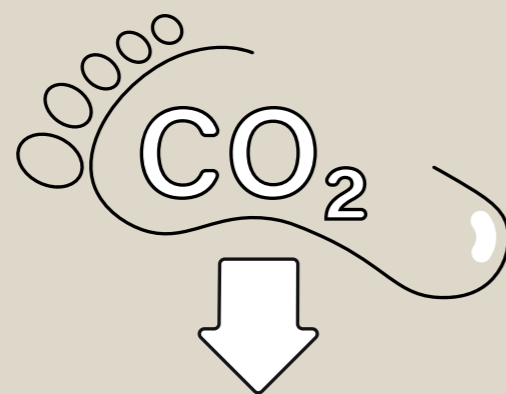
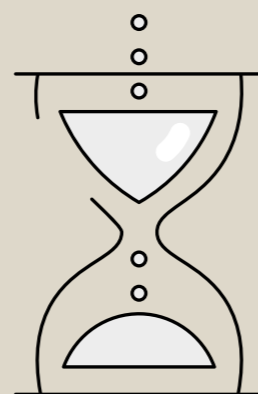


STRATEGIC PRODUCT GUIDE

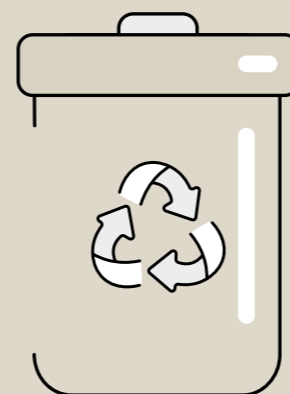
a guide to optimize and prepare products for
ECODESIGN FOR SUSTAINABLE PRODUCT REGULATION (ESPR)



REDUCING CARBON
FOOTPRINTS



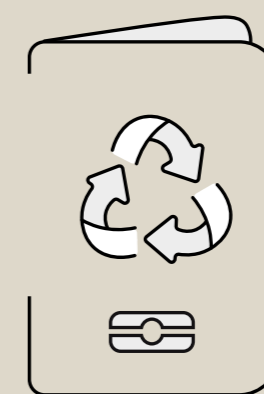
EXTENDING
USE PHASE



PREVENTING
WASTE



SUSTAINABLE
OPERATIONS



TRACEABILITY IN
VALUE CHAIN

01

BACKGROUND & INTRODUCTION

THE FASHION & TEXTILE SECTOR

Textiles are integral to daily life, appearing in clothing, workwear, furniture and in many other products. The production and consumption of textiles continue to grow and their impact on climate, on water and energy consumption and on the environment is escalating. Serious efforts are needed from businesses, policy makers and other stakeholders to address this. Establishing common Ecodesign requirements is key to fostering the transition to sustainable and circular business models and industry. Urgent action is needed in the sector to address:

- High environmental impacts of textiles.
- Lack of product performance (low quality, fast and disposable fashion).
- Greenwashing and lack of transparent and credible information on products.
- Growing amounts of textile waste, wasteful production and consumption practices.

EU STRATEGY FOR SUSTAINABLE AND CIRCULAR TEXTILES

Since 2022, the EU has put a strong focus on textiles to address these challenges and defined a 2030 strategy and vision for textiles, which foresees that:

- All textile products placed on the EU market are durable, repairable and recyclable, to a great extent made of recycled fibres, free of hazardous substances, produced in respect of social rights and the environment.
- "Fast fashion is out of fashion" and consumers benefit longer from high quality affordable textiles.
- Profitable re-use and repair services are widely available.
- The textiles sector is competitive, resilient and innovative with producers taking responsibility for their products along the value chain.

WHAT IS ESPR?

The Ecodesign for Sustainable Products Regulation (ESPR) is part of the EU Green Deal and the Sustainable Products Initiative, which aims to establish sustainable and circular products as a standard across the European Union (EU).

The ESPR focuses on integrating environmental sustainability considerations into products and processes throughout their value chain.

