TRUSTex Insight Infographic

TRUSTex Project Advancing Sustainable Textiles in the Circular Economy through Innovative EPR Schemes

TRUSTEX aims to revolutionise the EU textile industry by developing and implementing Extended Producer Responsibility (EPR) schemes that promote circular business models through eco-design principles, improved waste management systems, and digital traceability solutions.

This infographic presents **key insights** gathered by Prospex Institute throughout the **TRUSTex stakeholder engagement process** since the start of the project.

This version draws on findings from the first engagement activities conducted by PI in the project, encompassing **9 different events** attended by **186 stakeholders**, representing different parts of the textile value chain, from **production, design, distribution, collection, sorting** and **recycling** to **consumers** and **policy makers.**

The **phases are strategically selected based on the topics discussed at the stakeholder events**, focusing on those areas where stakeholder input was most relevant.

Insights on the Circular Textile Value Chainstakeholder



Recycling & Product Recovery

Recycling and product recovery are essential for circularity, but current systems lack the scale, infrastructure, and transparency needed to maximise material recovery and keep textiles in use for longer.

Production

Circular textile production starts with better design and sourcing decisions, supported by fair global governance, worker inclusion, transparent data, and stronger collaboration across an EU–Asia–Africa value chain.

Product Design

Design choices made today determine tomorrow's circularity: simpler materials, modular design, and life-cycle thinking are essential to creating durable, repairable, and recyclable textile products.

Use & Reuse

Circular textile use depends on making reuse, repair, and second-hand consumption more convenient and a social standard, while shifting norms away from overconsumption and fast fashion.

Collection & Sorting

Collection and sorting are the critical bottlenecks—and greatest opportunities—for textile circularity, as the quality, traceability, and management of collected textiles determine their potential for reuse, recycling, and value recovery.

This first version of the infographic will be updated at the end of the project to provide a complete overview of all key insights gained throughout the stakeholder engagement by Prospex Institute.

Production

The **Production** phase covers stakeholder reflections on the early stages of the textile value chain and covers raw material extraction as well as textile and product manufacturing. It includes all processes required to produce and finish textile products, including mechanical, physicochemical, and chemical treatments. During the discussions stakeholders emphasised that improving resource efficiency at the earliest stages of the value chain is critical, as initial material choices strongly shape downstream outcomes, particularly due to their close interdependence with available recycling technologies.

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KEY CONSTRAINTS HIGHLIGHTED BY THE STAKEHOLDERS

STAKEHOLDER SUGGESTIONS FOR POSITIVE CHANGE

IMPLEMENTATION



- Limited material availability constrains achievement of ecodesign ambitions.
- Low product quality limits the potential of reuse and recycling with the growth of 'ultra fast fashion' and high volumes of production outpacing regulatory and circularity efforts.

- Strengthened trust and supplier relationships across the value chain could support the effective implementation of circular practices.
- Reduced production volumes and resource consumption may contribute to advancing textile circularity.
- Increased substitution of chemicals that hinder recycling processes, such as certain dyes, could improve the recyclability of textile products.

GLOBAL DIMENSION



- Poor labour conditions and limited access to collective bargaining create ethical challenges across the production sector.
- Global transport networks and a misalignment between production, design, and recycling locations undermine the sustainability of textile production pathways.
- Low wages in the Global South production countries, reinforced by brands´ purchasing practices and pricing pressures.

- Greater incorporation of worker perspectives and participation could support more inclusive international production networks.
- Expanding current textile material flow models to an EU/Asia/Africa framework may contribute to more balanced textile governance frameworks by aligning the location of production with the location of recycling.

GOVERNANCE (EPR)



- Insufficient alignment across international regulatory frameworks for material production hinders effective governance.

- **Further input on Extended Producer Responsibility (EPR) governance is expected from the second Stakeholder Board and will be added in the final version.*

TRACEABILITY (DPP)



- Absence of a clear distinction between material manufacturing and product manufacturing limits traceability.

- Harmonised data-sharing tools and standards could improve product traceability across the textile value chain.

POSITIVE EXAMPLE

Comprehensive sourcing and manufacturing data are essential, including country-level Put-On-Market (POM) data disaggregated by product category, fibre type, and composition. The value of further segmentation by first point of collection and actor type (e.g. non-profit organisations) is being emphasised. Cost data covering each stage of the value chain is being highlighted as a priority to improve transparency and support evidence-based decision-making.

CONSUMER PERSPECTIVE

- Consumers value quality, comfort, durability, and materials that remain functional over time.
- Concerns about production transparency and working conditions influence perceptions of sustainability.
- Trust in brand sustainability claims is generally low.
- Consumers want simple, visual, and easy-to-understand product information (Digital Product Passport).
- Trustworthy information is considered more important than large amounts of technical data.

