



Advancing Textile Circularity: Policy Recommendations for Implementing ESPR in the EU

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Executive Summary

The transition to a circular textile industry is a critical objective under the European Union's Strategy for Sustainable and Circular Textiles, and the Ecodesign for Sustainable Products Regulation (ESPR) is a key component of it. The T-REX (Textile Recycling Excellence) project, a consortium of 13 industry leaders, is committed to developing a blueprint for a harmonized EU framework for textile-to-textile recycling. In November 2024, the T-REX Project policy roundtable convened key stakeholders from across the entire value chain, along with EU policymakers and research institutes, to address the challenges and opportunities within ESPR, focusing on recyclability, recycled content targets, sorting mechanisms, and infrastructure development.

Key recommendations from the roundtable emphasize the need for standardized definitions of recyclability, scalable recycling technologies, and policy measures that align with industry realities. Mandatory recycled content quotas, clear eco-design guidelines, and investment in sorting and preprocessing infrastructure are critical to ensuring textile circularity's technical and commercial feasibility. Additionally, ESPR must provide a regulatory framework that fosters innovation rather than imposing premature restrictions that may hinder progress.

This white paper outlines the core insights from the T-REX Project policy roundtable and provides strategic recommendations for policymakers to facilitate a robust and sustainable textile recycling ecosystem in the EU.

T-REX Project and the Policy Roundtable on ESPR

The T-REX (Textile Recycling Excellence) project unites 13 industry players from across the value chain and research institutes to develop a harmonized EU blueprint for closed-loop sorting and recycling household textile waste. Funded by the EU's Horizon Europe program, the project demonstrates textile-to-textile recycling for polyester, polyamide 6, and cellulosic materials while exploring systemic solutions to scale recycling and engage citizens in circularity efforts.

In November 2024, T-REX Project hosted a policy roundtable to discuss industry challenges under the Ecodesign for Sustainable Product Regulation (ESPR), a key pillar of EU textile legislation. ESPR aims to set sustainability performance and information requirements, including recyclability, recycled content, durability, and repairability. However, clear, practical provisions and reliable verification methods are needed to ensure compliance without stifling innovation.

ESPR's recyclability requirements will mandate that textiles are designed for easier recycling, discouraging complex material blends that hinder sorting and processing. Additionally, recycled content targets will drive the use of secondary raw materials, reducing reliance on virgin resources and fostering a circular economy. For the apparel sector, these requirements present both an opportunity and a challenge, as the industry must integrate recycled content while addressing supply chain constraints, limited availability of recycled fibers, and the need for scalable recycling technologies.

By acting early, the EU textile industry can gain a competitive advantage in sustainable practices, setting a global precedent. However, successful implementation requires collaboration between brands, manufacturers, and policymakers to balance ambitious sustainability goals with industry realities.

Stakeholders' Insights from the Roundtable

The Roundtable event was held on 12th November 2024, prior to the release of the EU Joint Research Center's Preparatory Study on Textiles for Product Policy Instruments¹. The overview below is based on insights shared during the roundtable event and does not include additional information from other resources or consultations.

Recyclability

A primary concern raised during the roundtable was the definition of recyclability. Some participants questioned whether a product should only be considered recyclable if it can be transformed into new textiles instead of downcycled into lower-value applications. Establishing a harmonized framework for recycling terminology is critical, as distinctions between closed-loop, open-loop, upcycling, and downcycling remain ambiguous. Stakeholders mentioned that technical recyclability criteria must be standardized to guide material selection and ensure that non-recyclable components are identified at the design stage.

Functionality and design emerged as another central issue. While the current trend promotes mono-material compositions to enhance recyclability, this approach may compromise the durability and functionality of textile products. More comprehensive and harmonized standards defining recyclability guidelines are needed to ensure that sustainability objectives do not come at the expense of product performance.

Sorting and scaling challenges also surfaced as key discussion points. The introduction of Digital Product Passports (DPPs) has the potential to enhance fiber identification during sorting, improving recycling efficiency. Standardized grading systems for recyclability, distinguishing between chemical and mechanical recycling suitability, could help optimize material classification. However, scaling textile recycling technologies requires more significant investment in infrastructure and synchronized efforts between regulatory bodies and industry stakeholders.

Recycled Content

Concerns regarding recycled content targets and traceability were also discussed. The industry lacks consensus on the definition of recycled content, particularly

¹ [PG Section Documents | Product Bureau](#)

when differentiating between textile waste and non-textile sources such as plastic bottles (this source is used for recycled polyester). Policies must ensure that recycled content targets align with actual material availability while maintaining fair competition among materials. Traceability is another pressing challenge, as distinguishing between textile-to-textile recycled content and non-textile sources remains difficult. The cost of recycled materials continues to be a barrier, highlighting the need for Extended Producer Responsibility (EPR) schemes that incorporate eco-modulation fees to encourage textile-to-textile recycling.