GENERIC ESPR GOALS



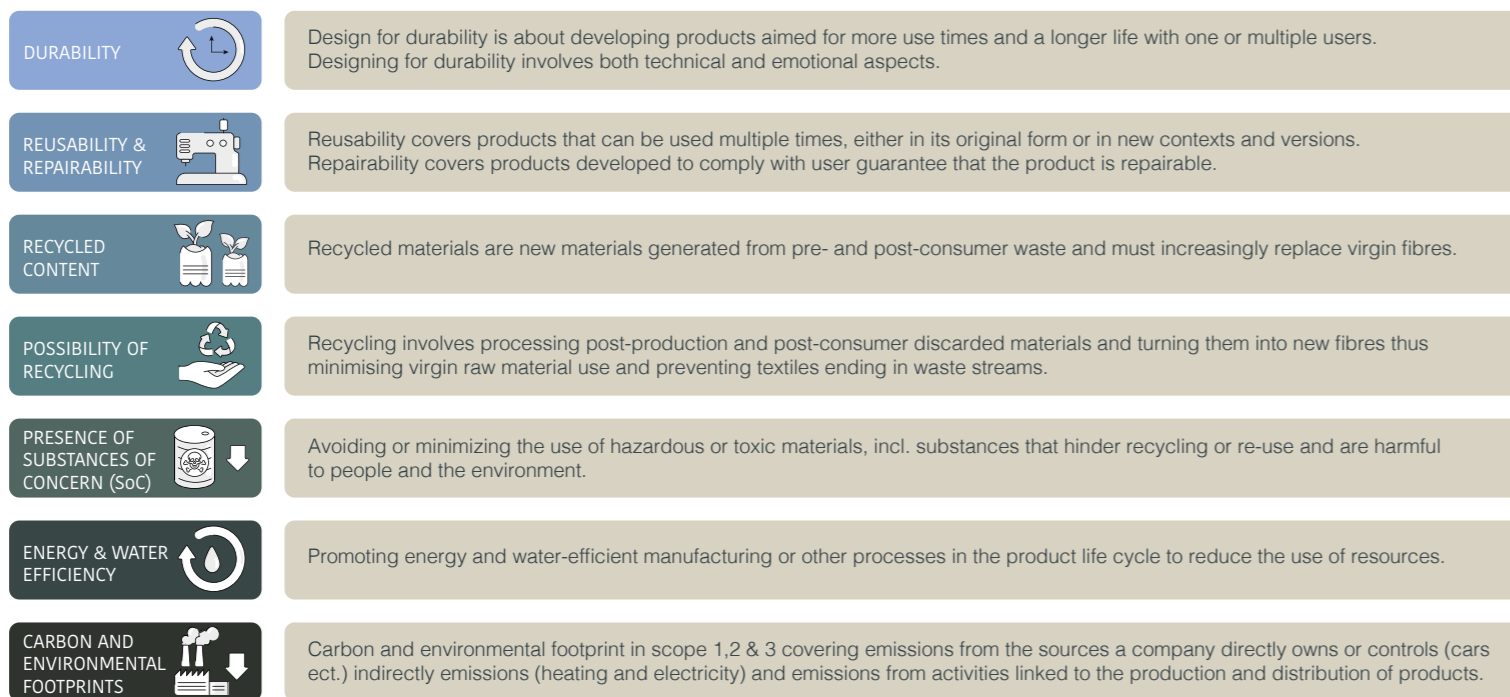
02

BACKGROUND & INTRODUCTION

ESPR TEXTILE REQUIREMENTS

ESPR defines minimum product performance requirements, such as ensuring products are designed to be durable, repairable, and recyclable. Companies must meet these standards to sell textiles within the internal market.

ESPR introduces two types of requirements for textile products: "Physical Performance" and "Information Requirements" in the form of Digital Product Passport (DPP).