The **Product Design** phase covers the remaining pre-consumer stages of the value chain, product design and branding. Discussions focused on how to reduce product lifecycle impacts by integrating ecodesign principles within the product development.
Stakeholders stressed that optimising product design is critical for the entire textile value chain, as even small choices in materials and design can have significant downstream implications for sorting and recycling.

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KEY CONSTRAINTS HIGHLIGHTED BY THE STAKEHOLDERS

STAKEHOLDER SUGGESTIONS FOR POSITIVE CHANGE

IMPLEMENTATION

- Ecodesign principles often conflict with one another and require explicit prioritisation and trade-offs.
- Ecodesign compromises that affect usability or aesthetics increase the risks of underuse or premature product disposal by the consumers.
- High product costs limit incentives for companies for repair and reuse, reducing the economic attractiveness of circular consumption models.
- Limited trust across supply chain actors and weak feedback loops between producers and recyclers constrain circularity.

- More 'systems-based' ecodesign approaches that integrate business models, warranties, and repair services could support strengthened product circularity.
- Greater consideration of design for disassembly and modular design approaches may improve product repairability and recyclability.

GLOBAL DIMENSION

- End-of-life considerations are often overlooked during the design phase, as garments are developed in one region but disposed of in others with inadequate recycling infrastructure.
- Large global brands show lower responsiveness to adapt to ecodesign principles compared to smaller, more agile local brands.

- More standardised ecodesign criteria and consistent application beyond the EU could strengthen the implementation coherence of ecodesign frameworks.

GOVERNANCE (EPR)

- Existing EPR schemes remain primarily waste-focused and fail to incentivise upstream design improvements.

- Greater emphasis on upstream incentives within Extended Producer Responsibility systems could support more circular product design.

TRACEABILITY (DPP)

- Speed and usability limitations reduce the suitability of QR codes as standalone data carriers, while embedded digital chips raise concerns regarding e-waste, recoverability, cost, and loss of garment value.
- Inconsistent Life Cycle Assessment (LCA) methodologies limit comparability across products and systems.

- More harmonised and 'forward-looking' data systems could improve information availability on product flows, material composition, and product movement across the textile value chain.

POSITIVE EXAMPLE

The importance of simplifying material compositions to support circularity is emphasised. In particular, replacing conventional three-layer synthetic constructions with a two-layer system consisting of recycled wool and recycled polyester is identified as a promising approach to reducing material complexity without compromising performance. The exclusion of elastane, the use of 100% cotton with recycled content, and the preference for buttons over zips are further highlighted as design strategies that address trade-offs between comfort, repairability, and recyclability.

CONSUMER PERSPECTIVE

- Consumers associate sustainable clothing with long product lifetimes, quality materials, and timeless design, but it is important to distinguish physical and emotional durability*.
- Clear information on durability, care, repair, and material composition is highly valued.
- Confusing sustainability claims make it difficult to identify genuinely sustainable products.
- Material composition, care instructions, repair guidance, product origin, and recycling information are prioritised (DPP).

***Physical durability** is the ability of a garment to maintain its function and appearance over time under use, washing, and care. It includes resistance to wear, as well as the durability of components like zips and buttons. It is also supported by good design for repair, maintenance, and, where possible, easy disassembly.
Emotional durability refers to the emotional attachment a person feels toward a garment—how meaningful, desirable, and relevant it remains over time, encouraging continued use regardless of its physical condition.



The **Use & Reuse** phase addresses the textile consumption and includes reuse activities such as repair, resale, gifting, and donation. These practices are considered preventative measures under the Waste Framework Directive and are distinct from recycling because they occur before textiles are classified as waste and enter the post-consumer collection and sorting system. Stakeholder discussions focused on consumer behaviour particularly concentrated on factors that enable or hinder the adoption of circular practices.

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KEY CONSTRAINTS HIGHLIGHTED BY THE STAKEHOLDERS

STAKEHOLDER SUGGESTIONS FOR POSITIVE CHANGE

IMPLEMENTATION

- Price barriers and limited consumer budgets reduce the uptake of sustainable, second-hand, and repair-based consumption options.
- Limited awareness of textile impacts, disposal pathways, and circular practices constrains consumer participation in circular systems.
- Time constraints, limited access to second-hand options, and insufficiently accessible collection systems reduce engagement in reuse and repair activities.
- Emotional and aesthetic purchasing impulses frequently override considerations related to budget, necessity, or sustainability at the point of buying.
- Psychological barriers associated with hygiene and uncertainty regarding previous ownership reduce acceptance of second-hand clothing, particularly among older generations.
- Perceptions that damaged or intimate garments are unsuitable for donation contribute to their disposal through general waste streams.

