Module 07 – Repository of Toolkits

1 Introduction to Circular Economy (CE)

2 CE in the context of textiles

3 CE policies and enablers for textiles

4 Need and Potentials in India

5 Developing Policy Instruments

6 Best Practice Examples

7 Repository of Toolkits



Objective: In this chapter specific, already **elaborated tools for a more circular and more resource-efficient textile sector** will be presented and shortly discussed for the training participants. The toolkits partly take up topics presented in the different modules of the EU REI textile toolkit.

Module 07 – 7.1 Example 1: Circular Business Model Canvas



Key Partners / Stakeholders

- Garment and accessories providers: brands, retailers, boutiques, garment manufacturers, small producers, second-hand sellers, etc.
- Online platform and technology suppliers and maintenance service providers
- Suppliers that repair, clean, and maintain garments and accessories
- Logistics suppliers that provide storage, transportation, and packaging
- Communications and branding partners
- Insurance and legal services partners
- Customers that provide feedback and comments
- Banks, investors, and other organizations that provide access to funding
- Citizens that benefit from sustainable practices

Key Activities

- Identifying the details of the model, i.e. renting/ leasing terms and the subscription system (if applicable)
- Establishing technological infrastructure and a digital platform and its continuous maintenance and tracking and/or establishing an offline store (if applicable)
- Engaging with brands, retailers, and other sources to build up a garment and accessories inventory and its continuous improvement
- Setting up the infrastructure for logistics (storage, packaging, and transportation)
- Managing demand, inventory, and deliveries
- Establishing a system for the regular maintenance, cleaning, tagging, registration, and repairing of garments and accessories
- Developing an effective distribution and take-back scheme
- Managing agreements and other legal relationships (warranty procedures, etc.) with customers
- Communication and marketing activities especially focused on the advantages of rental/leasing systems

Value Propositions

- Give consumers access to a shared wardrobe, reducing the environmental footprint of using fashion products
- Offer consumers the flexibility and convenience of wearing a variety of garments and accessories that can be used on different occasions, eliminating the need to purchase new items
- Provide brands&retailers with an infrastructure through which to rent out their garments and accessories
- Help brands keep track of their garments and accessories and collect them when they become unwearable, supporting their circularity strategies

Key Resources

- Human resources
- Online platforms and technological infrastructure (websites, apps, and social media capabilities)
- An inventory of garments and accessories (stock)
- Offline shops (if applicable), storage, and logistics infrastructure
- Office equipment
- Investment capital

Customer Relationships

- Long-term and strong relationships with consumers through subscriptions
- Trust and attachment generated through an attractive inventory and intense cleaning and maintenance services
- Opportunity to share experiences and interact through an online platform
- Business-to-business commercial relationships and offline/online points of sale provide opportunities to create CE-related relationships with customers
- Long-term and strong partnerships with brands&retailers