KEY PRODUCT ASPECTS OF ESPR ALONG VALUE CHAIN

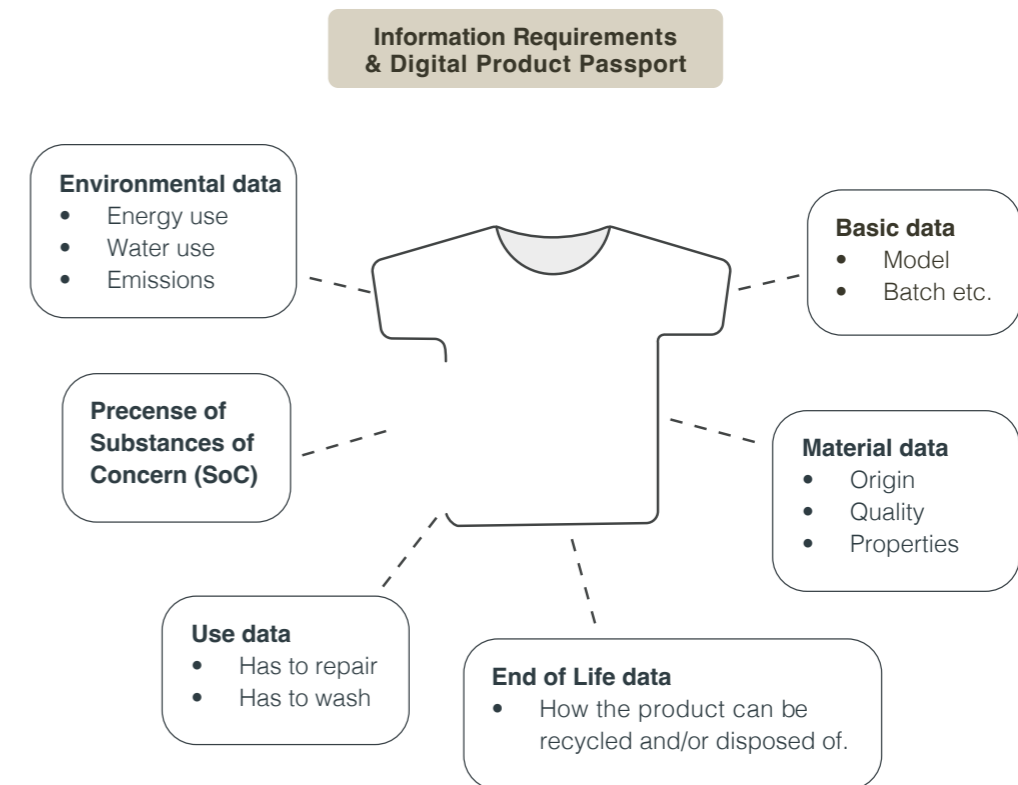


DIGITAL PRODUCT PASSPORT (DPP)

The DPP serves as a digital platform designed to gather and disseminate information about a product throughout its life. The information requirements are indicative and are currently being developed by the EU.

PRODUCT SPECIFIC REQUIREMENTS

DISCLAIMER: THESE ARE INDICATIVE



03

BACKGROUND & INTRODUCTION

STRATEGIC PRODUCT GUIDE INTRODUCTION

This guide is tailored for companies in the fashion and clothing sector aiming to assist them to prepare their strategic product design, business model, and value chain operations for compliance with ESPR. The tool is aligned with the growing necessity for sustainable product development practices, influenced by EU Textile Strategy and regulations like the EU ESPR.

Strategic Product Guide helps companies to build compliance with the forthcoming Ecodesign regulation (ESPR), and hereby, decision making for minimizing environmental impact across the product lifecycle, and ensuring long-term viability. It assists to move beyond the take-make-waste model, and it is recognizing that much of product's environmental impact is determined during the design and production phase.

APPROACHES OF HOW TO USE THE GUIDE

The guide is based on the position a successful compliance with ESPR is depending on:

- 1) Company strategy that includes sustainability goals
- 2) Collaboration with suppliers and other stakeholders
- 3) An in-depth understanding of the company's products and processes across a product's lifecycle

The guide focuses on products, recognizing that the success of any chosen strategy is closely linked to the properties, characteristics, and realization of those products. Its purpose is twofold: to serve as a tool for evaluating individual products and product portfolios, and to facilitate dialogue across the company's various departments, suppliers, and other stakeholders in the value chain.



The figure illustrates how the guide unfolds within the Ecodesign for Sustainable Products Regulation. The grey ring represents the canvases referring to product strategy. These decisions often involve management level. The orange circle represents the operational canvases, including material, trim, form, manufacturing and the product summary page. These decisions often involve product development such as design, purchasing and pattern making.

04

BACKGROUND & INTRODUCTION

KEY QUESTIONS TO UNDERSTAND IMPACTS OF ESPR

- How do you currently design, develop, and manufacture products?
- Do you have a baseline understanding of your product's performance (incl. environmental performance)?
- How do you need to adapt your product design, development, and manufacturing processes to enable ecodesign and a digital product passport?
- Can you improve the product qualities to align with durability and prolonging the lifetime of the products?
- How does the ESPR legislation impact your internal and value chain processes?
- How much product related data do you have about your products, and how do you need to adapt and optimise your data management processes for DPP?
- What internal resources are going to be required to meet the requirements, and in what areas of the business?

