

# SUMMARY



## Reduced environmental impact textile products

Developed by:



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# Introduction

The textiles industry plays a crucial role in the global economy and reducing its overall **environmental impact** also means safer and healthier working environments for hundreds of millions<sup>2</sup> to which this significant sector provides employment on a global basis.

This OER offers an introduction to the different aspects of the textile value chain that have a direct or indirect impact on the environment.

# Competence

## **1. Skills**

Advanced knowledge of the English language including textile terminology.

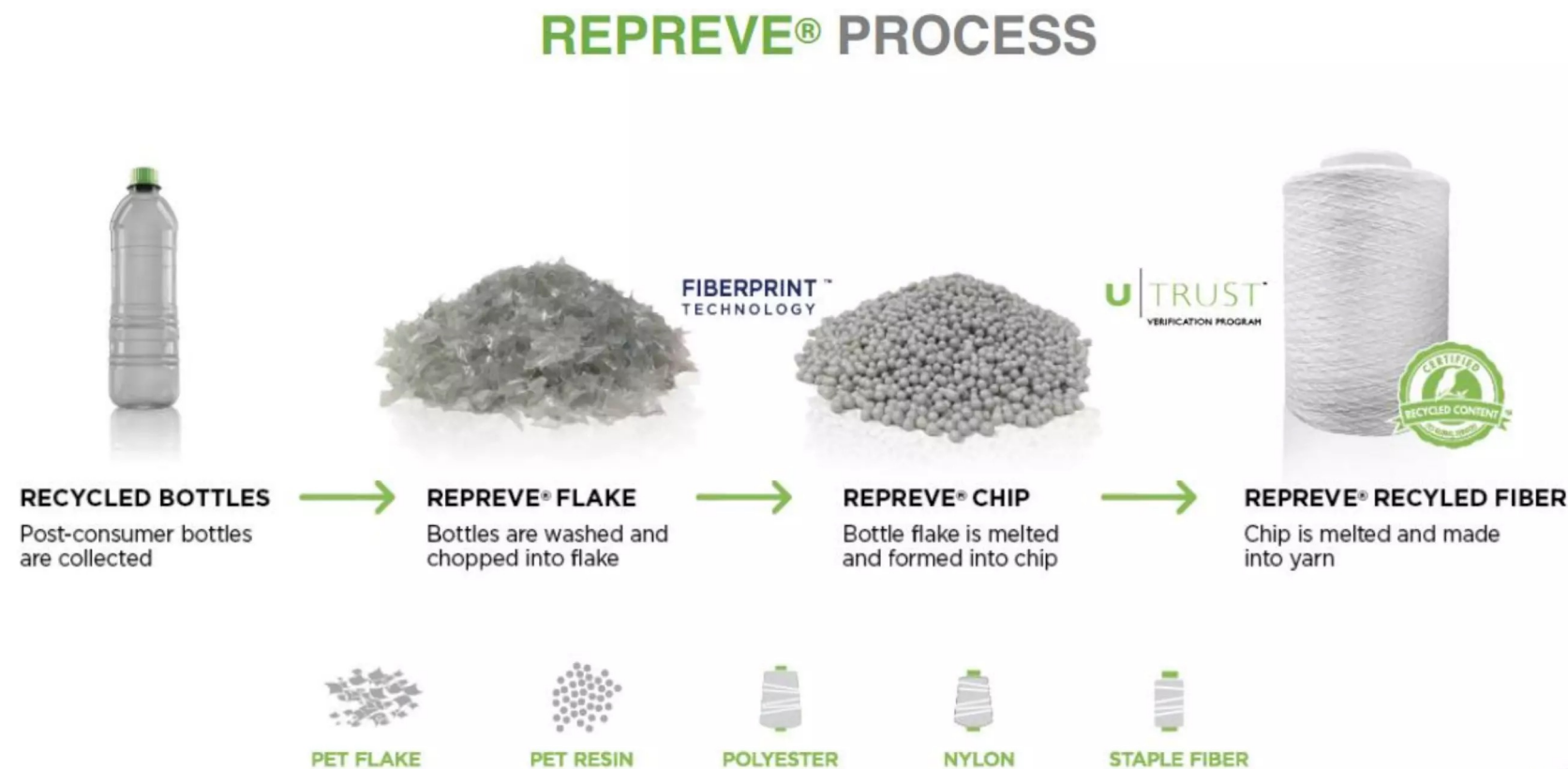
## **2. Competences**

Understanding the need to investigate production processes and technical features to fully comprehend the potential impact of a product or material.

Awareness of the complexity of the textile value chain and impact of the single product life-cycle phases

# 1. Fibres, yarns and textile products

To reduce a fabric's environmental impact you can use fibers and yarns manufactured with high-performance biopolymeric yarns from easily renewable resources which are non-food crops.



## CASE STUDY

**Repreve®** by Unifi, Inc. is a recycled performance polyester fiber manufactured with PET (polyester) from recycled materials, including post-consumer drink bottles

## 2. Dyes and dyeing processes

Dyes used for different types of fiber and employed at different stages of the textile production process may contribute to reduce a textile's environmental impact.