Channels

- Sales: Website, app, shops
- Communication: websites, social media

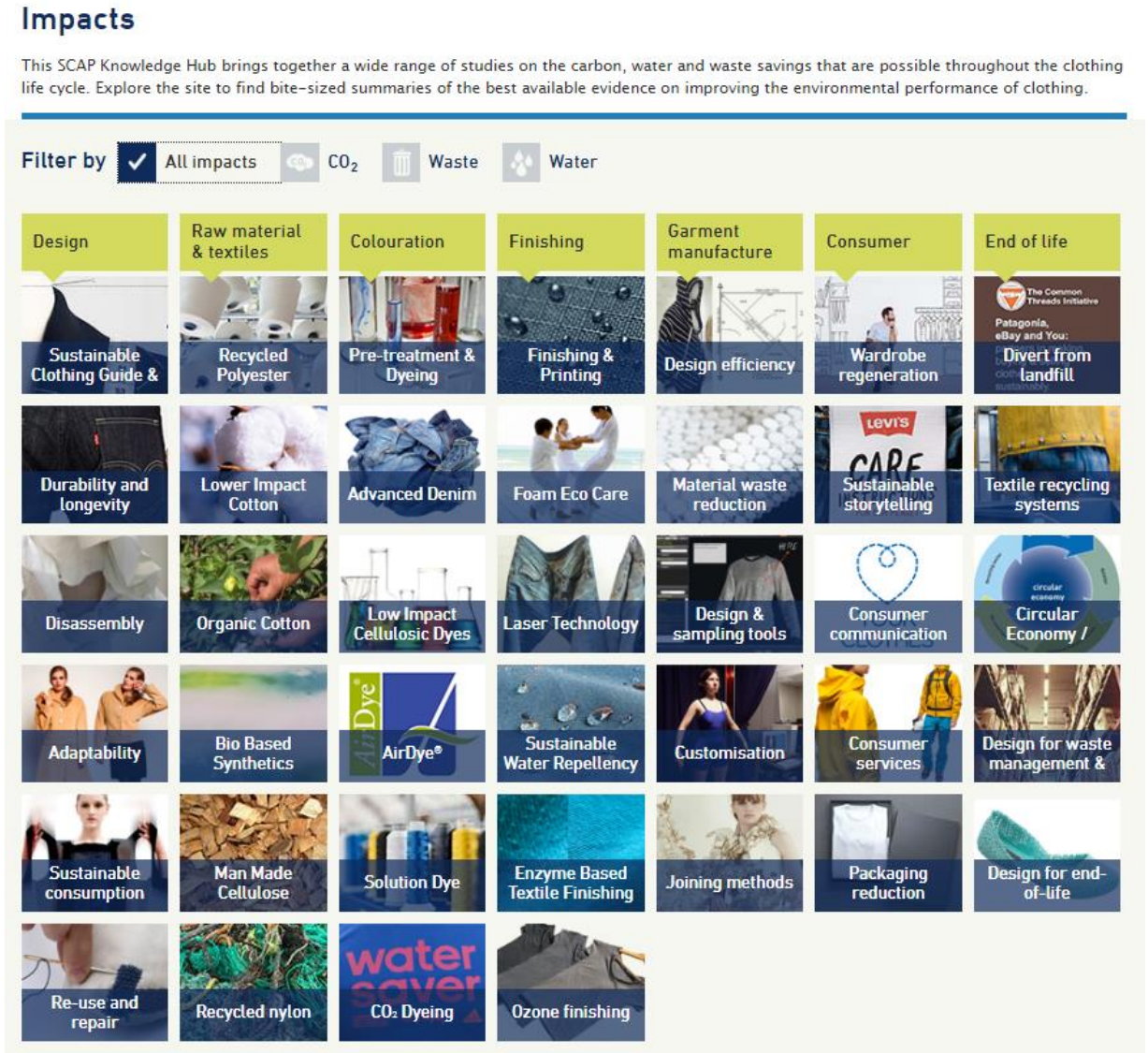
Customer Segments

- Consumers wanting high-quality garments and accessories and unlimited wardrobes at a low cost
- More common for fast fashion wearers, millennials, young to middle-aged, from upper to middle class, or individuals that have temporarily/rapidly changed sizes
- Consumers who consciously choose renting as a way of decreasing their environmental footprints
- Brands willing to rent/ lease their products (generally luxury, premium products)

SCP/RAC and BCSD-Turkey use the business model canvas in their paper "Circular Business Opportunities in the South Mediterranean: How can Businesses Lead the Way to Sustainable Fashion". The business model canvas is then developed for each strategy (the example on the right for leasing of clothes)

Source: SPC/RAC (2020): https://switchmed.eu/wp-content/uploads/2020/11/Circular-business-opportunities-in-SouthMed_Fashion.pdf

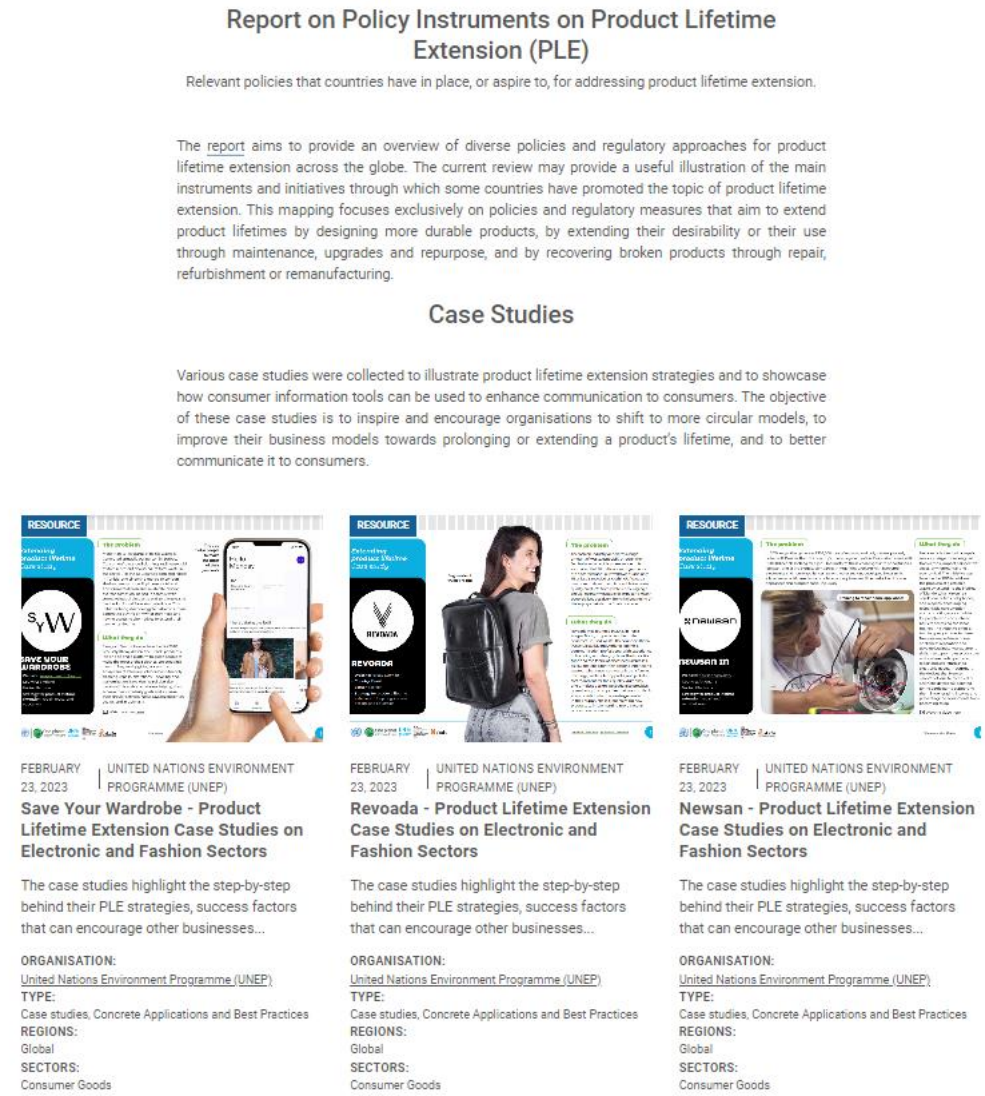
Module 07 – 7.2 Example 2: Knowledge Clothing Hub



WRAP (Waste and Resources Action Program) envisions a sustainable world by working at the intersection of governments, businesses, communities, and individuals, forming partnerships and initiatives to promote sustainability. They have created the **Clothing Knowledge Hub**, which raises awareness of eco-friendly initiatives and technologies along each of the value chain steps.

Source: WRAP (n.d.): https://ckh.wrap.org.uk/rawMaterialsAndFabrics/recycledPolyester?breadcrumb=Explore+by%3A+Impact

Module 07 – 7.3 Example 3: Production Lifetime Extension Hub



The **Product Lifetime Extension Hub** serves as a centralized platform for gathering resources and tools that **promote the extension of product lifetimes** to support a more circular economy. It offers reports, case studies, and relevant materials focused on measures and processes aimed at postponing product obsolescence through deliberate interventions, thereby contributing to the principles of the circular economy.

