This project is co-financed by the European Union
and the Republic of Türkiye

PRESENTER FULL NAME: OZAN CAN YILDIZ

ORGANIZATION: SUN TEKSTİL

WORKSHOP NAME: Twin Green and Digital Transition of Industry

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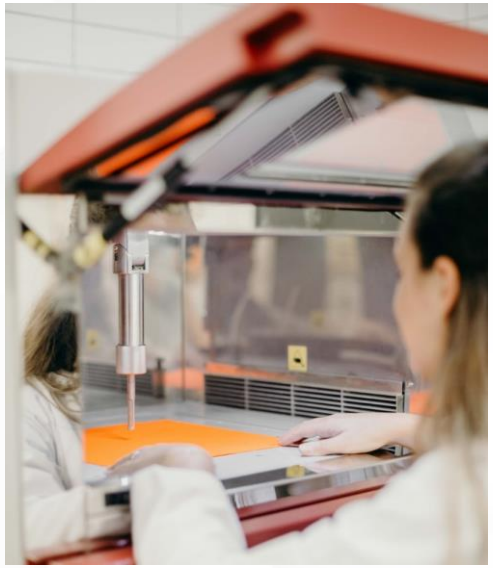
SUN AR-GE MERKEZİ

Description of the Organisation



Founded in 1987, Sun Tekstil is one of the biggest textile producer and exporter in Turkey.

Our aim is to develop new products, processes and technologies in the fields of innovative garment and technical textiles since our establishment.

Our goals are to create sustainable solutions and circular economy models/designs in the textile industry.

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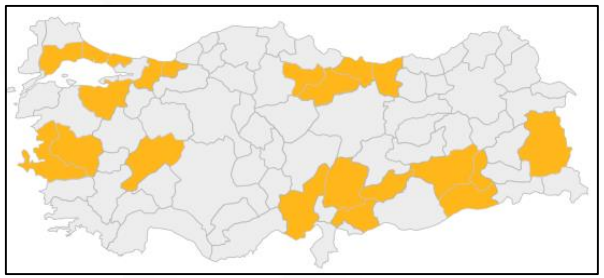
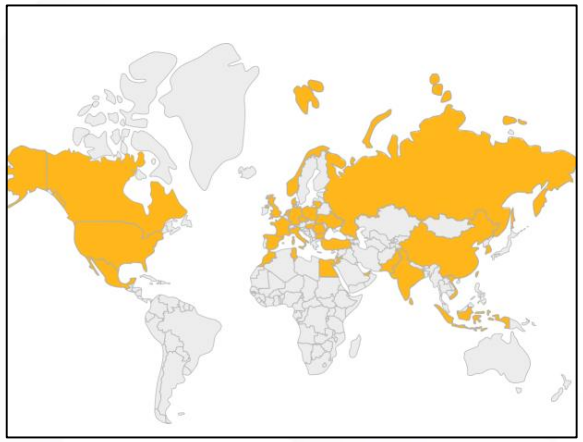
SUN AR-GE MERKEZİ

Description of the Organisation

ZARA H&M PULL&BEAR Massimo Dutti Bershka MARKS & SPENCER HUGO BOSS TESCO next UNDER ARMOUR





Through our supply chain and customers, we reach 48 countries in different parts of the world for both our export and import processes.

Sun Tekstil has machine infrastructure for laboratory scale, pilot scale and industrial scale applications.

We aspire to improve people’s lives through technical textile integrated products

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Our Teams' Expertise

- Textile engineers
- Chemical engineers
- Mechanical engineers
- Computer engineers
- Electronic engineers
- Material engineers
- Industrial engineers
- Bioengineers
- Chemists
- Software developers
- Designers fashion designers

- Strong Industry Collaboration
- Expert team
- Innovative product development

- Advanced R&D Center Laboratory
- Digital Fabric Library
- Advanced colour laboratory

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Our Research Fields

High-performance technical textiles

Recycling technologies

Bio-based material and application technologies

Digitalization of textile manufacturing and improving textile value chain with digital solutions and artificial intelligence.

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PLASTICE

Our On-going Projects - PLASTICE

New technologies to integrate PLASTIC waste in the Circular Economy (HORIZON-CL4-2021-TWIN-TRANSITION-01-17)

With a consortium of 23 partners from 8 different countries, PLASTICE Project aims to develop four different recycling technologies for plastic waste mixtures to convert them new added value products with total budget of 15.122.601,00 €.
Sun Tekstil is responsible for validation of recycled yarns in new fabric development processes for fashion industry.

