

R&D+I FOR SUSTAINABLE DEVELOPMENT

Trainer Handbook



VERDEinMED

Interreg
Euro-MED



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PREFACE

This document aims to develop a skilled workforce through knowledge sharing, fostering experienced professionals in the Textile and Clothing Industry with a focus on circular strategies and textile waste management. It represents a key outcome of the VERDEinMED project, specifically Activity 1.3 – Train the Trainers, which forms part of WPI: Reforming the Industry through Sustainable and Circular Practices.

In particular, the document aligns with the theme “R&D+I for Sustainable Development”, providing an opportunity to examine and explore innovative approaches and best practices that advance research, development, and innovation to accelerate sustainable solutions across the textile value chain.

The information is organised as follows:

1. The importance of R&D in sustainability;
2. Sustainable material innovation;
3. Process innovation for sustainability;
4. Collaborative R&D partnerships;
5. Scaling up sustainable solutions;
6. Case studies and best practices;
7. Conclusions.



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The Importance of R&D in Sustainability

Research and Development (R&D) play a crucial role in advancing sustainability by fostering innovation and delivering solutions to pressing environmental challenges. Through targeted R&D efforts, new technologies, materials, and processes can be developed to reduce ecological footprints, improve resource efficiency, and promote sustainable practices across the textile value chain.

Policy and Regulatory Landscape for Textiles

The European textile industry is currently navigating a complex regulatory landscape, with 16 key regulations under consideration at the European level (Figure 1). These measures are expected to have a substantial impact on the industry and, ultimately, on the end consumer. A primary focus of these regulations is the restriction and prohibition of certain chemicals. For example, the sector faces the challenge of replacing low-carbon chemicals that generate PFAs, particularly in technical textiles, where effective alternatives are not yet available.

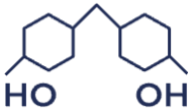
 ECODESIGN AND DIGITAL PRODUCT PASSPORT	 EXTENDED PRODUCERS' RESPONSIBILITY	 WASTE SHIPMENT	 GREEN CLAIMS AND TEXTILE LABELLING
 GREEN PUBLIC PROCUREMENT (GPP)	 WASTE LEGISLATION	 CORPORATE SUSTAINABILITY DUE DILIGENCE	 CORPORATE SUSTAINABILITY REPORTING DIRECTIVE
 INDUSTRIAL EMISSIONS	 SUSTAINABLE FINANCE (TAXONOMY)	 MICROPLASTICS	 PFAS
 SKIN SENSITISERS	 BISPHENOLS	 REACH REVISION	 PFHxA

Figure 1 - EU legislations that will impact textile and clothing companies

Significant R&D efforts are underway to tackle these challenges. The REACH regulation plays a pivotal role, targeting the phase-out of microplastics, specific chemicals, phenolic compounds, and skin sensitizers. In parallel, new regulations on textile waste management will come into effect in January 2025. These require the collection and sorting of textile waste, prohibiting its disposal in landfills or by incineration, thereby driving innovation in sustainable and efficient recycling methods.

Another key development is the introduction of eco-design regulations and the Digital Product Passport. Initially applied to electronic products and batteries, these regulations will extend to textiles by 2026. The Digital Product Passport will become mandatory for all textile products and footwear, presenting significant challenges for the industry, particularly regarding the digitalisation of the value chain. These measures are crucial for achieving the European Green Deal targets by 2030, which seek to establish a more sustainable and circular textile sector.

Priority Research and Innovation Areas

To address the evolving challenges in the textile industry, the European Textile Platform (ETP) has updated its Strategic Research Agenda. This collaborative initiative, involving numerous research institutes across Europe, has identified key strategic areas where research and innovation are critical.

The revised agenda highlights three primary research areas (Figure 2):

- Sustainable Materials and Clean Processes: This area focuses on developing sustainable bio-based feedstocks, which is particularly important given that over 96% of fibres are currently imported.

It also emphasises the need for sustainable textile chemistry to replace hazardous chemicals with non-toxic alternatives, alongside resource-efficient processes that reduce greenhouse gas emissions and improve energy efficiency. Efficient end-of-life sorting, separation, and recycling are also critical to ensure sustainable management of textile waste.

- Digital Supply Chain and Circular Business Models: Digitalisation of the textile value chain is essential for creating digital twins of products and processes, enhancing data interoperability, and employing artificial intelligence for decision-making and optimisation. This area further encompasses designing for circularity and durability, as well as developing new business models that promote sustainability and service-oriented approaches.
- Advanced Manufacturing and High-Performance Textiles: This area seeks to improve manufacturing processes through smart manufacturing and zero-defect approaches, while enhancing flexibility and competitiveness via on-demand digital and networked production. It also focuses on developing sustainable materials for technical applications and advanced multifunctional materials that combine functionality with durability.