Source: UNEP (2019): https://www.oneplanetnetwork.org/programmes/consumer-information-scp/product-lifetime-extension

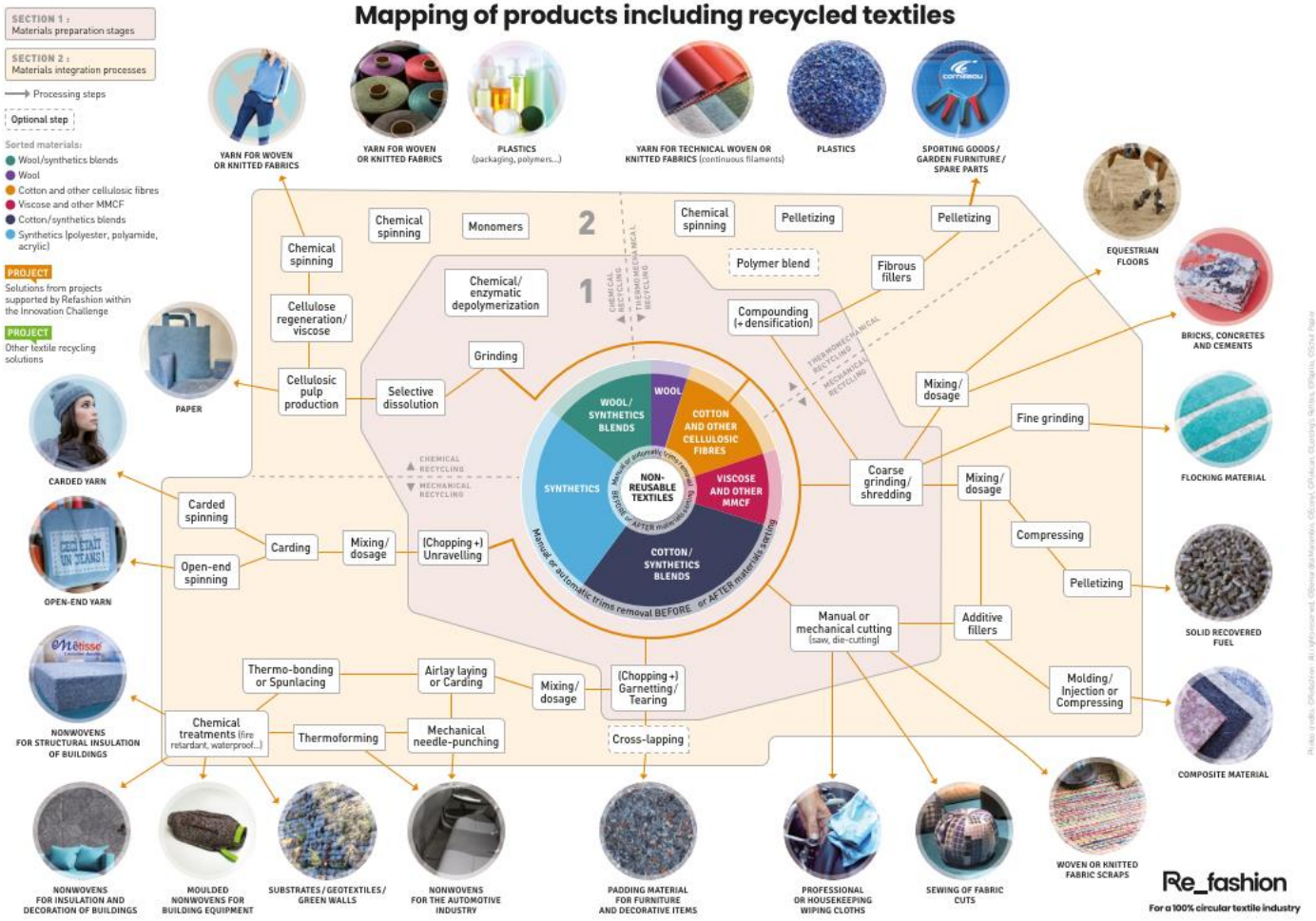
Module 07 – 7.4 Example 4: Close the Loop Toolkit



The **Close the loop toolkit** is a guide encouraging fashion entrepreneurs to contribute to the shift towards a circular economy by **implementing strategies at various phases of a garment's lifecycle:** Resources, Design, Production, Retail, Consumption, and End of life. They are advised to choose strategies that align with their business's size, focus, and location. The guide provides **practical tips, directs to existing resources and organizations supporting the circular economy**, and continually updates a database with inspirational cases.

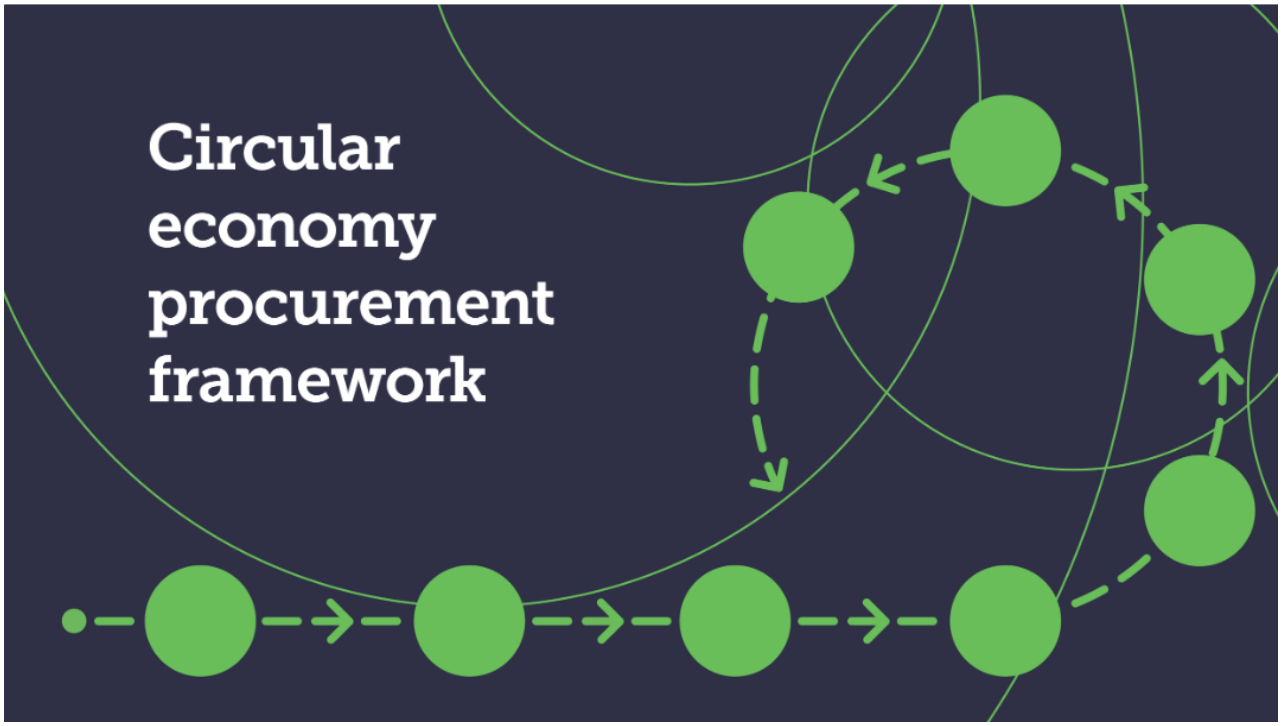
Source: Flanders DC (n.d.): https://close-the-loop.be/en/the-loop/cases?form=projectsIndexForm&phases%5B%5D=2&phases%5B%5D=5&q=&countries=