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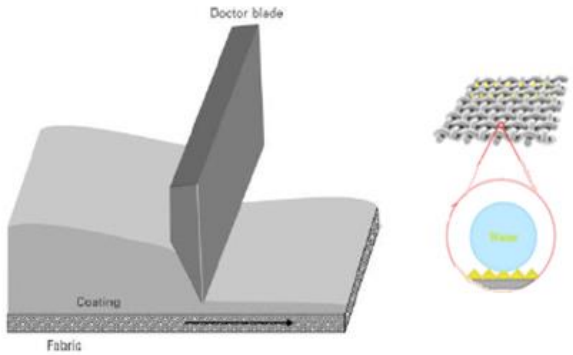
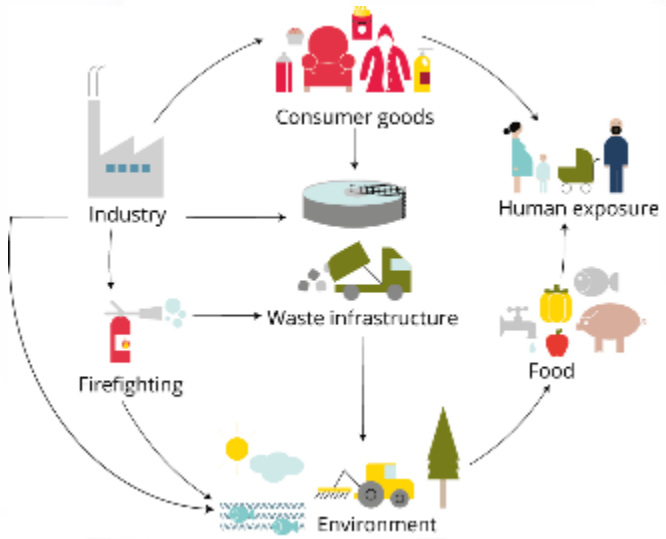
Our On-going Projects - TORNADO

New Routes of Safe and Sustainable By Design Water and Oil Repellent Biobased Coatings (HORIZON-CL4-2022-RESILIENCE-01-23)

With a consortium of 14 partners from 4 different countries, TORNADO Project aims to develop safe and sustainable water and oil repellent bio-based coatings that can be used in several industries including textile with total budget of 4.527.891,25 €.
Sun Tekstil is responsible for validation of new coating chemicals to develop fabrics and application methods for technical textile and fashion industries.





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BioSusTex

Our On-going Projects - BioSusTex

BioSusTex / Towards Absolute Safe and Sustainable Biobased Textile (HORIZON-CL6-2023-ZEROPOLLUTION-02)

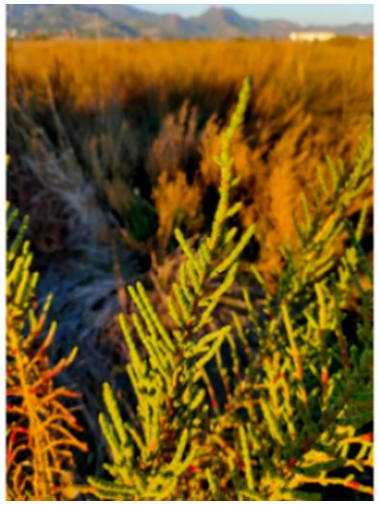
With a consortium of 12 partners from 7 different countries, BioSusTex Project aims to develop safe and sustainable solutions for recycled cellulosic textiles and new type of bio-based coatings formulations. Also project aims to develop PVC-free print formulations.
Sun Tekstil is responsible for application and validation of new coating chemicals, recycled cellulosic yarns.

Our On-going Projects – HALO-TEX

HALO-TEX / Halophyte Biorefinery Process for Sustainable Production of Textiles, Composites, and High-Value Biochemicals (HORIZON-CL6-2024-CircBio-02)

With a consortium of 10 partners from 6 different countries, HALO-TEX Project aims to develop a novel and sustainable bioproduct manufacturing system based on the biorefinery of salt-tolerant plant biomass.
Sun Tekstil is responsible for the application and validation of new coating chemicals and also responsible for validation of cellulose-based yarns in new fabric manufacturing processes for fashion industry.

We are planning to officially start on June 2025.



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Our On-going Projects – DefectFree

Eureka Clusters AI Call 2021

Defectfree / Machine learning and artificial vision for 0% waste textile production (Eureka Sustainability Call 2022)

With this project, the consortium (SMARTEX and SUN TEKSTIL) intends to develop new artificial intelligence models, additional hardware (composed mainly of cameras, lighting systems and communication components), and data analysis models able to detect defects in complex knitted fabrics while producing them.

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Project Idea

Call Topic:HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-32: Green and resilient flexible production processes (Processes4Planet partnership) (IA)
Deadline Dates: 23.09.2025

❑ Objectives:

- ❑ Redesign and modification of existing processes
- ❑ Implementation of smart combinations of renewable energy sources
- ❑ Increased speed in process adjustments
- ❑ Demonstration of material and energy efficiency gains
- ❑ Pilot-scale demonstration of improved performance, scalability, and cost-effectiveness

❑ Expected Results:

- ❑ Development of new flexible and efficient production processes
- ❑ Process flexibility
- ❑ Contribution to the EU's climate neutrality goals and the target of 90% reduction in greenhouse gas emissions by 2040.

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Project Idea

Call Topic:HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-31 Digitally enabled local-for-local textile and apparel production (IA)

Deadline Dates: 23.09.2025

- **Objectives:**
  - Digitization of supply chains
  - Development of local and on-demand textile production
  - Promotion of renewable materials
  - Support for new service-oriented business models
  - Addressing environmental, social, and economic challenges
- **Expected Results:**
  - Economic viability of local, on-demand textile production
  - Accelerated adoption of digital technologies by SMEs
  - Increased production of time-critical textiles in Europe

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Project Idea

Call Topic:HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-52: Accelerate the uptake of life-cycle assessment (LCA) for Safe and Sustainable by Design (SSbD) chemicals and materials and resulting products (RIA)

Deadline Dates: 23.09.2025

- **Objectives:**
  - Develop and implement LCA methodologies
  - Create digital tools and platforms
  - Encourage the adoption of LCA methodologies
- **Expected Results:**
  - Standardized LCA approaches for SSbD chemicals and materials
  - Increased transparency and accessibility of LCA data
  - Improved environmental performance of products

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