INFORMING SOURCES

[Ecodesign for Sustainable Product Regulation \(ESPR\), EU](#)

[Digital Product Passport \(DPP\), EU](#)

[Green Public Procurement \(GPP\), EU](#)

[ISO Standards, Dansk Standard](#)

[Sustainable Design Cards, Kolding School Of Design](#)

[The Nordic Textile Collaboration, Miljøstyrelsen](#)

DISCLAIMER

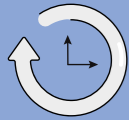
The guide focuses on the development of clothing products, with its text and visualizations based on the current understanding of ESPR and DPP. While the guide does not offer definitive solutions, it highlights key areas that companies should address to ensure compliance with ESPR. It is essential for companies to remain informed and up-to-date on evolving ESPR regulations and requirements.

PRODUCT STRATEGY

PRODUCT ELIGIBILITY, VALUES & ESPR COMPLIANCE

Focuses on the overall product strategy of the company to enable the brand to comply with upcoming regulation, strategy creates the framework for product development.

DURABILITY



THE WHAT (definition)

Design for durability is about developing products aimed for more use times and a longer life with one or multiple users. Designing for durability involves both technical and emotional aspects.

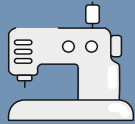
THE WHY (purpose)

A design for durability strategy aims to contribute to longer use of products and thus reducing the number of products produced, distributed, and discarded.

THE HOW (method/tools)

Focus on the aesthetic & technical properties of products, addressing design parameters, body types, fit & sizing, material choices, accessories, manufacturing and communication.

REUSABILITY & REPAIRABILITY



THE WHAT (definition)

Reusability covers products that can be used multiple times, either in its original form or in new contexts and versions. Repairability covers products developed to comply with user guarantee that the product is repairable.

THE WHY (purpose)

Reducing the need for new products lowers the pace of launching new products, contributes to reduce resource use and generation of waste. It creates opportunities for circular business models.

THE HOW (method/tools)

Implementing services that support product reusability aspects. Applying design principles that support multiple use cycles, easy repair and product adjustments for changing bodies. Implementing services that support product reusability (e.g. take-back, repair, resell, refurbish) and circular business models.

RECYCLED CONTENT



THE WHAT (definition)

Recycled materials are new materials generated from pre- and post-consumer waste and must increasingly replace virgin fibres.

THE WHY (purpose)

Virgin fibres and materials are becoming scarce resources, and it is increasingly important to keep resources in a circular loop opposed to ending in waste streams.

THE HOW (method/tools)

Consider the use of recycled material in the product development phase. Attention to properties and characteristics of recycled materials.

POSSIBILITY OF RECYCLING



THE WHAT (definition)

Recycling involves processing post-production and post-consumer discarded materials and turning them into new fibres thus minimising virgin raw material use and preventing textiles ending in waste streams.

THE WHY (purpose)

At some point all clothes outlive their functionality and usability and must be prepared for recycling. Designing with materials intended for recycling (e.g. mono materials) and/or using recycled materials contributes to reduce the use of virgin raw materials (resources).

THE HOW (method/tools)

Design for recycling involves specific attention to choices and intake of materials (mono and recyclable materials), trim, and design for disassembly to enable easier recycling.

PRESENCE OF SUBSTANCES OF CONCERN



THE WHAT (definition)

Avoiding or minimizing the use of hazardous or toxic materials, incl. substances that hinder recycling or re-use and are harmful to people and the environment.

THE WHY (purpose)

Reducing the use of harmful chemicals in garments will be beneficial both for the environment and for the user and will ease post use recycling of materials.

THE HOW (method/tools)

Require profound knowledge about all the materials the company intend to use. Certifications can support making the responsible choices for materials, compositions, dyeing and other finishes.

ENERGY & WATER EFFICIENCY



THE WHAT (definition)

Promoting energy and water-efficient manufacturing or other processes in the product life cycle to reduce the use of resources.

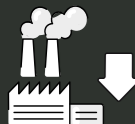
THE WHY (purpose)

Production and use phases have a large consumption of water and energy resources that are already scarce.

THE HOW (method/tools)

Promoting energy and water-efficient manufacturing or other processes in the product life cycle. E.g. choosing materials that are less water and energy demanding, both in production and during maintenance and use. Communication to users about optimal maintenance behavior.

