change are tackled through <u>WISESHIFT</u> and <u>Public Procurement for Climate and Social Benefits</u>, which promote inclusive socioeconomic transitions and sustainable public purchasing. Meanwhile, sector-specific knowledge building is

central to projects like <u>Furniture and Mattresses Circularity</u> and <u>QualiProSecondHand</u>, which explore new strategies, training needs, and quality standards to professionalise and expand the reuse sector.

5. Resource-Saving Innovation in the Tanning Industry: The Example of Hearth Leather by Rino Mastrotto



Traditional tanning processes can be highly waterintensive. This substantial water usage, coupled with the potential for water pollution from chemicals used in leather processing, has become a significant environmental concern. Lower-impact solutions to reduce water and chemical usage are being introduced to the market.

As most tanning processes take place in aqueous baths, water remains a crucial resource for tanneries. The European leather industry has made progress in reducing both the volume of water used in processing and the pollutant load of the resulting wastewater (see European and leather industry - Social and Environmental Report 2020), but it continues to seek new, commercially viable processes and technologies to further reduce its environmental impacts.

<u>Hearth Leather</u>, developed by Rino Mastrotto, represents a promising example of this resource-saving innovation approach. The Rino Mastrotto Group, founded in the 1950s in Arzignano, Italy (in the Veneto region — one of the world's key tanning districts), is a major company specialising in leather processing for the fashion (footwear, leather goods, apparel), automotive, furniture, and interior design sectors.

Following four years of research, the patented production process now achieves a **91% reduction in water consumption** and a **23% reduction in chemical usage** during the re-tanning, dyeing, and fatliquoring stages, compared to conventional methods — all while retaining the aesthetic and performance characteristics of traditional leather. These calculations are based on a comparative cradle-to-gate Life Cycle Assessment (LCA), conducted in accordance with ISO 14040 and 14044 standards, on 1 m² of finished cowhide. The assessment compares the conventional production process with one in which the Hearth innovation was applied to the re-tanning, dyeing, and fatliquoring phases. The aim is to extend this process to the tanning phase in the future.

According to Matteo Mastrotto in a recent interview, one key success factor was the collaboration between the inventor (Renato Bertoli, professor and CEO of the company RenBerTech), the machinery supplier, and the tannery. This example demonstrates how environmental progress can go hand-in-hand with product quality, innovation, industrial excellence, and cooperation across the ecosystem. By significantly reducing water and chemical usage, this innovation addresses two of the most pressing environmental issues associated with leather tanning.

6. Breaking the silence: how data is transforming gender equality in textile factories



An innovative partnership is closing the gender data gap in textile manufacturing through innovative assessment tools and collaborative action. This initiative demonstrates how companies can measure and tackle discrimination against women workers to create safer and more equal workplaces.

A collaborative solution

In 2023, the Partnership for Sustainable Textiles launched the "Gender Data Gap Partnership Initiative". The project is being implemented as part of the Partnership for Sustainable Textiles and is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and brings together German textile brand (Hess Natur-Textilien and Gerry Weber International), non-profit organisations (Hessnatur Foundation and FEMNET, Global Standard gGmbH) and development agency (GIZ). The partnership developed a practical assessment tool that can be scaled across countries and stakeholders to measure, manage, and improve gender equality in textile manufacturing.

Testing the approach in Tunisia

The initiative piloted its methodology in the two Tunisian production facilities (Denim Manufacture and Manufacturing International Company) using a comprehensive two-level assessment system:

- Level 1 collects basic workforce data and information about existing policies on gender-based violence, harassment, and non-discrimination.
- Level 2 involves detailed individual and group interviews with diverse workers, covering health and safety, recruitment, training, leadership opportunities, wages, social dialogue, and violence prevention.

The assessment requires specially trained female auditors who are external, neutral, and culturally competent, without language barriers. This approach ensures workers can speak openly about their experiences in a safe environment.

Breakthrough results

The assessment focuses on three critical areas:

- Occupational safety of pregnant women
- Promotion opportunities for women
- Psychological and physical violence in the workplace.