These strategic areas and their associated topics are crucial for driving innovation and ensuring that the textile industry meets the sustainability targets set by the European Green Deal.

	SUSTAINABLE MATERIALS & CLEAN PROCESSES	1. Sustainable biobased feedstock 2. Sustainable fibres 3. Sustainable textile chemistry 4. Resource efficient processes 5. Efficient end-of-life sorting, separation & recycling
	DIGITAL SUPPLY CHAINS & NEW BUSINESS MODELS	1. Digitalisation of the textile value chain 2. Sustainability & circular data management 3. Design for sustainability & circularity 4. Circular business models & value-added customer and end-user services
	ADVANCED MANUFACTURING & HIGH-PERFORMANCE TEXTILES	1. Automated, AI supported smart manufacturing 2. On-demand digital and networked manufacturing 3. Safe & sustainable materials for technical applications

Figure 2 - Primary textile research areas

Sustainable Material Innovation

Innovation in sustainable materials is a cornerstone of the textile sector's transition towards circularity and a reduced environmental impact. The acceleration of research in renewable resources, next-generation fibres, and advanced validation methods reflects a strategic shift towards climate resilience, resource efficiency, and sustainable value creation. This chapter outlines three fundamental areas driving this transformation: strategic areas of material innovation, renewable raw materials, and sustainable fibres.

Strategic Areas of Material Innovation

Recent technological developments have broadened the landscape of sustainable and circular materials. Guided by the principles of bioeconomy, circular design, and traceability, material innovation now focuses on four interconnected domains:

- Sustainable and Circular Textile Materials: This domain includes bio-based polymers, recycled feedstocks, and natural alternatives derived from regenerative agriculture or biotechnology. The goal is to reduce reliance on fossil resources while minimising toxicity, water consumption, and greenhouse gas emissions.
- Sustainable and Circular Textile Processes: Innovation extends beyond materials to low-impact processing technologies—such as enzymatic treatments, waterless dyeing, precision fermentation, and closed-loop chemical recycling—which reduce resource intensity across the value chain.

- Sustainable and Circular Business Models: Emerging models—repair, rental, resale, remanufacturing, and fibre-to-fibre recycling—enable materials to circulate longer and more efficiently, generating tangible demand for sustainable feedstocks and scalable circular flows.
- Sustainability and Circularity Validation: Material passports, environmental product declarations, lifecycle assessment (LCA), and traceability markers (e.g., DNA tagging, blockchain) ensure transparency and scientifically validated sustainability claims.

These strategic domains provide the foundation for material transformation, allowing companies to integrate scientific advancements with economic feasibility and consumer expectations.

Renewable Raw Materials

Renewable raw materials are central to reducing reliance on fossil-based resources and enabling nature-positive textile systems. Based on the categories illustrated in the visual materials, the main innovation pathways include (Figure 3):

- Marine-Based Materials (Algae and Seaweed): Seaweed and microalgae are increasingly used as feedstocks for fibres, polymers, and coatings due to their rapid growth, low land-use requirements, and carbon-sequestration potential. Examples include alginate fibres, kelp-based yarns, and algae-derived biopolymers, which offer biodegradable, low-impact alternatives with growing commercial viability.
- Biotechnology-Derived Materials (Microorganisms): Microbial fermentation and synthetic biology facilitate the production of innovative biomaterials such as bacterial cellulose, mycelium, and bio-engineered protein fibres (e.g., spider-silk analogues). These methods allow controlled production without agricultural inputs, reducing land, water, and chemical consumption.

- Forest-Based (Cellulosic) Raw Materials: Sustainably managed forests provide cellulose for next-generation fibres, including lyocell, nanocellulose, and dissolving pulp derived from responsibly certified forestry. Regenerated cellulose is increasingly produced using closed-loop systems to minimise solvent loss and emissions.
- Agro-Industrial Residues: Agricultural by-products—such as pineapple leaves (Piñatex), banana stems, citrus peels, coconut husks, and hemp shives—are being valorised into fibres, composites, and nonwoven materials. These innovations reduce waste while supporting rural bioeconomies.
- Alternative Natural-Based Materials: Novel materials, including stinging-nettle fibres, cactus leather, orange fibre, and regenerated bamboo fibres, expand the portfolio of renewable feedstocks. These alternatives enhance biodegradability and reduce dependence on petrochemicals.