CARBON & ENVIRONMENTAL FOOTPRINTS



THE WHAT (definition)

The carbon and environmental footprint in both scope 1,2 and 3 covering emissions from the sources a company directly owns or controls (cars ect.) indirectly emissions (heating and electricity) and emissions from activities linked to the production and distribution of products.

THE WHY (purpose)

Contribute to meeting the goals of the Paris Agreement on maximum temperature rise (1.5 degrees) and comply with the ESPR and other regulations linked to Green Deal.

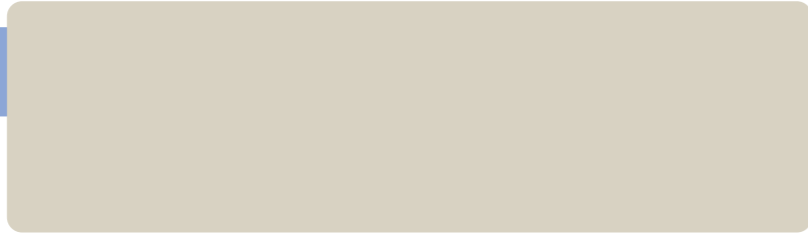
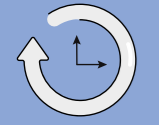
THE HOW (method/tools)

Develop a company strategy that in the short and long term takes responsibility for all tiers in the value chain.

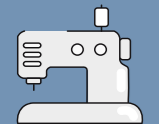
PRODUCT STRATEGY

PRODUCT ELIGIBILITY, VALUES & ESPR COMPLIANCE
Focuses on the overall product strategy of the company to enable the brand to comply with upcoming regulation, strategy creates the framework for product development.


DURABILITY



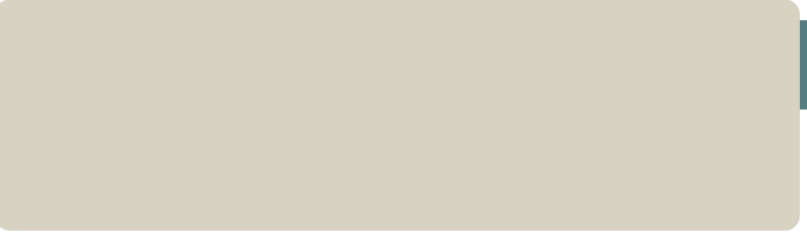
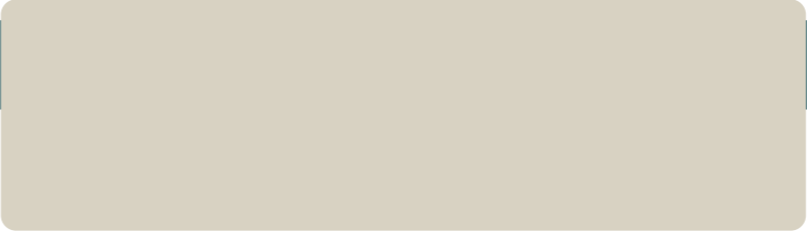
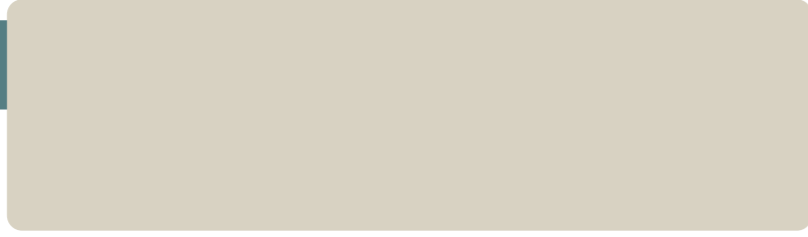
REUSABILITY & REPAIRABILITY



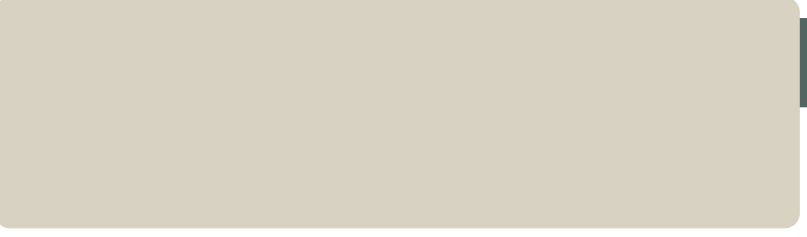
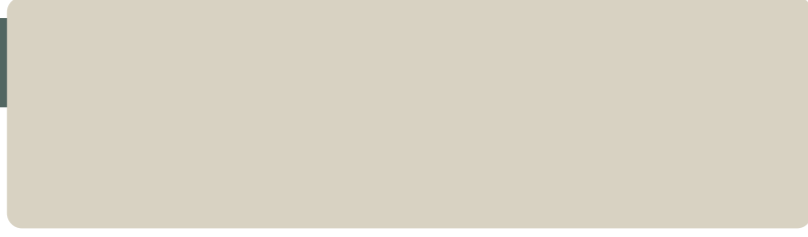