Based on these findings, the Partnership developed targeted measures to promote gender equality and sensitisation training to raise awareness of gender-specific challenges. Importantly, a capacity building guide and employee questionnaire are created to ensure workers have input in determining the most suitable measures for their specific workplace.

A scalable and transferable solution

The project has produced an <u>Assessment and Action Guide</u> that companies can use to create lasting positive improvements and enhance working conditions for women. The guide includes questionnaires, evaluation methods, and action planning tools, along with a recommended training program covering gender data gaps,

women's rights, labour law, and non-violent communication. Business cases demonstrate clear business benefits of addressing gender equality:

- Companies with high gender diversity are 25% more likely to be profitable (McKinsey, 2020)
- Diverse teams increase creativity by 59.1% and improve problem-solving (ILO, 2020)
- Inclusive working environments increase employee commitment and reduce turnover (Maurer & Qureshi, 2019).

The Gender Data Gap Initiative proves that measuring gender equality is not only possible but essential for creating safe, and healthy working environments for all workers in the textile industry. It provides a replicable model for textile companies across Europe and beyond to assess and improve gender equality in their supply chains, supporting broader EU objectives for social sustainability and human rights due diligence.

7. The Discover Natural Fibres Initiative: a model for textile industry collaboration



DNFI demonstrates how voluntary industry collaboration can transform entire sectors, bringing together natural fibre organisations without bureaucracy or fees to share knowledge, drive innovation, and support 290 million workers in building a sustainable USD60 billion textile ecosystem.

What is the Discover Natural Fibres Initiative

The Discover Natural Fibres Initiative (DNFI) is a global platform connecting natural fibre industries worldwide. Established in 2009 following the UN's International Year of Natural Fibres, DNFI brings together organisations representing 15 major fibres, from cotton and wool to specialty materials like cashmere, hemp, and alpaca.

Unlike traditional industry associations, DNFI operates as a voluntary knowledge-sharing network with no membership fees, offices, or formal bureaucracy. This streamlined approach has proven effective at fostering collaboration across the textile supply chain, from farmers growing raw materials to manufacturers creating finished products, with over 40 member organisations actively participating from all over the world.

Why this model works

World production of natural fibres exceeds 33 million tonnes, valued at USD 60 billion annually and employs 290 million people. DNFI addresses sector challenges and encourages innovation by removing collaboration barriers, by enabling participation from small-scale farmers to multinational corporations. This inclusive approach ensures that solutions are effective across different economic contexts and geographic regions. Natural fibres are carbon-neutral, absorbing the same amount of CO2 they release throughout their lifecycle. DNFI supports this advantage by promoting best practices that enable natural materials to compete effectively with synthetic alternatives.

Core activities

DNFI focuses on four strategic activities that create measurable impact:

- Stakeholder Community: DNFI provides a platform for the natural fibres stakeholder community, facilitating knowledge exchange and experience sharing among members, and advancing common interests across all natural fibre sectors.
- Spreading the Word: The initiative promotes natural fibres as CO2-neutral resources, contributing to a greener planet by organising presentations and sessions at international high-level conferences and trade shows.
- Recognise Innovation: The DNFI Innovation in Natural Fibres Award celebrates innovation, people, and institutions behind breakthrough developments, raising public awareness of achievements within the natural fibre sector.
- Facts & Figures: DNFI shares fibre statistics and information on innovative technologies, promoting all natural fibres in the face of competition from synthetic fibres and raising awareness of the advantages of natural fibres.

Impact and Benefits

DNFI's collaborative model encourages supply chain innovation, with members sharing efficient farming techniques, cleaner processing methods, and waste reduction strategies. The initiative supports millions of small-scale farmers and workers, transferring knowledge from developed to developing regions.

This approach demonstrates that simple structures maximise participation, knowledge sharing drives innovation, environmental focus creates market value, and inclusive growth benefits everyone. DNFI proves that voluntary collaboration can achieve environmental goals and support economic development, offering a blueprint for sustainable textile ecosystems worldwide.