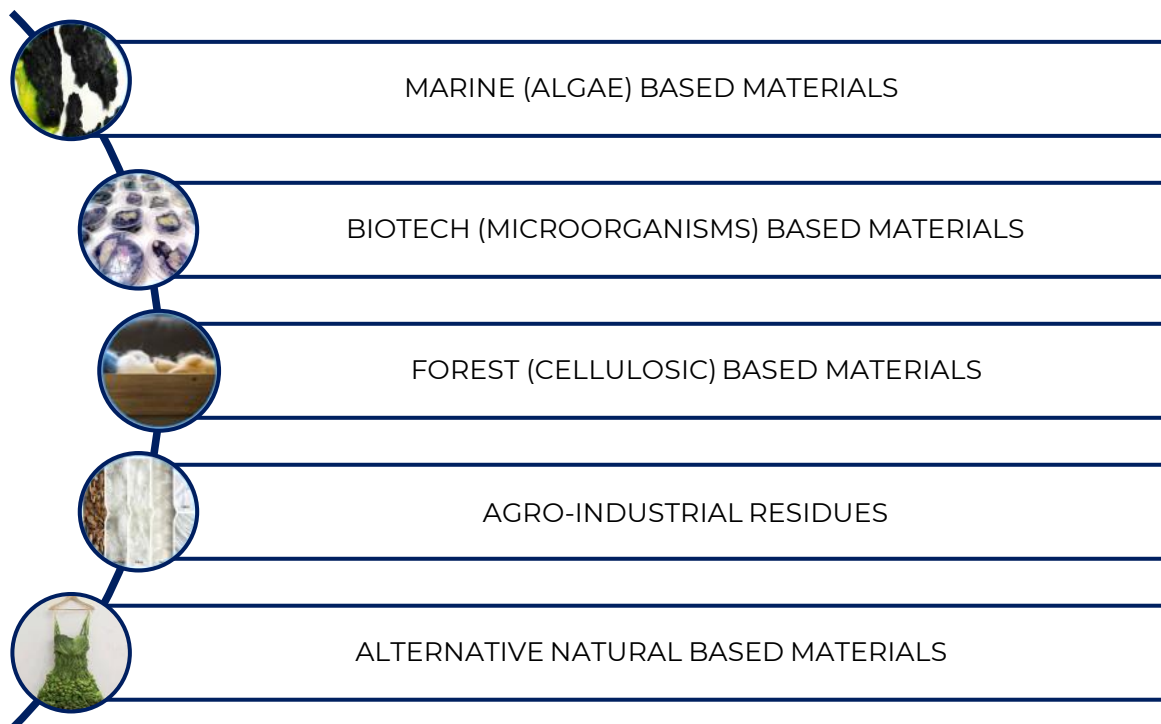


Figure 3 - Renewable raw materials

Together, renewable raw materials support regenerative sourcing, circular flows, and diverse biobased supply chains aligned with EU bioeconomy strategies.

Sustainable Fibres

Sustainable fibre innovation encompasses both natural and engineered solutions, aiming to reduce environmental impacts across the entire fibre life cycle. The categories shown in the visual table illustrate the wide range of innovations currently underway, spanning renewable raw materials, circular fibres, and novel bio-based alternatives

SUSTAINABLE NATURAL FIBRES	NEW CELLULOSIC FIBRES	BIO-BASED SYNTHETIC FIBRES (FOSSIL FREE)	RECYCLED SYNTHETIC FIBRES	TRACEABLE FIBRES
Organic and regenerative fibres	From textile waste (industrial, Pre-consumer, post-consumer)	Bio-based fibres	From textile waste (industrial, pre-consumer, post-consumer)	Additives /markers (e.g., rare materials, pigments)
From new plants and from agri residues (banana, pineapple)	From agricultural residues	Biodegradable fibres in different environments (e.g., soil, sea, rivers)	Based on other residues: PET bottles, fishing nets, oyster shells, CO ₂ ...	Forensic additives /markers (e.g., DNA)
Animal protection practices (e.g. no mulesing)	Alternative and more ecological production processes	Compostable fibres (domestic and/or industrial)		Additives + Blockchain platform
Mechanically recycled fibres	Bacterial cellulose (tree free)			

SUSTAINABLE NATURAL FIBRES

Natural fibres are increasingly developed with a focus on ethical sourcing, soil health, biodiversity, and animal welfare. Examples include:

- Organic and regenerative cotton cultivated using soil-restoration practices.
- Plant fibres derived from agricultural by-products, such as banana, pineapple, and abacá.
- Wool sourced from farms adhering to animal-protection standards.
- Mechanically recycled natural fibres, producing new yarns with reduced environmental impact.

When responsibly cultivated or recovered, these fibres demonstrate strong alignment with recognised sustainability frameworks.