Module 07 – 7.5 Example 5: Recycle Re_Fashion



Recycle by Refashion, a digital platform and website, innovates within Refashion's mission to advance post-consumer clothing and footwear recycling. Through a subscription-based platform, it **maps recycling resources and connects professionals to accelerate the adoption of recycling solutions**, while the open-access website shares industry news and educational resources. This unique European platform streamlines sourcing recycled polyester, finding solutions for shoe recycling, accessing fabric swatches, and promoting the industrialization of recycling solutions, covering various materials like wool, cotton blends, synthetics, and more.

Source: Refashion (n.d.): https://recycle.refashion.fr/en/cartographies-du-recyclage/



The circular procurement framework offers a comprehensive perspective on the key junctures where organizations can transform their **procurement decisions into more circular practices and foster dialogues and cooperative circular alliances** with their suppliers. These overarching principles, as presented in this resource, must be customized to suit each unique business context and can vary based on industry, sector, company size, geographic location, and other pertinent variables..

Source: Ellen MacArthur Foundation (n.d.): https://www.ellenmacarthurfoundation.org/circular-economy-procurement-framework

Module 07 – 7.5 Example 7: CE Policy Toolbox

Circular Economy policy enablers		Circular strategies				
		Cross-strategy	Maintain, repair & upgrade	Reuse	Remanufacture	Recycle
	Other regulations	▪ Assessment of circular criteria in EU product registry for market access (i.e. "Conformité Européenne"/ CE marking)[3] including declaration of toxins[1]/non-toxic composition (SVHC)[3] ▪ Mandatory producer deposit systems for products reflecting raw material intensity of e.g. technical devices, electronic goods, clothing[3] ▪ Set absolute reduction targets for selected material streams[1, *] ▪ Set absolute waste prevention targets in general and for specific product groups[1, *]	▪ Extend legal warranties to planned technical lifetime, to three years for all goods, or five years for selected goods[1, 8] as incentive for service business models ▪ Extended commercial producer warranties[2b] to planned technical lifetime[1] or five years[3] ▪ Reversal of the burden of proof in legal warranties[2] ▪ Implement warranty statement obligation of manufacturers, and extension of the limitation period for warranty claims[2, 2b] ▪ "Right to repair" by users and autonomous repair facilities[7, *] including right to update (obsolete) software[7, *]	▪ Differentiate new vs. used goods in international trade statistics[1] ▪ Mandatory use or quota for retailers to use standardised reusable packaging[1] ▪ Extension of single-use plastics policy to more goods[2] ▪ Prohibition of destruction of returned products from online shopping[3]	▪ Duty to remanufacture complex technical products if economically and environmentally reasonable[3] ▪ Remove nation, EU, and international regulations which put reman at a disadvantage (e.g. health and safety regulations; regulations prohibiting sale of remanufactured products as "new")[4] ▪ Adopting a government strategy for reman with associated targets and milestones[4]	▪ Introduce positive lists and "safe-by-design" chemicals into the EU's product and chemicals regulations[1, 7, 9] ▪ (Candidate) substances of very high concern (SVHC) in materials are declared in safety data sheets with higher resolution (100 ppm instead of REACH's 1000 ppm)[9] ▪ Stricter REACH regulations regarding inclusion of substances of very high concern (SVHC) and their elimination from products[9]
III. Standards		▪ Supporting the development of broader CE standards (e.g. ISO/TC 323)* ▪ Supporting open-source standard for CE data and information[2]	▪ Standardisation of components and connectors especially in electronic products[2] ▪ Standardisation of replaceable battery form factors for high impact good categories (e.g. mobile phones)*	▪ Supporting the development of quality standards for used goods by national bodies (e.g. Roundtable Reparatur)[2] ▪ Standardisation of universal electric devices (e.g. chargers)[7, *] ▪ Further standardisation of returnable packaging systems (e.g. standardised bottle)[1]	▪ Developing quality standards and labels for the reliability of remanufactured products/components[4] ▪ Development of international remanufacturing standards (e.g. RIC001.1-2016)[10] and diffusing them through linkage with environmental management systems and standards[3, 5]	▪ Development of new and reference to existing standards and certification systems for high quality recyclates with transparency regarding physical, chemical, biological properties and quality assurance regarding toxicological properties (e.g. RAL, cradle to cradle)[1, 2]

The **CE Policy Toolbox** outlines key policy instruments categorized based on two dimensions: the **type of policy instrument** and the **circular economy (CE) strategy.** By clearly defining each circular strategy and systematically examining pertinent policies, this toolbox aims to **empower policymakers to move beyond the prevailing emphasis on recycling** in policy development. Furthermore, the differentiation of policy types for each circular strategy facilitates the creation of a comprehensive policy mix, encompassing economic incentives, regulations, information dissemination, and public procurement.