Repairability and Durability

Repairability and durability were identified as essential considerations for extending product lifespans. Participants highlighted that garments are often not designed for repair, a factor that should be addressed through modular design features. There are also other design options to increase repairability that can further support repair service providers and consumers. Brands should explore cost-effective repair models, leveraging third-party repair providers where possible. Reliable data on product durability and consumer usage patterns remains scarce, limiting the industry's ability to assess product lifetimes effectively.

Key Challenges and Opportunities

A significant challenge facing the industry is the risk of premature regulations that could stifle innovation if they are based on limited existing infrastructure. Frequent regulatory changes also create uncertainty, complicating long-term business strategies. The lack of traceability mechanisms makes it difficult to verify textile-to-textile recycled content, while limited supplies of recycled materials pose short-term obstacles to meeting recycled content quotas. Recyclers need long-term financial commitments to enable the technologies and production; brands need to commit demand to support the scale-up of recycling innovators.

Despite these challenges, the industry has several opportunities to advance sustainability. Collaborative efforts between brands and suppliers could help bridge the gap between supply and demand for recycled content. Establishing a clear vision for recycled content targets by 2028-2030 would drive investment and technological advancements. At the same time, brands must prioritize transparency and traceability, enhancing consumer trust and gaining a competitive advantage

Overall learnings from the event

Although the landscape is complex, regulation is key to driving progress. Regulation should provide a clear long-term direction, allowing stakeholders to navigate towards sustainable goals. Mandatory recycled content represents the most effective means of driving industry transformation, as creating demand will naturally lead to increased supply. Moving forward, supply chains will require greater traceability and transparency to ensure accountability in recycling processes. Data gathering will be essential in advancing these efforts and must be systematically guided and applied by all industry members. For instance, discussions on information disclosure highlight the need to focus on Substances of Concern – recyclers and value chain partners require details only on substances present in the final textile product rather than every substance used in production. Mandatory data should be relevant and necessary, balancing transparency with the practical challenges of building a circular value chain.

Making textiles and clothing sustainable and circular is not a trivial challenge, and there are no quick-fix solutions. However, complexity should not deter action. European regulators and industry leaders must address these challenges with pragmatic, enforceable policies that balance impact, feasibility, and compliance.

Policymakers must act decisively, providing clear messages that enable businesses and innovators to move forward. Even before defining precise percentages or implementation methods, it is crucial to establish that mandatory recycled content quotas will be required. The most significant reductions in environmental impact come from prolonging product use and minimizing waste. Strategies focusing on durability and repairability will be instrumental in achieving these goals. If products cannot remain in use, their materials must be efficiently recycled to maintain circularity.

Compared to other waste streams like fishnets (polyamides) or packaging and plastic bottles (polyesters), textile waste is significantly more complicated and requires more sophisticated and robust technologies. Post-consumer textile waste presents even more difficult recycling challenges than post-industrial textile waste. It will require a balanced approach that considers technical feasibility, economic viability, and sustainability impact. Design choices play a crucial role in recyclability, yet they should not compromise the functionality of textile products. Policymakers must foster market incentives that promote textile-to-textile recycling, with mandatory recycled content quotas being the most promising strategy.

To implement these measures effectively, the industry and regulators must develop accessible and reliable standards, ensuring true collaboration across the supply chain, ideally at a regional level within Europe. Initially, textile-to-textile recycled materials may be in limited supply. Still, market dynamics, which are driven by a clear policy vision for recycled content targets, are expected to resolve this issue over time.

All supply chain actors and regulators require comprehensive data to make informed decisions. The collective knowledge gained from roundtables and workshops like this one is essential for tackling the grand challenges of the sustainable textile transition.

T-REX Project's Recommendation for the Future of ESPR

The T-REX Project has revealed fundamental challenges in the EU's textile circularity infrastructure that regulation must help bridge. Without investment in advanced sorting technologies, recycling technologies, and the missing pre-processing stage, circularity at scale remains out of reach. Pre-processing of textile waste feedstock is essential for chemical recycling, yet no players in the value chain are fully addressing this need. Existing infrastructure is insufficient to handle the complexities of textile waste, making it challenging to meet future recyclability and recycled content targets. EU regulations, particularly ESPR and Waste Framework Directive, must take a strategic approach to support the entire value chain—from design, collection, and sorting to pre-processing and recycling—so that commercial infrastructure can scale effectively. Without this, the industry will struggle to integrate recycled materials into new textile products at the necessary volume.