NEW CELLULOSIC FIBRES

Cellulosic fibres have advanced significantly to support circularity and sustainability in textiles. Key developments include:

- Fibre-to-fibre recycling: Cotton and viscose waste streams are reprocessed into new fibres, reducing the need for virgin materials and minimising textile waste.
- Agricultural-residue-derived cellulose: By utilising by-products such as straw, husks, and stalks, manufacturers decrease reliance on fresh resources, promoting a circular bioeconomy.
- Low-impact production processes: Closed-loop solvent systems and other environmentally friendly methods reduce water, energy, and chemical use during fibre production.
- Bacterial cellulose: Produced via microbial fermentation, this cellulose offers a tree-free, sustainable alternative suitable for textiles and other applications.

These innovations provide biodegradable, renewable alternatives to synthetic fibres such as polyester and traditional viscose, aligning with circular economy principles while remaining commercially scalable.

BIO-BASED SYNTHETIC FIBRES (FOSSIL-FREE)

Bio-based synthetic fibres reduce reliance on fossil-derived inputs while maintaining high performance:

- Bio-polyamides (PA11, PA56): Derived from castor beans or plant sugars, these fibres offer strong, durable alternatives to conventional polyamides.
- Biodegradable polymers: Engineered to break down under controlled conditions, such as soil or marine environments.
- Compostable fibres: Suitable for packaging, nonwovens, and selected textile applications, providing end-of-life solutions aligned with circular principles.

The development of these materials requires harmonised standards to ensure claims of biodegradability are accurate and not misleading.

RECYCLED SYNTHETIC FIBRES

Chemical and mechanical recycling technologies are expanding the availability of recycled synthetic fibres:

- Recycled polyester (rPET): Produced from post-consumer bottles or textile waste.
- Recycled polyamide: Sourced from fishing nets, carpets, and industrial waste.
- Advanced depolymerisation processes: Enable high-purity fibre-to-fibre recycling.

These fibres contribute to circular systems when supported by robust traceability and quality-control frameworks.

TRACEABLE FIBRES

Traceability innovations ensure material authenticity and supply-chain transparency:

- Physical markers: Rare materials or pigments.
- Forensic markers: DNA tags, isotopes.
- Digital–physical hybrids: Blockchain combined with additive markers.

These tools provide credible chain-of-custody verification and support the implementation of Digital Product Passports (DPPs).

Process Innovation for Sustainability

Process innovation is crucial for achieving sustainability in the textile industry. By developing new methods and technologies, the environmental impact of textile production can be significantly reduced (Figure 4).

Examples include innovative spinning processes, such as wet spinning, which are being developed to replace traditional methods like viscose and lyocell production. These new processes use ionic liquids and advanced techniques to dissolve cellulose and improve the crystallisation bath, resulting in more sustainable and efficient fibre production.

Additionally, the dyeing and finishing stages - traditionally high consumers of water, energy, and chemicals - are undergoing substantial innovation. Alternatives to conventional dyeing, such as spray dyeing, are being explored to increase efficiency and reduce resource consumption. Enzymatic pre-treatments and post-treatments, along with hydrothermal and green chemistry approaches, are also being developed to enhance the sustainability of these processes.

SUSTAINABLE
CHEMISTRYECODESIGN
& LCA TOOLS

RECYCLING

NEXT GENERATION FIBRES
AND BIOSYNTHETICSELECTRIFICATION &
RENEWABLE
ENERGYRESOURCE-EFFICIENT
PROCESS TECHNOLOGIES*Figure 4 - Process innovation for sustainability: environmental criteria and lifecycle stages*

The development of new equipment and machinery is essential for implementing these innovative processes. Europe is focusing on restoring its capacity to manufacture efficient textile machinery that reduces water and energy consumption while integrating multiple technologies to advance sustainability. Biotechnology also plays a key role in producing sustainable chemicals and raw materials, addressing constraints such as land use and competition with the food industry.

By incorporating ecodesign principles and Life Cycle Assessment (LCA) tools, the sustainability of these innovations can be validated, ensuring positive contributions to the end-of-life and recycling phases of textile products. The use of renewable energy and resource-efficient technologies will further enhance the environmental performance of textile processes.

Collaborative R&D Partnerships

Collaborative research and development (R&D) partnerships are vital for driving innovation and achieving sustainability in the textile industry. These partnerships should be holistic and circular, engaging not only academia and technological centres but also local partners, municipalities, factories, innovators, end users, and recyclers. By involving all relevant stakeholders, challenges can be effectively addressed, innovation can be accelerated to market, and the Technology Readiness Levels (TRL) of new developments can be increased.

A circular textile value chain relies on the active collaboration of all stakeholders to ensure that materials and products are reused, recycled, and kept in circulation for as long as possible. This approach minimises waste and environmental impact while promoting sustainability. Collaborative partnerships are therefore essential in building a circular textile value chain, bringing together diverse expertise and resources to develop and implement sustainable practices (Figure 5).