Source: Circular Economy Initiative Deutschland (2020):Circular Business Models: Overcoming Barriers, Unleashing Potentials (squarespace.com)

The Jeans Redesign Guidelines



The **Jeans Redesign Guidelines** serves as a practical **toolkit for advancing circularity** in the fashion industry, particularly focusing on jeans. Developed through collaborative efforts with input from 80 experts spanning industry, academia, and NGOs, these guidelines encourage prominent brands, mills, and manufacturers to revolutionize the design and production of jeans.

Transparency and shared learning are integral aspects of the project. Participants are obligated to **publicly update on their progress and showcase the methods employed to align with the guidelines**. In 2021, the guidelines' 'minimum bar' was elevated to heighten ambition levels and propel the industry forward.

Source: Ellen MacArthur Foundation (2023): https://emf.thirdlight.com/link/The_Jeans_Redesign_Insights_report_2021-2023/@/preview/1?o

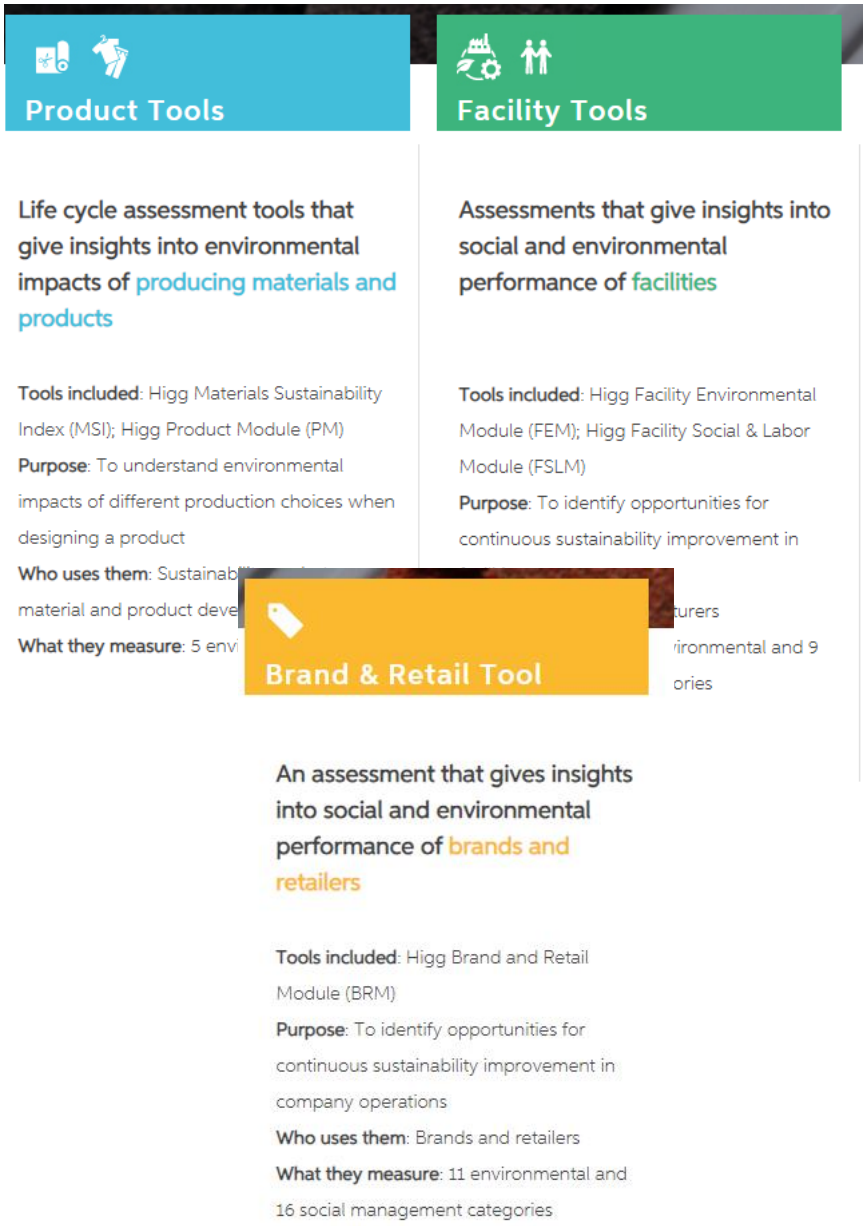
Module 07 – 7.5 Example 9: Circular Toolbox



The **Circular Toolbox** is designed to assist apparel brands in creating and launching their own **circular pilots**, specifically focusing on **rental or resale business models**. This comprehensive toolbox leads brands through a five-step circular innovation process, starting from obtaining top-level approval and assembling a team to piloting the new concept on the ground.
Included resources consist of **design thinking and research tools, workshop sheets, facilitator's guides**, and a **podcast featuring brands** that have successfully undergone the same process. The toolbox provides specific guidance on when and how to use each tool.

Source: Circle Economy (n.d.): https://www.thecirculartoolbox.com/module/getting-started