RECYCLED CONTENT



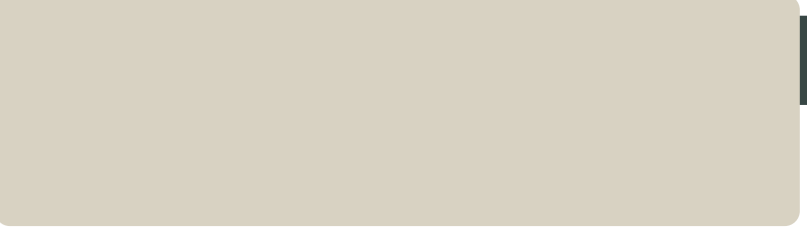
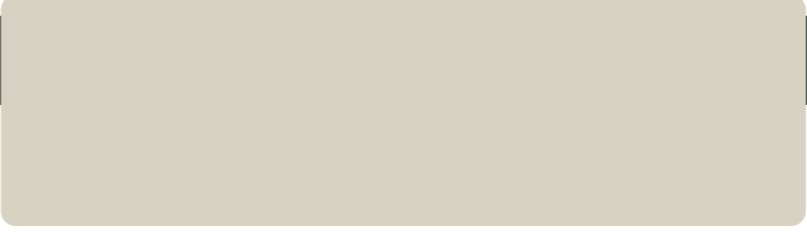
POSSIBILITY OF RECYCLING



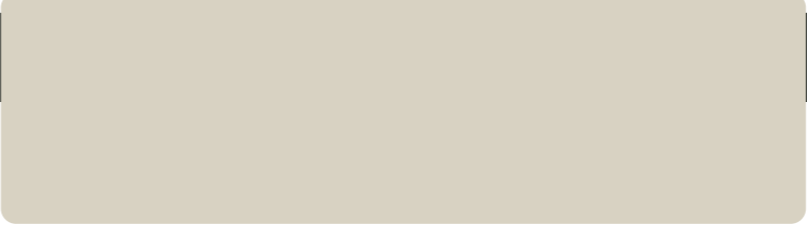
PRESENCE OF SUBSTANCES OF CONCERN



ENERGY & WATER EFFICIENCY



CARBON & ENVIRONMENTAL FOOTPRINTS



MATERIAL

DESIGN & BUYING

Item no. _____

Composition _____

Weight g/m² _____

Construction _____

SWATCH
Main, lining, interling, etc.