8. BALI Chair: Multi-stakeholder collaboration as a driver of systemic change



Founded in 2017, the BALI Chair (Biarritz Active Lifestyle Industry) is an initiative coordinated by ESTIA — École Supérieure des Technologies Industrielles Avancées, designed to support a circular, sustainable, and responsible transformation of the fashion and textile industry. The initiative brings together industry and academic partners and is supported by the Nouvelle-Aquitaine Region of France.

General objectives and partners

The BALI Chair is a programme for education and research on technological innovations. It was founded on the mission of accelerating the industrial deployment of circularity in the textile and fashion sector through the development of solutions that deliver economic, social, and environmental benefits. The current partners of the BALI Chair include a diverse range of stakeholders:

- Schools and academia: <u>ESTIA École Supérieure des Technologies Industrielles Avancées</u> and <u>ESMOD</u> Fashion School;
- Service providers: <u>E-SCM Solutions</u>, a digital services company designed to optimise the traceability
 of fashion and luxury supply chains; <u>CETIA Centre d'Expertise du Tri et du Démantèlement des
 Articles</u>, a new and innovative centre dedicated to advancing the recyclability of textile and leather
 products;
- Leading international wearing apparel brands: Petit Bateau, Decathlon, and Groupe Eram;
- Other relevant circular actors: <u>Gebetex Tri</u>, a textile sorting and recycling company specialising in the wholesale supply of second-hand clothing and footwear;
- Institutional actors: the Nouvelle-Aquitaine Region, which supports the initiative

This diverse partnership ensures that the BALI Chair benefits from a broad, practical perspective capable of driving sustainable change, fostering transformation within businesses in terms of skills, structures, and technologies.

BALI Chair activities

In its first phase (2017–2020), the BALI Chair focused on awareness-raising and setting up steering committees. From 2020 to 2023, the Chair entered a more operational phase, formalising the first standards for circular fashion and initiating collaborations in EU-funded projects. Currently in its third phase (2023–2026), the BALI Chair is focusing on the challenges of scaling up circular fashion, deploying technical solutions and business models that prioritise resource efficiency and local value creation whilst remaining competitive at the same time.

The Chair's work is structured around three working groups (WGs) that include Chair members as well as external participants:

 WG Traceability, led by Belharra, Groupe Eram, and Petit Bateau: Sharing feedback on the deployment of a digital passport among companies experimenting with circular tools and practices. In 2024 BALI Chair carried out, on behalf of the European Commission, a study on the Digital Product Passport for the Textile sector.

- WG Future Sorting Processes, led by CETIA and Gebetex: Exploring the future organisation of textile collection, sorting, and recycling.
- WG Eco-design, led by Groupe Eram: Developing indicators for repairability, durability, and recyclability.

As part of its cooperation initiatives, the BALI Chair also regularly hosts Scientific Committee gatherings, i.e. occasions for EU wide dialogue and exchange with key players in the European textile sector. The last session, held on 8th July 2025, featured discussions on textile recycling actors in Europe, online resale trends, data governance and the Digital Product Passport, as well as valorisation strategies for smart textile waste, with contributions from institutions such as CETIA, AITEX, Lusíada University, the University of Leeds, and Mondragon University.

Educating for circularity

A fundamental pillar of the BALI Chair is education. Through its modules at ESTIA, the BALI Chair equips university students with the skills and tools needed to design, develop, and implement circular models, whilst raising their awareness of the environmental and societal impacts of their future careers. Additionally, by collaborating with BALI Chair partners, students gain hands-on experience in cutting-edge projects, practical applications, and innovative real-world solutions.

In this area, the Chair reported the following achievements in 2024:

- Over 150 students were involved in BALI Chair training modules;
- Four Textile 4.0 certificates were awarded to students, acknowledging their skills in digital and circular textile technologies;
- One doctoral thesis was successfully defended, advancing the scientific foundation of circular textile solutions;
- 30 European researchers were brought together through the Textile Circularity Scientific Committee to share knowledge and harmonise practices;
- Three working groups actively collaborated on industrial pilot projects and shared research activities.