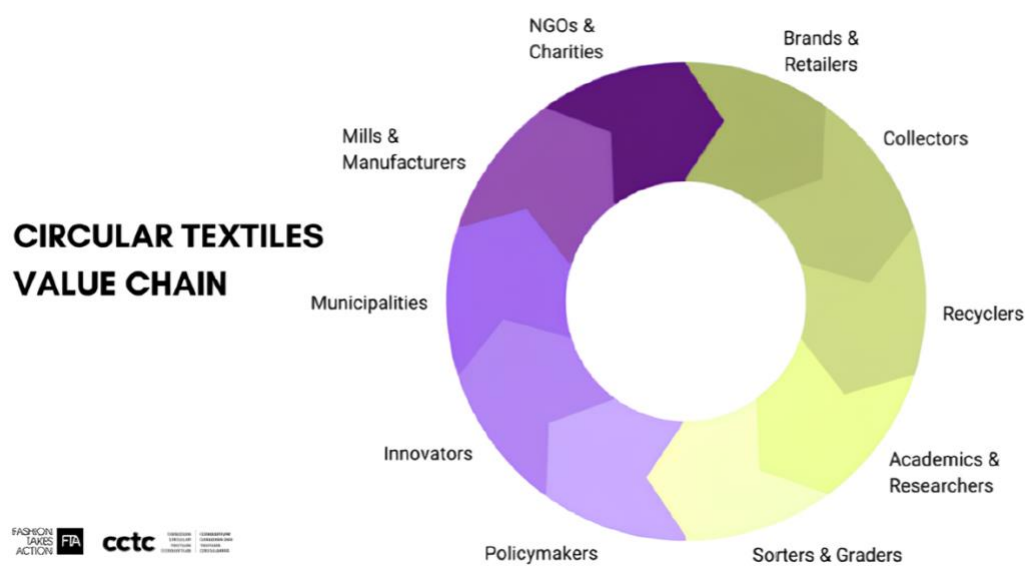


Figure 5 - Circular textiles value chain
Source: <https://www.fashiontakesaction.com/>

Technology Readiness Levels (TRL) are a framework for assessing the maturity of technologies throughout the research, development, and deployment phases (Figure 6). The TRL scale ranges from 1 to 9, with 1 representing the earliest stage of conceptual research and 9 indicating full commercial readiness. Advancing a technology along the TRL scale requires collaboration among diverse stakeholders to move innovations from basic research to market-ready solutions. Such collaborative efforts are crucial for bridging the “valley of death,” a stage where many promising technologies fail to progress beyond development.



Figure 6 - Technology Readiness Levels (TRL)

Source: <https://windharvest.com/blog/2022/07/29/technology-readiness-levels-the-path-to-commercialization/>

The relationship between Technology Readiness Levels (TRL) and resource investment is critical for successful innovation (Figure 7). As technologies advance through the TRL stages, the required resources and commitment increase correspondingly. Collaborative partnerships are essential in securing the support and investment needed to progress technologies from TRL 4 to TRL 7, a phase where many projects encounter significant challenges. By engaging technological institutes, companies, and other stakeholders, innovations are more likely to receive the guidance, expertise, and funding necessary to reach the market.