	FIBERS & COMPOSITION	CONSTRUCTION	DYEING & AOP	FINISHING
DURABILITY 	<p>Considering choice of fibers to increase durability and prolong use phase, e.g. fiber length, thickness and spinning methods. Consider the aesthetic change of fiber over time e.g. patina and odour.</p>	<p>Test by ISO Standards e.g.: ISO 6330 Dimension change ISO 13937-1 Tear properties ISO 12945-2 Pilling ISO 12947-2 Abrasion</p>	<p>Test by ISO Standards e.g.: ISO 105-A02 Color change</p>	<p>Test of fabric after finish for possible impact on durability. Test by ISO Standards e.g.: ISO 13937-1 Tear properties ISO 12945-2 Pilling ISO 105-A02 Color change</p>
REUSABILITY & REPAIRABILITY 	<p>Considering the choice of fibers to support the intended use of the product and fibers which is possible to repair.</p>	<p>Consider construction due to optimising the repairability & reusability of the material, e.g. set internal minimum requirements for ISO Standards. Devlop and offer materials, guides & help for repairing accessible for users.</p>	<p>Test if the dyeing or AOP processes contaminate the possibility of reuse and/or repairability of the material e.g. digital print on white fabric make it difficult to repair tearing, aesthetics of print can affect reuse.</p>	<p>Test if finishing process contaminates the possibility of reuse.</p>
RECYCLED CONTENT 	<p>Documentation of recycled content and source e.g. pre-consumer, post-consumer waste. Fiber-to-fiber recycling of textiles. Upcycling instead of downcycling.</p>	<p>---</p>	<p>---</p>	<p>---</p>
POSSIBILITY OF RECYCLING 	<p>Consider possible recycling methods, e.g. mechanical recycling, chemical recycling. Fiber choice e.g. mono materials and no elasthane eases the possibility of recycling.</p>	<p>Consider if the fabric construction affects the possibilty of recycling e.g. weave, knit.</p>	<p>Test if dyeing or AOP processes contaminate the possibility of recycling.</p>	<p>Test if the finishing process contaminates the possibility of recycling</p>
PRESENCE OF SUBSTANCES OF CONCERN 	<p>Documentation of SoC in the material and all material processes from raw material to finished yarn incl. transportation.</p>	<p>Documentation of SoC in all processes from yarn to fabric incl. transportation.</p>	<p>Documentation of SoC in dyeing and/or printing processes of fabric incl. transportation.</p>	<p>Documentation of SoC in finishing processes of fabric incl. transportation e.g. stone wash & soft wash.</p>
ENERGY & WATER EFFICIENCY 	<p>Documentation of sources and consumption in all processes from raw material to finished yarn incl. transportation.</p>	<p>Documentation of sources and consumption in all processes from yarn to fabric incl. transportation.</p>	<p>Documentation of sources and consumption in dyeing and/or printing processes of fabric incl. transportation.</p>	<p>Documentation of sources and consumption of finishing processes of fabric e.g. stone wash, soft wash, etc. incl. transportation.</p>
CARBON & ENVIRONMENTAL FOOTPRINTS 	<p>Documentation of all processes from raw material to yarn incl. transportation. Choice of raw material affects environmental impact during the entire lifespan of the product, from extraction to end of life, e.g. man-made vs. natural fibers.</p>	<p>Documentation of all processes from yarn to fabric incl. transportation.</p>	<p>Documentation of dyeing and/or printing processes of fabric incl. transportation.</p>	<p>Documentation of finishing processes of fabric incl. transportation.</p>

TRIM

DESIGN & BUYING

Item no. _____

Composition _____

Weight _____

Details _____

SWATCH
Button, zipper etc.

	COMPOSITION	DYEING & FINISHES	MANUFACTURING & APPLICATION	FUNCTIONALITY
DURABILITY 	Consider if the trim composition support the durability of the product.	Test by ISO Standards e.g.: ISO 105-A02 Color change	Most durable method for application to garment. E.g. 4-holes buttons are more durable than 2-holes.	Justify the purpose of the trim, if no function.
REUSABILITY & REPAIRABILITY 	Consider if the trim composition is easy repairable.	Documentation of recycled content & the source.	Making it possible to repair trim details to extend use and reuse. E.g. consider the possibility of detachable trims for replacement & upgrading trims.	Making it possible to repair trim details to extend use and reuse. E.g. develop and making materials, guides & help for repairing accessible.
RECYCLED CONTENT 	Documentation of recycled content and source. Pre-consumer or post-consumer waste. Focus on upcycling instead of downcycling.	---	---	---
POSSIBILITY OF RECYCLING 	Consider possible recycling method. E.g. mechanical recycling or chemical recycling.	Test if the finishing process contaminates the possibility of recycling	Test if finishing process contaminates the possibility of recycling. Consider design for disassembly. Complexity of trim; material, technique.	---
PRESENCE OF SUBSTANCES OF CONCERN 	Documentation of SoC in the material and all material processes from raw material to material incl. transportation.	Documentation of SoC in the dyeing and finishes processes incl. transportation.	Documentation of SoC in the manufacturing and application processes incl. transportation.	---
ENERGY & WATER EFFICIENCY 	Documentation of sources and consumption of all manufacturing processes from raw material to finished trim incl. transportation.	Documentation of sources and consumption of all manufacturing processes from material to finished trim incl. transportation.	Documentation of sources and consumption of all manufacturing processes from raw material to finished trim incl. transportation.	---
CARBON & ENVIRONMENTAL FOOTPRINTS 	Documentation of all production processes from raw material to material incl. transportation.	Documentation of all production processes from material to finished trim incl. transportation.	Documentation of all production processes from raw material to finished trim incl. transportation.	---

FORM

DESIGN & PATTERN MAKING

Style no. _____

Collection _____

Supplier _____

Details _____

DESIGN SKETCH

DURABILITY

DESIGN AESTHETICS

Consider if the design has a potential to last e.g. not designing based on fast trends.
3 aspects of durability: Technical, emotional & aesthetic
User understanding: Know the users and their needs.