### CASE STUDY

**Food textile project** is a joint effort between Toyoshima & Co., Ltd., food and beverage manufacturers who provide the ingredients for obtaining the dyes, and garments and accessories manufacturing companies that use the fabrics colored with these dyes to create their products.

### 3. Finishings

In addition to being based on improved, sustainable formulations using natural ingredients, water-free technologies should be suitable for a variety of textile product types and not require specific equipment and significant investments.

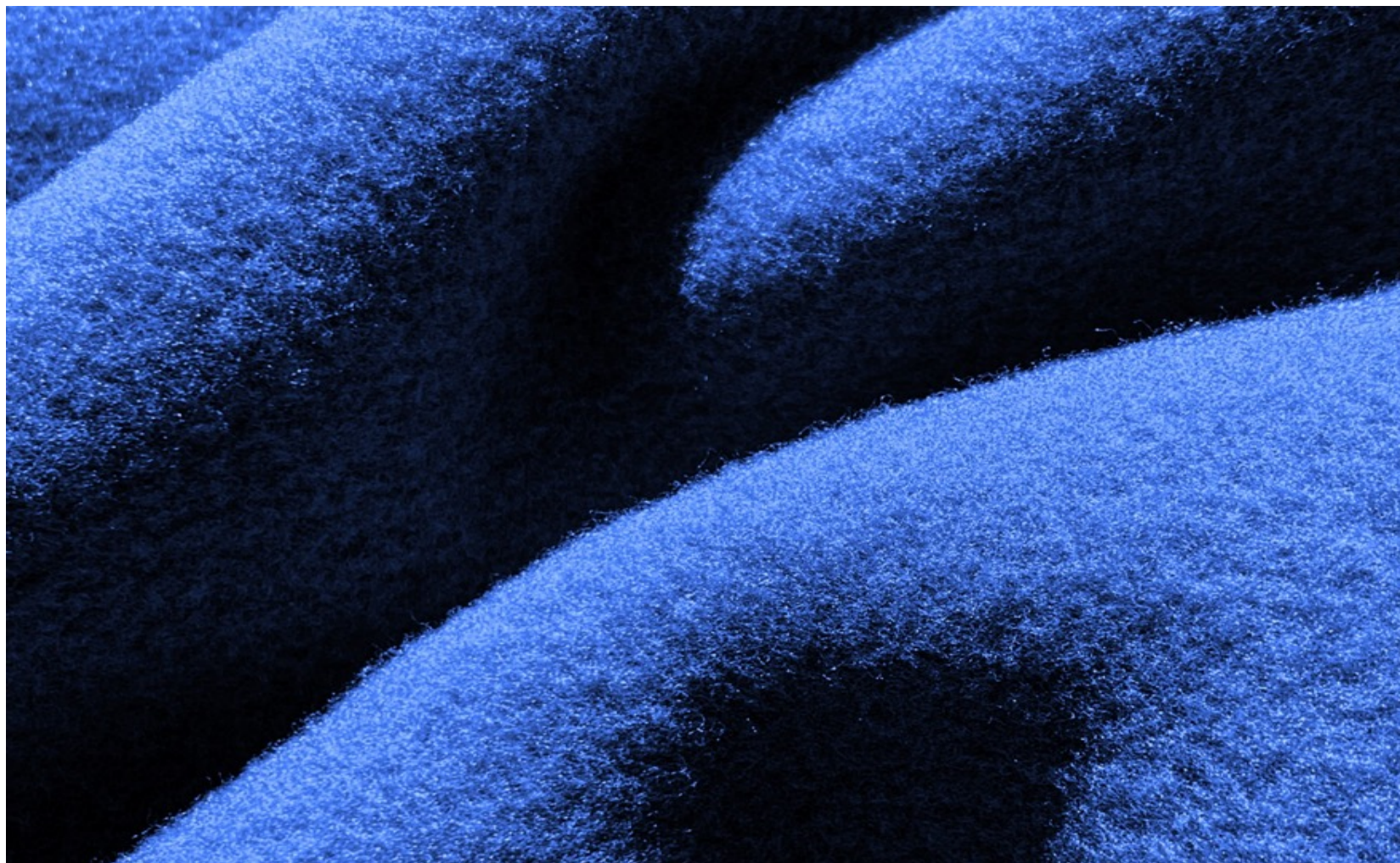


#### CASE STUDY

**Ecorepel® Bio** by Schoeller Textil AG is a water and stain repellent finish for textiles which mimics the natural protection of ducks and other water fowl, available exclusively on Schoeller® fabrics.

## 4. End-of-life options

Manufacturing sustainable textiles also implies carefully designing their end-of-life destination. Advanced solutions include the possibility of switching from one cycle to another.



### CASE STUDY

**PrimaLoft® Bio™** is the first 100% recycled, biodegradable synthetic insulation and fabric. It is made from 100% post-consumer recycled material and its fibers break down, without affecting their performance characteristics, when exposed to specific environments, such as a landfill or the ocean

*This was a summary of an open educational resource. Please visit <http://destexproject.eu/> to see the full amount of intellectual outputs of the project.*



**Disclaimer:**

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