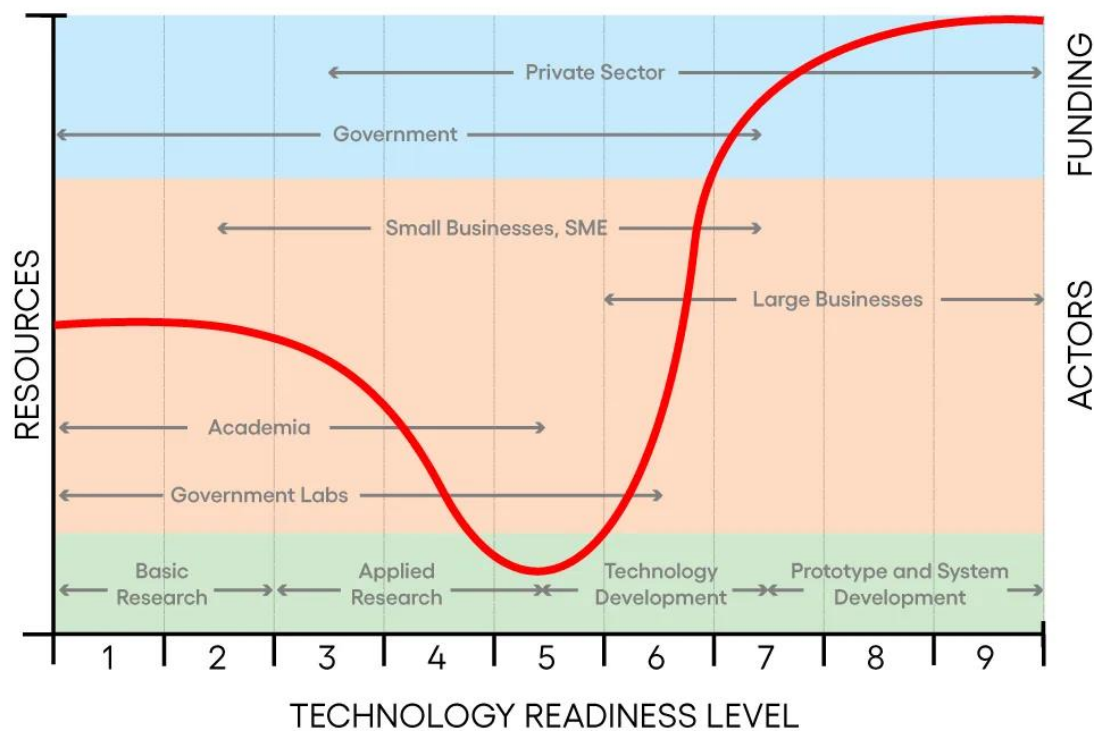


Figure 7 - Technology Readiness Levels (TRL) vs. Resources

Source: <https://windharvest.com/blog/2022/07/29/technology-readiness-levels-the-path-to-commercialization/>

Collaborative R&D partnerships also highlight the importance of engaging end users and recyclers. These stakeholders provide crucial insights into the practical applications and end-of-life considerations of new technologies. By incorporating their feedback, solutions can be developed that are not only innovative but also practical and sustainable. This comprehensive approach ensures that the entire lifecycle of a product is considered, from initial development to final disposal or recycling.

In summary, collaborative R&D partnerships are essential for advancing sustainability in the textile industry. By bringing together a diverse range of stakeholders, complex challenges in sustainable development can be effectively addressed, enabling innovations to progress from the laboratory to the market. This holistic approach ensures that new technologies are environmentally sustainable, economically viable, and socially responsible.

Scaling Up Sustainable Solutions

Scaling up sustainable solutions in the textile industry involves transforming innovative ideas and small-scale projects into market-ready, large-scale products. This process requires a comprehensive approach, addressing every stage of the textile value chain, from fibre production to recycling. By fostering innovation at each stage, it is possible to create a circular textile value chain that minimises waste and maximises resource efficiency.

TITLE	TYPE	NUMBER	ENTITIES INVOLVED	TYPE OF TECHNOLOGY TRANSFER	PROJECT
Cork yarn, production methods and uses	International patent (pending)	WO/2017/130170	Têxteis Penedo, Sedacor, CITEVE, UP	Licensing (royalties)	CORK-A-TEX
Thermosetting material, methods and uses thereof	International patent (pending)	WO/2022/144458	TMG, CITEVE, CeNTI, INEGI	Licensing (royalties)	TexBoost PPS3 ANI
Flexible Material, its production method and uses	International patent (pending)	WO/2019/111230	Tintex, Têxteis Penedo, Sedacor, CITEVE, CeNTI, CTIC	Selling IP	TexBoost PPS5 ANI
Device for attaching a lighting component onto a textile structure, operating method and uses thereof	International patent (pending)	WO/2021/034209	Têxteis Penedo, CITEVE, CeNTI	Licensing (royalties)	LEDinTEX

Spinning

One example of scaling up sustainable solutions is an innovative spinning process developed to coat yarn with residues such as cork or wood, known as CORK-A-TEX. The project initially began at a low TRL, focusing on the development of prototypes and pilot equipment capable of producing small quantities of coated yarn. Through collaboration with a textile company, a cork company, and the University of Porto, the project advanced to Technology Readiness Level (TRL) 7. This success subsequently led to the establishment of a new company dedicated to producing these coated yarns for various markets, including home textiles and automotive fabrics.

Weaving & Knitting

Another example involves the production of high-performance fabrics using carbon fibers in TexBoost. These fabrics are designed for impact absorption and composite applications. The project required adapting small-scale equipment to handle carbon-based fibers, which pose challenges such as creating explosive atmospheres. By overcoming these challenges, the project was able to produce these fabrics at an industrial scale.

Dyeing & Finishing

One example of scaling up sustainable solutions is an innovative spinning process developed to coat yarn with residues such as cork or wood, known as CORK-A-TEX. The project initially began at a low TRL, focusing on the development of prototypes and pilot equipment capable of producing small quantities of coated yarn. Through collaboration with a textile company, a cork company, and the University of Porto, the project advanced to Technology Readiness Level (TRL) 7. This success subsequently led to the establishment of a new company dedicated to producing these coated yarns for various markets, including home textiles and automotive fabrics.