BODY TYPES & FIT

Knowledge about user's body types and preferences for fit.
Consider size range and if sizes are equally tested.
Inclusive sizing matching the needs of user and offering fit variations.

WEAR & TEAR

Consider to strengthen and optimizing construction on areas exposed to wear and tear.

PATTERN MAKING

Consider possibility of modifying/altering design over time e.g. extra added seam allowance.

REUSABILITY & REPAIRABILITY

Consider adjustable solutions, possibilities of alteration and modification for changing design aesthetics e.g. multi-functionality, modularity, and the technical skills needed. Either your brand can offer services for alterations or make guides for user to do it themselves.

Consider adjustable solutions, possibilities of alteration and modification for changing bodies e.g. flexible hems & lengths, adjustment of waist, and the technical skills needed. Either your brand can offer services for alterations or make guides for user to do it themselves.

Consider possibilities for repairs in areas of exposure of wear & tear, e.g. bum, elbows, between thighs etc. Develop and offer materials, guides & help for repairing accessible for users.
Add extra fabric piece inside the garment for use in repair to keep same aesthetics.

Larger pieces of fabric have bigger potential for reuse in other products.
Add extra fabric piece inside the garment for use in repair to keep same aesthetics.

POSSIBILITY OF RECYCLING

Consider how to design for disassembly e.g. trim can easily be detached, parts can be taken apart before recycling processes.

Consider how to design for disassembly e.g. parts can be taken apart before recycling processes.

CARBON & ENVIRONMENTAL FOOTPRINTS

Consider how to eliminate waste in the entire lifetime of the product from extraction of raw material to end of life.

Consider how to eliminate waste in the use phase and how to prolong the use of the product.

Consider how to eliminate waste in pattern making e.g. Zero-Waste cutting.

MANUFACTURING

DESIGN, BUYING & PATTERN MAKING

Style no. _____
 Collection _____
 Supplier _____
 Details _____

DESIGN SKETCH

	SEWING, WELDING, ETC.	STICHING TECHNIQUE	FINISH & HEMS	PRODUCTION
DURABILITY	Consider most durable sewing technique for design e.g. flat seam, french seam.	Consider stitch length, hread tension and needle used.	Consider most durable technique Customization, modification & alteration.	Consider most durable production techniques.
REUSABILITY & REPAIRABILITY	Consider sewing techniques for ease of repair and reuse.	Consider stitching techniques for ease of repair and reuse.	Customization, modification & alteration.	---
RECYCLED CONTENT	---	---	---	---
POSSIBILITY OF RECYCLING	Consider techniques for disassembly.	Consider techniques for disassembly.	Consider techniques for disassembly.	Consider post-consumer waste from production facilities for recycling.
PRESENCE OF SUBSTANCES OF CONCERN	Documentation of SoC in manufacturing process incl. transportation.	Documentation of SoC in manufacturing process incl. transportation.	Documentation of SoC in manufacturing process incl. transportation.	Documentation of SoC in manufacturing process incl. transportation.
ENERGY & WATER EFFICIENCY	Documentation of sources and consumption in manufacturing processes incl. transportation.	---	---	Documentation of sources and consumption in manufacturing processes incl. transportation.
CARBON & ENVIRONMENTAL FOOTPRINTS	Documentation of all processes in manufacturing incl. transportation.	---	---	Documentation of all processes in manufacturing incl. transportation. Local production to minimize transport costs and CO ₂ emissions. Consider production on demand to avoid waste unsold products.

PRODUCT

DESIGN, BUYING & PATTERN MAKING

Style no. _____

Collection _____

Supplier _____

Details _____



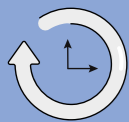
MATERIALS

TRIM

FORM

MANUFACTURING

DURABILITY



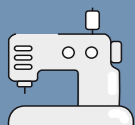
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REUSABILITY & REPAIRABILITY



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RECYCLED CONTENT



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POSSIBILITY OF RECYCLING



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PRESENCE OF SUBSTANCES OF CONCERN



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ENERGY & WATER EFFICIENCY



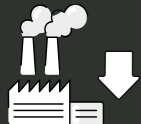
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CARBON & ENVIRONMENTAL FOOTPRINTS



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