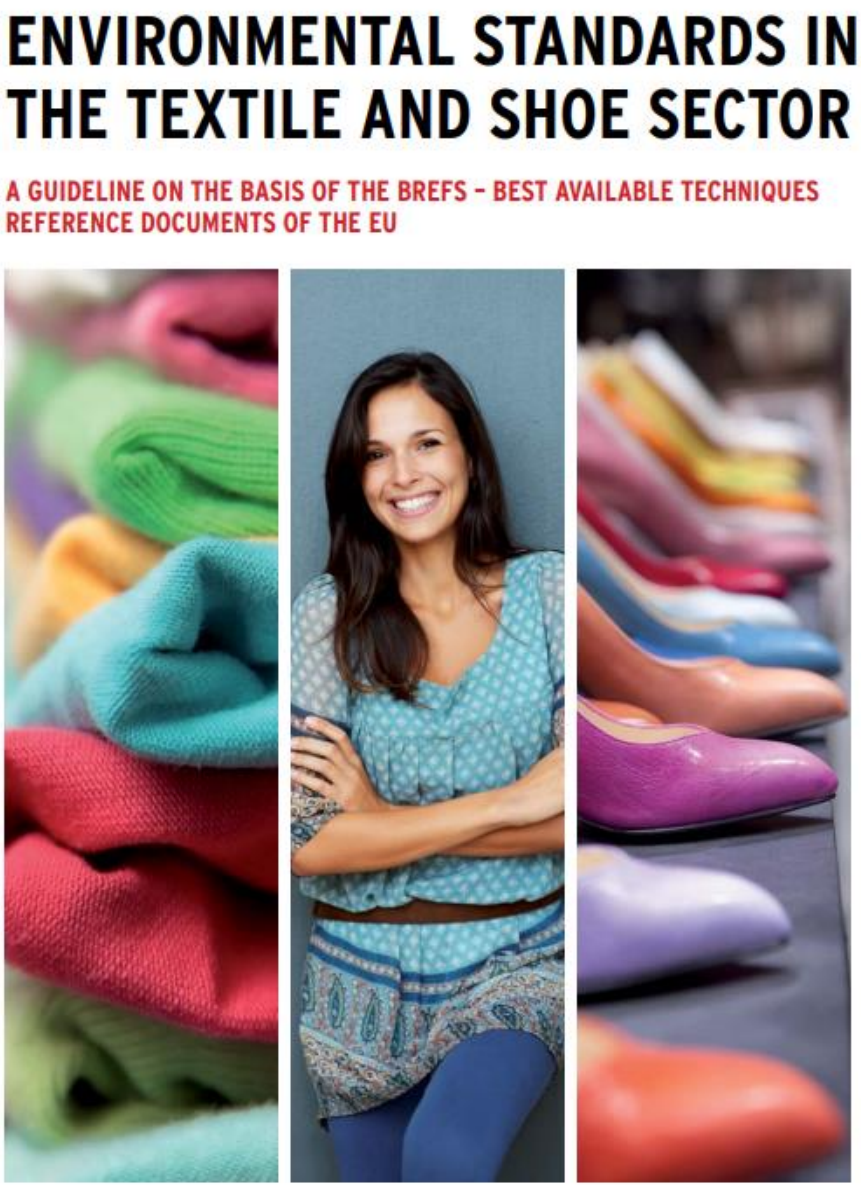
Module 07 – 7.5 Example 10: Higgs Index



The **Higg Index** is a comprehensive suite of **tools designed for standardized measurement of value chain sustainability,** serving as a central element in the Sustainable Apparel Coalition's (SAC) mission to drive transformative impact in businesses. It provides a **common language and platform for companies and organizations to track and measure their social and environmental impacts**, enabling them to leverage verified data for performance measurement, improvement, and sharing.

Comprising five tools, including the Higg Facility Environmental Module (FEM), Higg Facility Social & Labor Module (FSLM), Higg Brand & Retail Module (BRM), Higg Materials Sustainability Index (MSI), and Higg Product Module (PM), the Higg Index **assesses both the social and environmental performance of the value chain** and the environmental impacts of products.

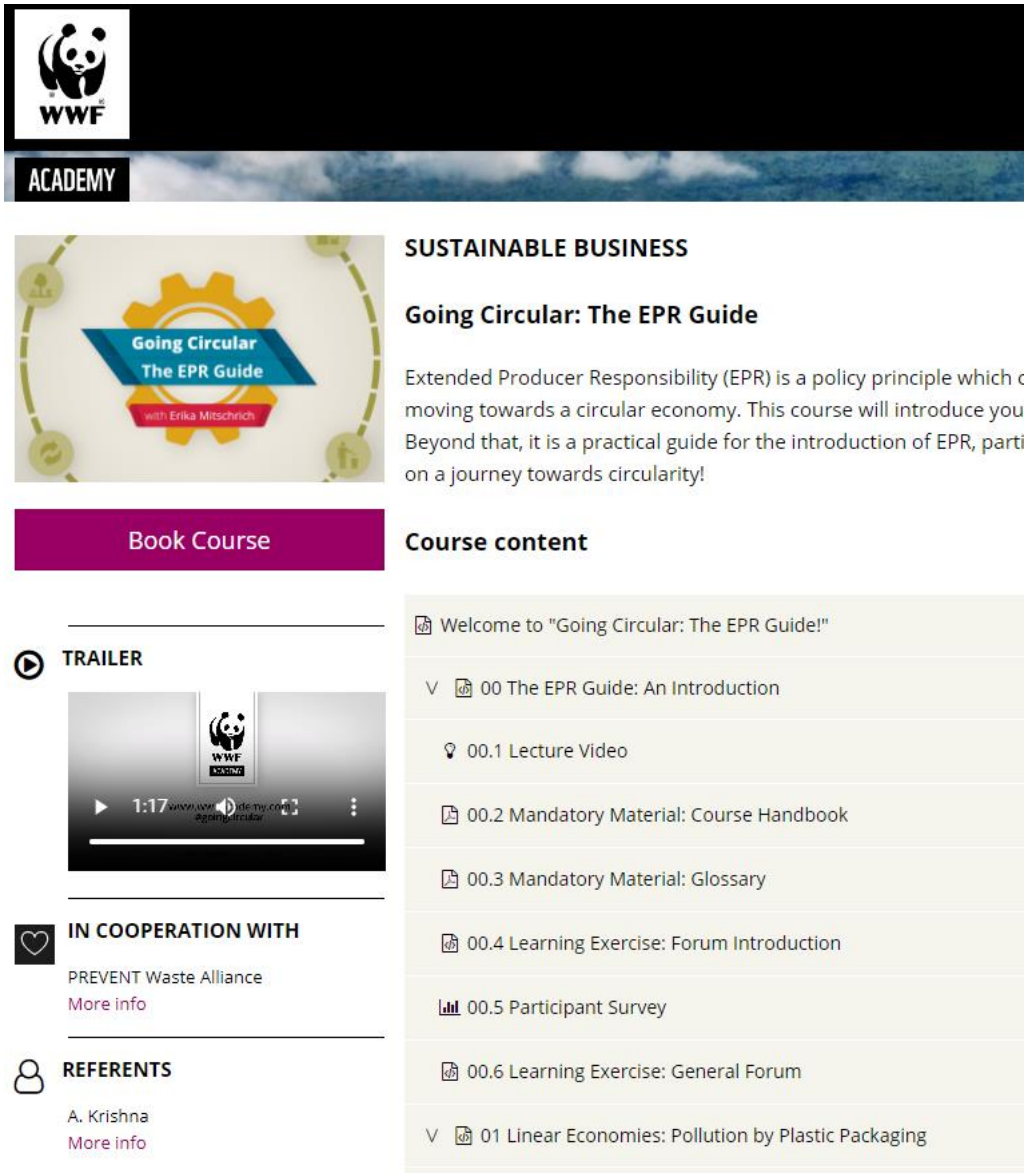
Source: Sustainable Apparel Coalition (n.d.): https://apparelcoalition.org/tools-programs/higg-index-tools/