- Financial incentives such as repair vouchers, reduced VAT rates, reward systems, and subsidies could improve the affordability and attractiveness of circular consumption options.
- Greater investment in consumer education on textile impacts, repair skills, maintenance practices, and circular solutions could support more sustainable consumption behaviours.
- Increased accessibility and convenience of repair, reuse, collection, and take-back systems could strengthen consumer participation in circular textile systems.
- Community-based approaches that foster human connection and emotional engagement could increase participation in take-back and collection schemes.

GLOBAL DIMENSION

- Fashion trends, advertising, and social media reinforce overconsumption and ultra/fast-fashion purchasing behaviours.
- Social and cultural stigma surrounding second-hand clothing, particularly across different age groups, limits the acceptance of reuse practices.
- Limited awareness of the social dimensions of textile production and the just transition weakens consumer engagement with global sustainability challenges.

- Greater normalisation of sustainable consumption practices through awareness campaigns and collaborative initiatives could help shift cultural norms away from fast-fashion consumption.
- Increased communication of the environmental and social impacts of textile production and consumption could strengthen consumer engagement with global sustainability challenges.

GOVERNANCE (EPR)

- Consumers have limited understanding of Extended Producer Responsibility systems and how related fees contribute to textile circularity.
- Communication gaps between public authorities, collection operators, and citizens reduce participation in textile collection and reuse schemes.
- Consumers show limited willingness to pay for additional lifecycle services, such as inclusion of repair kits or repair vouchers at the point of purchase.

- Extended Producer Responsibility schemes could support consumer education, awareness-raising activities, and incentives for participation in textile collection and reuse systems.
- Greater transparency regarding the use of EPR funds and stronger inclusion of consumer perspectives in decision-making processes could improve public trust and engagement.
- Stronger policy measures addressing systemic drivers of overconsumption could support the transition towards more circular textile systems.

TRACEABILITY (DPP)

- Limited trust in sustainability claims, labels, and product information reduces consumer confidence in making informed purchasing decisions.
- Insufficient transparency regarding the destination and treatment of collected textiles undermines trust in circular systems.
- Complex or inconsistent information systems reduce the accessibility and usability of product traceability information for consumers.
- QR codes and detailed product information seem to have limited influence on consumer behaviour that is primarily driven by aesthetics and convenience.

- Clear, standardised, and accessible product information could improve consumer understanding of environmental impacts and support informed purchasing decisions.
- Greater transparency regarding product origin, production conditions, environmental impacts, care instructions, and end-of-life pathways could strengthen trust in circular textile systems.
- Simplified visual indicators could improve consumer understanding and usability of complex supply chain information.

POSITIVE EXAMPLE

The widespread adoption of second-hand purchasing is highlighted, particularly due to its affordability and the opportunity to access unique products. Repair is generally viewed positively, although its uptake was found to be strongly influenced by cost and convenience considerations. It should also be noted that consumers frequently extend garment lifetimes through reuse, repurposing, and informal repair practices.

Collection & Sorting

The **Collection & Sorting** phase represents the first stage of the post-consumer value chain. Collection is defined as the point at which a consumer relinquishes ownership and the textile acquires waste status. This distinguishes it from reuse activities such as resale or donation. The capture or yield of collected textiles is not only about volumes, it is also about quality of collected textiles. Sorting refers to the categorisation of collected textiles to determine the most appropriate valorisation pathway. Stakeholder feedback in this area identified collection and sorting as both the biggest bottlenecks and as the areas with the biggest opportunity for improving circularity.

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KEY CONSTRAINTS HIGHLIGHTED BY THE STAKEHOLDERS

STAKEHOLDER SUGGESTIONS FOR POSITIVE CHANGE

IMPLEMENTATION

- Poor maintenance of clean and dry collection conditions limits material quality and recovery potential.
- Limited or no demand for certain collected materials.
- Limited scalability of technological solutions for sustainable processes often derives from high energy costs and insufficiently supportive policy frameworks.

- More diversified collection methods could support textile collection performance across local collection systems.
- Clearer allocation of responsibility for the removal of zippers, trims, and non-textile elements may support the consistency of operational frameworks across sorting systems.
- Increased implementation of human-led sorting at collection hubs could reduce contamination and improve sorting efficiency.

GLOBAL DIMENSION

- Weak collection systems in parts of Africa, combined with the concentration of textile sorting outside the EU, create a mismatch in global feedstock availability.
- Misclassification of textiles as waste and unclear communication on export flows reduce recycling opportunities in partner countries such as India and Bangladesh.