Product Manufacturing

Finally, the integration of smart electronics into textiles presents a significant challenge due to high costs and the lack of industrial production equipment. One project sought to embed LEDs in textiles for lighting and comfort applications. Initially, the integration was performed manually, which was not viable for large-scale production. To overcome this, the project developed an automated system using a robotic arm and a vision machine to accurately position LEDs within the textiles. This advancement enhanced both the efficiency and feasibility of producing smart wearables and electronic textiles.

Case Studies and Best Practices

The objective of this section is to give each region the opportunity to present case studies and good practices that align with their specific objectives and needs. By sharing these examples, trainers can demonstrate the practical application of the information presented.

BE@T - BIOECONOMY AT TEXTILES

The be@t project, funded by the Portuguese Recovery and Resilience Plan (PRR), is a comprehensive initiative aimed at promoting sustainable development within the textile industry. Launched in 2022 and scheduled to conclude in 2026, the project integrates multiple dimensions of sustainability, including biomaterials, production processes, and consumer engagement.

The be@t project adopts a holistic approach, recognising that sustainable development requires attention to all aspects of the value chain (Figure 8). This encompasses not only technical and environmental considerations but also societal and consumer dimensions.

A key focus of the be@t project is the development of renewable raw materials. This involves sourcing materials from agro-industrial waste, certified forests, and marine environments. For instance, the project explores the use of cellulose-based fibres as alternatives to synthetic fibres such as polyester. Biotechnology approaches are also employed to produce bio-based polyesters via fermentation processes, alongside the development of other sustainable fibres.

Eco-design principles are central to the be@t project, ensuring that products are designed for end-of-life recyclability or biodegradability. The initiative prioritises materials that can be composted or recycled without causing environmental harm, supporting the replacement of synthetic and fossil-based materials with sustainable alternatives.

To guarantee the credibility of green claims, the project incorporates rigorous validation and metrics, assessing the environmental and economic benefits of new materials and processes. By providing demonstrable proof of sustainability, be@t aims to build trust and transparency within the textile industry.

Recycling is another critical component. The project seeks to increase the use of recycled materials in textile products, reducing reliance on virgin fossil-based fibres. Through traceability systems, be@t ensures that all sustainability claims are verified and transparent.