The guideline is directed towards companies involved in textile or shoe production, specifically those operating in the global market and supplying goods to Europe. It's for those who want to enhance environmental standards due to consumer demand or market pressures but are unsure how to start. The document highlights the increasing importance of environmentally-friendly manufacturing in consumer markets. It aims to demonstrate that **adopting the Best Available Techniques (BAT) for eco-friendly production not only benefits the environment but also significantly benefits the company**. The guideline is based on **Best Available Techniques Reference Documents (BREFs)**, globally recognized resources offering practical experience and continuously evolving expertise in technical environmental protection within the textile and shoe industry.

Source: Federal Environment Agency (2011): https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/4289.pdf

Module 07 – 7.5 Example 12: Online training toolkit on EPR by WWF



Extended Producer Responsibility (EPR) stands as a crucial policy principle in eliminating pollution from packaging waste and propelling us toward a circular economy.

This program, hosted on the WWF Academy among a plethora of other online training modules, **targets policymakers, companies engaged in the packaging lifecycle, waste management service providers, and civil society groups** (e.g., NGOs, researchers, students). Its primary objective is to **familiarize participants with the fundamental principles of EPR schemes.**

Furthermore, it provides a practical, hands-on approach to implementing EPR, specifically designed for developing nations. The course is free to register for and spans a duration of 12 hours.

Source: WWF (n.d.): https://www.wwf-akademie.de/catalog/view/course/id/215

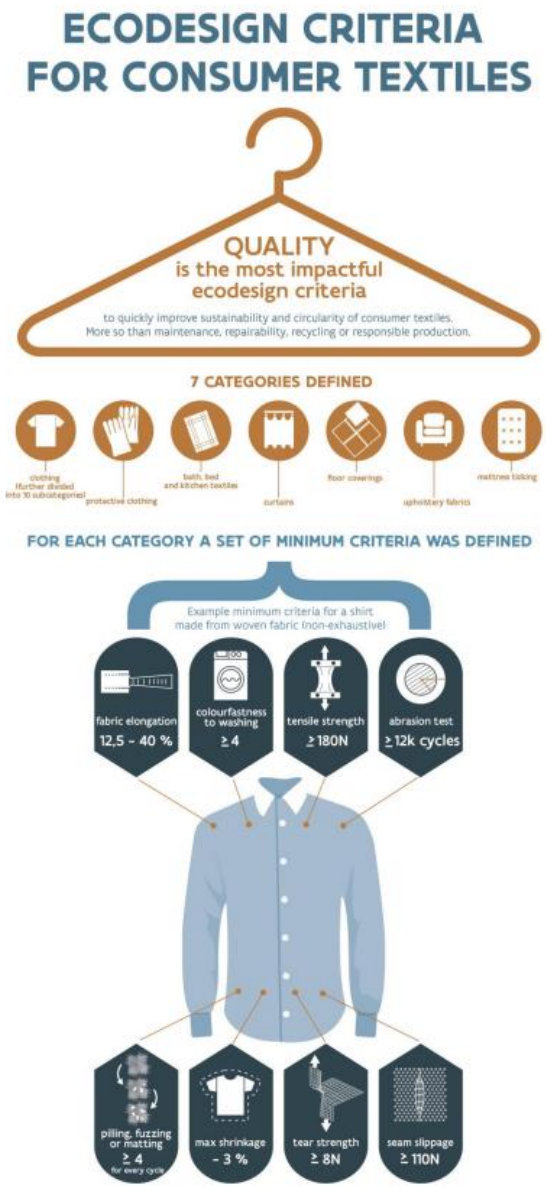
Module 07 – 7.5 Example 13: Potential Ecodesign Requirements for Textiles

Requirement	Themes addressed	Description	Type of requirement		
			Informative	Threshold	Other
1. Declaration of, and/or minimum threshold for recycled content	Recycling	Textile products must carry a visible label with a declaration of the percentage by weight content of recycled materials AND/OR Products within [*stated fibre group*] must contain a minimum of *X*% recycled material by weight.	✓	✓	
2. Durability of fasteners	Durability	Fasteners should be able to be fastened and unfastened *X* number of times without failure.		✓	
3. Availability of spare parts	Durability Reparability	The producer must make spare parts available for *X* years after product has been on sale, or alternatively must provide spare parts with the product (e.g. extra buttons, thread of correct colour, replacement zips etc.).			✓
4. Design for disassembly	Durability Reparability Reusability Recyclability	The product logo, buttons and zips should be removable within *X* seconds. Seams should be disassembled within *X* seconds but without reducing durability under normal use and care. Instructions should be provided on how to do this.		✓	
6. Provision of detailed bill of materials	Recyclability Recycled content	The product must include, or link to, a list of all materials included in the product and at what level they are pure or mixed with other materials, and the share they make up by weight of the product down to a chosen threshold (e.g. 1%) Products that are made from a single material (with tolerance around 98%) must be stamped with a "100% recyclable" stamp.	✓		
7. Care and maintenance labelling	Durability Reparability	The product must be accompanied with information (or link to information) on recommended care and maintenance tips that can prolong the lifetime of the product (and reduce use phase impacts).	✓		
8. Dimensional changes during washing and drying	Durability	Between minus *X* % and plus *X* % for woven products, and durable non-wovens, other knitted products.		✓	
9. Colour fastness to washing	Durability	Colour-fastness to washing must be at least *X* (test score) for colour change and at least *X* (test score) for staining.		✓	
10. Colour fastness to perspiration (acid, alkaline)	Durability	Colour fastness must be at least *X* (test score for colour change and staining).		✓	