- Greater prioritisation of clear communication may improve consumers' understanding of where their donations go, particularly when textiles are exported beyond Europe.

GOVERNANCE (EPR)

- *Further input on EPR governance is expected from the second Stakeholder Board and will be added in the final version.*

- More explicit inclusion of upcycling pathways within collection and sorting systems could support the circular use of materials across textile systems.
- Extended Producer Responsibility schemes could fund repair vouchers, swap shops, and reward systems to improve correct disposal practices amongst consumers.

TRACEABILITY (DPP)

- Location traceability within Digital Product Passports remains unresolved and contested.
- Limited accuracy and ability to apply fibre composition data at a large scale constrains reliable traceability across global textile value chains.

- ·Greater use of item-level identification, including tracking fibre origin, colour, brand, and repair history, could strengthen traceability across textile value chains.
- Increased use of applications to map donation points and sensors for detecting full containers may improve collection system efficiency.

POSITIVE EXAMPLE

There are several innovative public-private collaboration and context-specific solutions for textile waste collection in Finland, Sweden, Denmark, and the Netherlands including street containers, door-to-door collection, indoor bins, and ID-based collection systems.

CONSUMER PERSPECTIVE

- Textile containers and charity-based collection systems are the most trusted collection options.
- Convenience, accessibility, and transparency are critical for participation of consumers in the circular textile system.
- Consumers want clearer information on what happens to donated textiles after collection.



The **Recycling & Product Recovery** phase covers the handling of textile waste after collection and sorting. It includes recycling processes that convert textiles into secondary materials, either for reuse within the textile sector (closed-loop) or for other applications (open-loop). This phase also sits alongside the share of textile waste that is not recovered and instead ends up in landfills or incineration. Stakeholder discussions highlighted that extending garment lifetimes remains a systemic challenge as current recycling systems lack the scale and efficiency needed to enable full circularity

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KEY CONSTRAINTS HIGHLIGHTED BY THE STAKEHOLDERS

STAKEHOLDER SUGGESTIONS FOR POSITIVE CHANGE

IMPLEMENTATION

- Insufficient collection infrastructure and contamination within the waste stream lead to the disposal of reusable clothing.
- Declining quality of textiles entering the recycling cycle (ultra/fast fashion) reduces revenues from second-hand sales and limits the ability of recyclers to cover rising operational costs.
- Fragmented recovery solutions are often limited to specific brands and lack accurate end-of-life tracking.

- As per the waste hierarchy in the Waste Framework Directive, greater prioritisation of reuse and repair pathways may support more environmentally and economically efficient circular strategies.

GLOBAL DIMENSION

- Uneven regulatory conditions allow online marketplaces operating outside European jurisdiction to bypass circularity standards.

- Greater inclusion of African and Asian stakeholders in EU policy discussions could support more inclusive governance approaches.
- Increased recognition of the role of informal sellers, repairers, and recyclers in Africa and Asia may strengthen textile circularity outcomes.
- More consistent application of end-of-life liability requirements to textiles globally could strengthen accountability across international textile markets.

GOVERNANCE (EPR)

- **Further input on EPR governance is expected from the second Stakeholder Board and will be added in the final version.*

- Considerations for mandatory recycling targets for clothing could strengthen circular material recovery.
- Increased development of European recycling capacity may support recycling performance within EU circular economy frameworks.

TRACEABILITY (DPP)

- Methodological limitations hinder verification that recycled products are correctly attributed to waste-derived inputs.

- Clear differentiation between standard recycling and fibre-to-fibre recycling could improve transparency and traceability across recycling systems.
- Greater availability of information on the origin of textile waste and the timing of exports could strengthen monitoring and accountability..

POSITIVE EXAMPLE

Reuse creates jobs across global value chains. According to GUCDA, Ghana's second-hand clothing sector supports around 2.5 million livelihoods and generates USD 29.5 million in import tax revenue, with less than 5% of imports considered waste. In Mozambique, every tonne of second-hand clothing creates 7.8 jobs, supporting at least 288,000 workers and over 1 million livelihoods (Current Status of Mozambique's Second-Hand Clothing Market: Opportunities and Challenges, 2025). Oxford Economics further estimates that the second-hand clothing trade supports 110,000 jobs in the EU27+ and generates employment for 43,000 informal workers in Ghana, 68,000 in Kenya, and 15,000 in Mozambique.

CONSUMER PERSPECTIVE

- Consumers prefer reuse and repair over disposal whenever possible.
- Confidence in recycling systems depends on understanding how collected textiles are processed and recovered.
- Greater visibility of recycling outcomes could strengthen participation in circular systems.