Conclusion

Over the past decade, the BALI Chair has developed an ecosystem that brings together industrial innovation and academic research to support the textile industry's transition towards sustainability. The multi-partner, multi-disciplinary approach serves as one method for addressing systemic change. The initiative connects local activities with broader European and global objectives, demonstrating how circular practices can deliver benefits at different levels of the ecosystem.

9. Closing the loop in the carpet industry: Ege Carpets initiatives



Ege Carpets, a large Danish carpet manufacturer, has embedded sustainability into its business model by combining two levers of circular transformation: regenerated raw materials usage in the product design phase and implementation of a take-back system for end-of-life carpets

Industrial-scale use of regenerated nylon yarn

Ege Carpets is a company headquartered in Denmark with several subsidiaries across Europe, Asia and the United States. The company produces approximately 5.8 million m² of carpet annually (data covering the period 1st May 2023 to 30th April 2024), including both tufted and woven products from its four production units in Denmark, as well as wool yarn produced in Lithuania. Ege Carpets primarily targets the contract market, focusing on the Hospitality (hotels, resorts), Offices, and Marine (cruise ships, vessels) segments.

Ege Carpets has progressively taken steps to transition from virgin materials to regenerated ones. As of 2024, more than half (58%) of carpets sold by the company were made from regenerated nylon yarn sourced from post-consumer and industrial waste, including discarded fishing nets, old carpets, and other residues, which are regenerated through chemical de-polymerisation. This nylon material can then be further recycled, provided it can be separated from the other materials.

With this approach, Ege Carpets aims to integrate sustainability considerations from the outset, supporting recyclability and minimising environmental impact over the product's lifespan.

Take-Back system

The second pillar of Ege Carpets' circularity strategy is CircleBack, a take-back and recycling system launched in 2023. By 2024, it covers ten major wall-to-wall carpet collections, with plans for further expansion. The take-back scheme applies to post-2023 carpet collections, which are specifically engineered to facilitate the easy separation of materials for recycling. To enable this, Ege Carpets has modified the design and material composition of its best-selling carpets. The material recovery rate of CircleBack is high, with up to 98–100% of the carpet's components being recyclable.

The system allows customers across Europe to return used carpets from selected collections for dismantling and recycling. At the point of purchase, customers are informed whether their carpet qualifies for CircleBack. When the carpet reaches the end of its life, customers can contact Ege Carpets or its logistics partners to arrange pickup and transport to recycling facilities. Once at the facility, the carpets are dismantled and shredded into separate material fractions. Nylon fibres are sent to Aquafil, Ege's long-term partner, where they are reprocessed into regenerated yarn through their Born Regenerated to be Regenerable (Born R2R) system. Finally, other components, such as adhesive fillers, are reused by Ege in its production lines.

This closed-loop system is managed through partnerships with other actors in the ecosystem and adapted infrastructure, allowing Ege to address the commonly cited barrier of collection inefficiencies in circular models.

Conclusion

The building industry is responsible for 40% of global CO₂ emissions, and interior elements like flooring playing a significant role in this environmental impact. By aligning material innovation upstream with takeback systems downstream, Ege Carpets presents an approach that is in line with the EU's sustainability objectives. These initiatives, both technically and commercially viable, represent a systemic approach to product circularity across the full lifecycle of carpets. This marks a step forward in transforming the EU sector, where less than 5% of carpets are currently recycled.

10. Prolonging the lifespan of denim: repair and reuse services at Nudie Jeans



Extending a product's lifespan is arguably one of the most effective strategies for reducing environmental impact, with repair and reuse at the top of the waste hierarchy. Nudie Jeans' business model prioritises product longevity through repair and reuse, practices embedded in the company's operations since its inception. This philosophy allows the Swedish brand to align environmental responsibility with consumer demand for durable and ethical clothing.

The company

Nudie Jeans is a Swedish denim brand founded in 2001 and headquartered in Gothenburg. Over the years, the company has expanded its operations across Europe, North America, and Asia. Its product range includes jeans, apparel, and accessories.