As EU policies are shaped, eco-design requirements must acknowledge technological and infrastructural constraints. Regulations must balance recyclability criteria and broader industry needs, ensuring that requirements do not unintentionally create trade-offs that hinder progress. ESPR's role in reducing textile waste must align with the circular economy hierarchy, establishing a clear and consistent framework for defining recyclability, supporting all recycling technologies, and mandating the inclusion of recycled content in textiles. Against this background, the feedstock for recycled content should not be artificially restricted. It should come from different types of textile waste (including post-consumer, post-industrial, and pre-consumer waste). The feedstock origin needs to be cleared, traced and included in data shared for transparency. This framework must be backed by comprehensive research and industry collaboration to avoid regulatory measures that stifle innovation. Standardized definitions of recyclability, mandatory product-level performance criteria, and transparent information requirements are necessary to ensure regulations drive real impact rather than adding complexity without practical outcomes.

Policymaking must also account for the global nature of textile waste flows. The EU should mandate minimum recycled content in clothing regardless of waste origin, as the industry depends on international trade in unsorted textile waste.

Additionally, regulations should not impose unnecessary restrictions on recycling technologies or chain-of-custody models beyond existing certification standards, such as Textile Exchange's RCS/GRS. Credibility in circularity policies requires a focus on recycling with verifiable recycled content and feedstock origin.

EU regulations must actively engage innovators and industry stakeholders to drive meaningful change, ensuring policies reflect real-world capabilities and constraints. Regulatory frameworks should remain flexible to accommodate advancements in recycling and material innovation rather than locking the industry into rigid standards that could become obsolete. Suppose trade barriers or taxes are introduced for textiles from non-EU regions. In that case, they must specifically target products that fail to meet EU environmental and social responsibility standards rather than creating blanket restrictions that could disrupt supply chains. By addressing these gaps, policymakers can ensure that regulation acts as an enabler—rather than a bottleneck—for textile circularity, allowing innovation, investment, and sustainable practices to scale effectively across the industry.

Conclusion

Transitioning to a circular textile economy requires a balanced approach that aligns regulatory mandates with industry realities. The T-REX Project roundtable has highlighted critical challenges and opportunities, advocating for policies that promote innovation while ensuring compliance. By adopting these recommendations, the EU can establish a globally leading textile recycling ecosystem, supporting the principles of circularity and long-term sustainability.

Appendix 1: T-REX Project Policy Roundtable Agenda

Brussels, 12 November 2024

WELCOME COFFEE AND REGISTRATION FROM 9:00

- | | |
|---------------|---|
| 9:30 – 9:45 | <p>Opening remarks
 Drishti Masand, adidas
 Melisa Saygivar, adidas
 Blanca Saez Lacave, EU Horizon Office</p> |
| 9:45 – 10:15 | <p>Overview of ESPR and the Delegated Act for Textiles
 Antonio De Sousa Maia, EU Commission</p> |
| 10:15 – 10:35 | <p>Introduction to the T-REX Project Design Guidelines
 Doris Hondtong, Arapaha
 Anja Kossel-Scharf, adidas</p> |

BREAK

- | | |
|---------------|--|
| 10:55 – 11:20 | <p>Panel: Defining Recyclability
 Coline Morise, Fashion for Good (moderator)
 Carsten Wentink, EU Commission
 Gudrun Messias, adidas
 Marieke Koemans Kokkelink, Erdotex</p> |
| 11:20 – 13:00 | <p>Workshop: Defining Recyclability</p> |

LUNCH

- | | |
|---------------|--|
| 14:15 – 14:40 | <p>Panel: Setting recycled content targets
 Drishti Masand, adidas (moderator)
 Rannveig van Iterson, Ohana Public Affairs, on behalf of Textile Exchange
 Daniela Antunes, Fulgar
 Tobias Schwab, BASF</p> |
| 14:40 – 16:20 | <p>Workshop: Setting recycled content targets</p> |

BREAK

- | | |
|---------------|---|
| 16:40 – 17:20 | <p>Panel: Reparability and durability
 Kirsi Niinimäki, Aalto University (moderator)
 Katarzyna Sulisz, FESI
 Tom Duhoux, VITO
 Hasna Kourda, Save Your Wardrobe</p> |
| 17:20 – 17:30 | <p>Closing remarks
 Lutz Walter, Textile ETP</p> |

NETWORKING COCKTAILS & CANAPES FROM 17:30

Appendix 2: List of Policy Roundtable Participating Organisations

Aalto University	Infinited Fiber Company
adidas	LVMH
Arapaha	Nike
BASF	Ohana Public Affairs
Bestseller	Ohana Public Affairs, on behalf of Textile Exchange
Cascale	PETCORE
CuRe Technology	Policy Hub
Ellen MacArthur Foundation	Refashion
Erdotex	Resortecs
EU Horizon Office	Save Your Wardrobe
European Commission (DG ENV)	TEXroad
European Commission (DG GROW)	Textile ETP
Fashion For Good	Veolia
FESI	VF Corporation
Fulgar	VITO
Group of the Greens / European Free Alliance	Zalando