- The project focused on establishing **ecodesign standards for non-energy-related products**, primarily using textiles as a case study and extending the approach to the furniture sector. It suggested that existing eco-labels could serve as a starting point for these requirements but highlighted the **need for stricter, evolving standards under the Ecodesign Directive**.
- The proposed requirements revolved around **enhancing durability, facilitating reuse, repair, and recyclability.** It emphasized the importance of consumer guidance on disposal and providing recyclers with detailed material information for effective recycling.
- Additionally, to bolster the market for recycled materials, the project recommended **setting minimum recycled content criteria** for new products.

Source: Nordic Council of Ministers (2018): http://norden.diva-portal.org/smash/get/diva2:1221509/FULLTEXT01.pdf

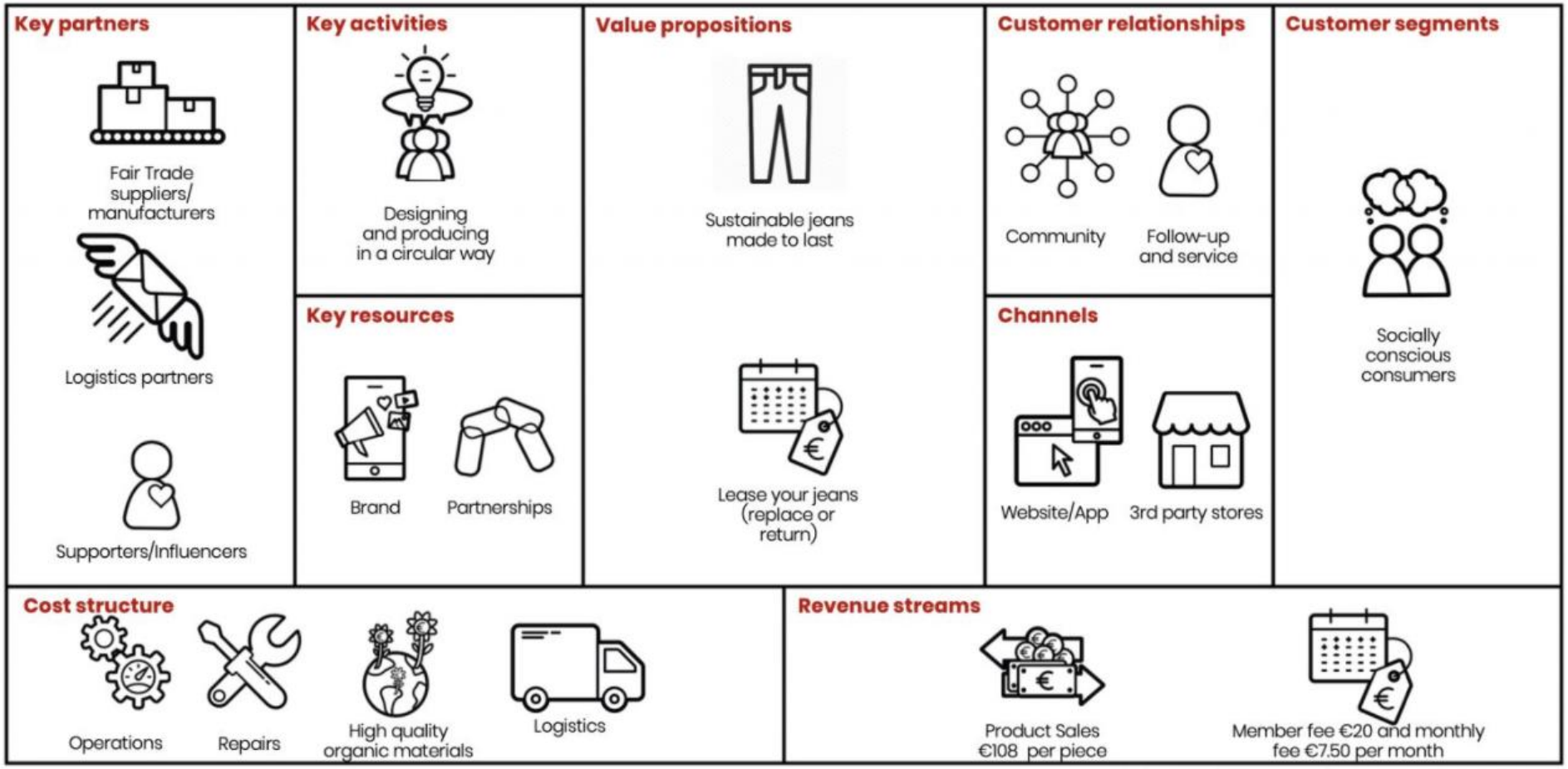
Module 07 – 7.5 Example 13: Ecodesign criteria for consumer textiles



- The study categorizes textile products into seven main categories, exploring criteria related to their ecodesign regulation.
- It identifies three key aspects: **life prolongation, closing the loop, and responsible production**, each with subcategories detailing quality, recyclability, and labor conditions. However, implementing clear criteria, especially for recyclability and responsible production, proved challenging due to evolving technologies.
- The study emphasized the **importance of stakeholder collaboration to develop solid quality standards**, **legislative revisions to combat greenwashing, and the promotion of voluntary labels** to ensure responsible production practices.
- With the Textile Strategy being launched recently, the content of this report, made by experts in the field, could serve as input for further developments on EU policy level

Source: OVAM (2021): https://circulareconomy.europa.eu/platform/sites/default/files/ecodesign_criteria_for_consumer_textiles.pdf

Exercise: Select one of the above presented value chain steps and think of a specific business model idea (like the one below) to enhance circularity in this value chain stage.



Source: adelphi (2022)