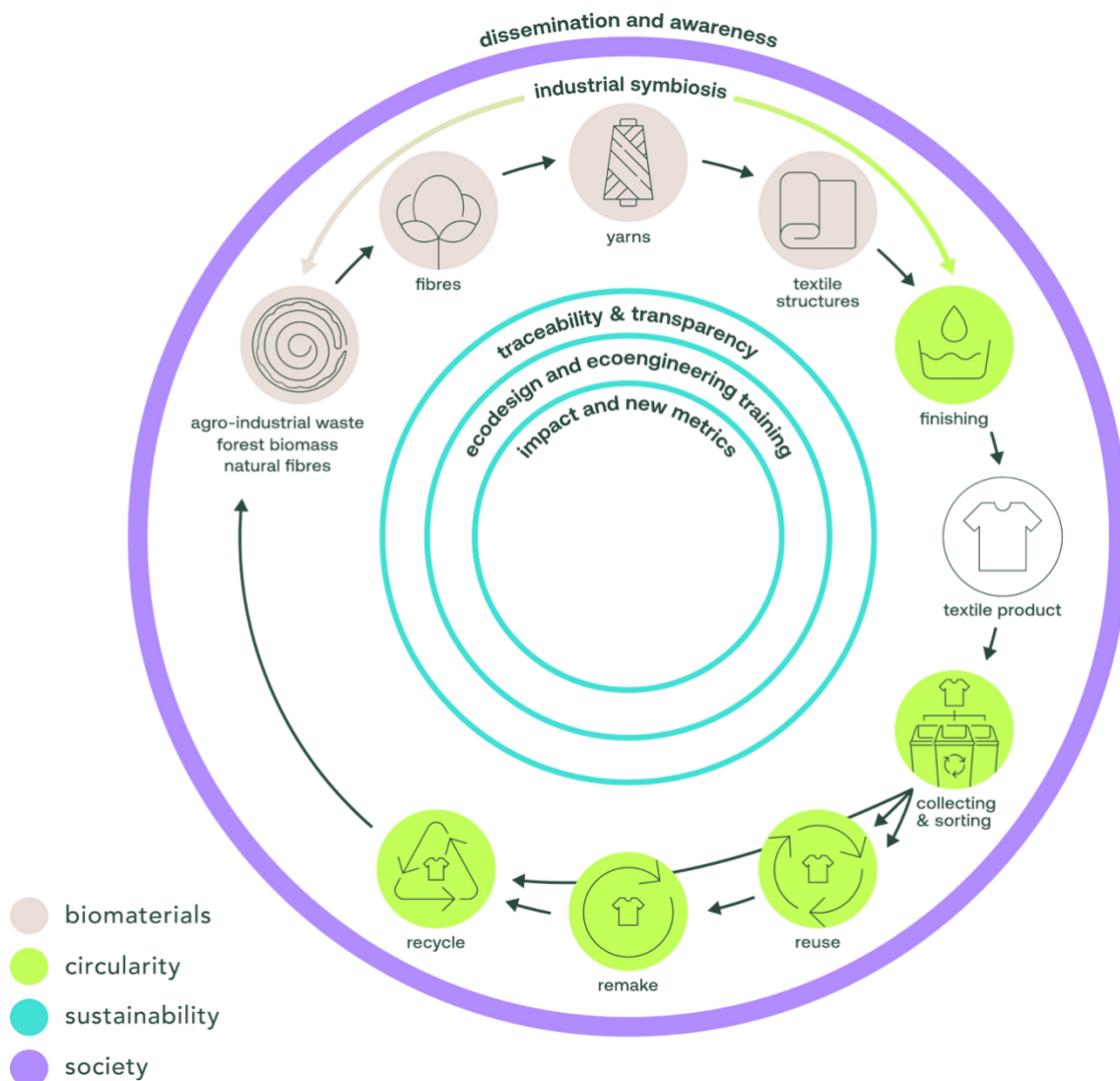


Figure 8 - be@t project infographic

KEY ACHIEVEMENTS	BEST PRACTICES
Developed innovative renewable raw materials - such as cellulose-based fibres, agro-industrial residue fibres, marine-derived biopolymers, and bio-based polyesters - providing viable alternatives to fossil-based fibres	Implement science-based material development using biotechnology, certified sourcing, and closed-loop design principles to ensure new fibres are recyclable, biodegradable, and aligned with circular bioeconomy goals
Advanced low-impact and circular production processes, including eco-design methodologies, enzymatic treatments, process optimisation, and technologies enabling fibre-to-fibre recycling	Adopt eco-design and circular engineering protocols early in R&D to minimise resource consumption, reduce chemical use, and ensure scalability across industrial textile processes
Developed integrated circularity frameworks supported by traceability tools - such as Digital Product Passports - enabling the use of recycled materials and transparent end-of-life pathways	Use robust traceability and verification systems to guarantee the credibility of sustainability claims and support new circular business models based on repair, reuse, recycling, and material recirculation
Strengthened consumer and stakeholder awareness through campaigns, workshops, and communication initiatives promoting responsible consumption, repair practices, and recognition of "Responsible Textiles from Portugal"	Combine scientific evidence with multi-channel communication to educate consumers, engage communities, and foster behaviour change that supports sustainable and circular practices across the value chain
Website: https://bioeconomy-at-textiles.com/	

Conclusions

Some of the key points of the Workshop 7 – R&D+I For Sustainable Development:

- Research and Development (R&D) is essential for driving sustainability by developing new technologies, materials, and processes that reduce environmental impact and enhance resource efficiency. This commitment underpins the advancement of sustainability goals and ensures the long-term viability of the textile industry.
- The European textile industry faces a complex regulatory landscape, with 16 key regulations currently under consideration. These focus on chemical restrictions and waste management and are critical for achieving the European Green Deal targets by 2030, fostering a sustainable and circular textile sector.
- The European Textile Platform's revised Strategic Research Agenda identifies priority areas for innovation, including sustainable materials, digital supply chains, and advanced manufacturing. These domains are central to driving innovation and meeting the sustainability objectives set out by the European Green Deal.
- Collaborative R&D partnerships that involve academia, technological centres, local partners, and end users are vital for advancing innovation and increasing Technology Readiness Levels (TRL). Engaging all stakeholders ensures that new technologies are environmentally sustainable, economically viable, and socially responsible.
- Scaling up sustainable solutions requires transforming innovative concepts into market-ready products through a comprehensive approach spanning the textile value chain, from fibre production to recycling. Protecting intellectual property during this process is essential to allow companies to recoup investments and continue innovating.



PreVEnting and ReDucing the tExtiles waste mountain in the MED area

Project overview

The VERDEinMED project is an initiative funded by the Interreg Euro-MED programme to promote the circular economy in the textile sector. VERDEinMED is a thematic project that will provide a support service to boost circularity in the textile value chain for businesses, consumers, policy makers and academia.

The project is part of the Innovative Sustainable Economy mission of the Euro-MED programme, which seeks cooperation between Mediterranean countries to promote smarter and greener business models. VERDEinMED project brings together 10 partners and 15 associated entities from Greece, Spain, Portugal, Italy, Slovenia, North Macedonia, Bulgaria, Tunisia, Turkey, Belgium and Lebanon



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-CERTH – The Centre for Research & Technology, Hellas
-Bulgarian Fashion Association
-CITEVE
-Confindustria
-Consorci de la Ribera
-Corporación Tecnológica de Andalucía.

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