Extending product lifespan

Nudie Jeans has developed a business model rooted in longevity, responsibility, and circularity. The company promotes the idea that denim improves with age, and that care, repair, and reuse should be integral to fashion consumption. Its mission explicitly challenges the linear "take-make-waste" model by offering tangible services to support a circular approach:

- Repair: Nudie Jeans offers free repairs on all its jeans. Customers are encouraged to bring their worn jeans to any Nudie Jeans Repair Shop for free mending. The company operates 33 physical repair shops in 20 cities and collaborates with over 15 partners to offer local repair stations and scale up its circular capacity. Additionally, Nudie provides free DIY repair kits containing denim patches, needles, and thread, along with instructions, for customers who prefer to mend their jeans at home, reinforcing a culture of self-reliance and garment care.
- Reuse: Alongside repair, resale and reuse form the second pillar of Nudie Jeans' service ecosystem. Customers receive a 20% discount on a new pair when they return an old pair of Nudie jeans, incentivising engagement with circular practices. Returned jeans are not downcycled or sent to landfills; instead, they are assessed and either cleaned and resold under the "Re-use" collection or repurposed for other applications (e.g., patching materials). The Re-use collection is marketed under the same brand and often displayed side by side with new products in stores, normalising reuse and shifting customer perception toward pre-owned fashion.

Finally, for garments that have reached end-of-life, Nudie Jeans ensures that textiles are directed to appropriate recycling streams, either mechanical or chemical, depending on their condition.

The overall impact

Since launching its free repair programme, which has grown steadily year after year, Nudie Jeans has repaired approximately 500 000 pairs of jeans. In 2024 alone, the company repaired 68 342 pairs. Most of these repairs took place in Europe, with the Netherlands, Sweden, and Germany leading in volume. In the same year, Nudie also collected 19 956 pairs of post-consumer jeans and sold 3 513 under the Re-use collection.

The business model has reached operational maturity. Nudie's repair system is now professionalised, with trained staff, standardised repair procedures, and integrated logistics. Reselling used jeans and offering

repairs not only reduces production costs but also generates new revenue streams and strengthens brand loyalty.

This approach aligns with European Commission goals on textile circularity, supports the growing emphasis on Extended Producer Responsibility (EPR) schemes, and meets market demand, as consumers increasingly seek responsible brands, while raising awareness about the consequences of fast fashion.

Finally, Nudie Jeans' model extends beyond internal operations. It fosters collaboration across the textile ecosystem: suppliers and production partners are transparently listed and monitored for fair labour practices; academia and civil society are engaged through knowledge-sharing and advocacy; and cross-sector partnerships support creative upcycling and material reuse initiatives. The company recently received funding from the Swedish Energy Agency to scale up repair and reuse efforts as part of a research and innovation project, with Sweden serving as the pilot market.

Conclusion

The repair and reuse model developed by Nudie Jeans demonstrates how brands can take proactive steps to reduce environmental impact while strengthening brand identity and customer loyalty. In contrast to fast fashion, which encourages rapid consumption and disposability, Nudie Jeans presents a commercially viable alternative that integrates circularity into its core values and operations, proving that sustainability and profitability can go hand in hand.

Conclusions

The practices reported here showcase that the textiles industry transition is already underway through innovative approaches across the value chain. They provide concrete examples of how stakeholders can contribute to a more sustainable, circular, and socially responsible textiles ecosystem.

Knowledge exchange emerges as a critical success factor, particularly in collective actions that create communities overcoming national borders. Research-oriented partnerships between academic institutions and industry demonstrate how to develop scalable solutions through real-world testing. Infrastructure investments like Prato's recycling hub show the power of comprehensive ecosystems that pool resources and leverage specialisations.

Individual company practices prove that economic viability and sustainability can coexist. These businesses adopt comprehensive approaches recognising the interconnected nature of circular models, addressing multiple stages from raw materials to waste management.

In the coming months, the process of identifying and showcasing more best practices on the Platform will continue with the aim of covering a broad and comprehensive range of practices highlighting innovative actions that are driving sustainability and circularity across the entire textiles ecosystem.