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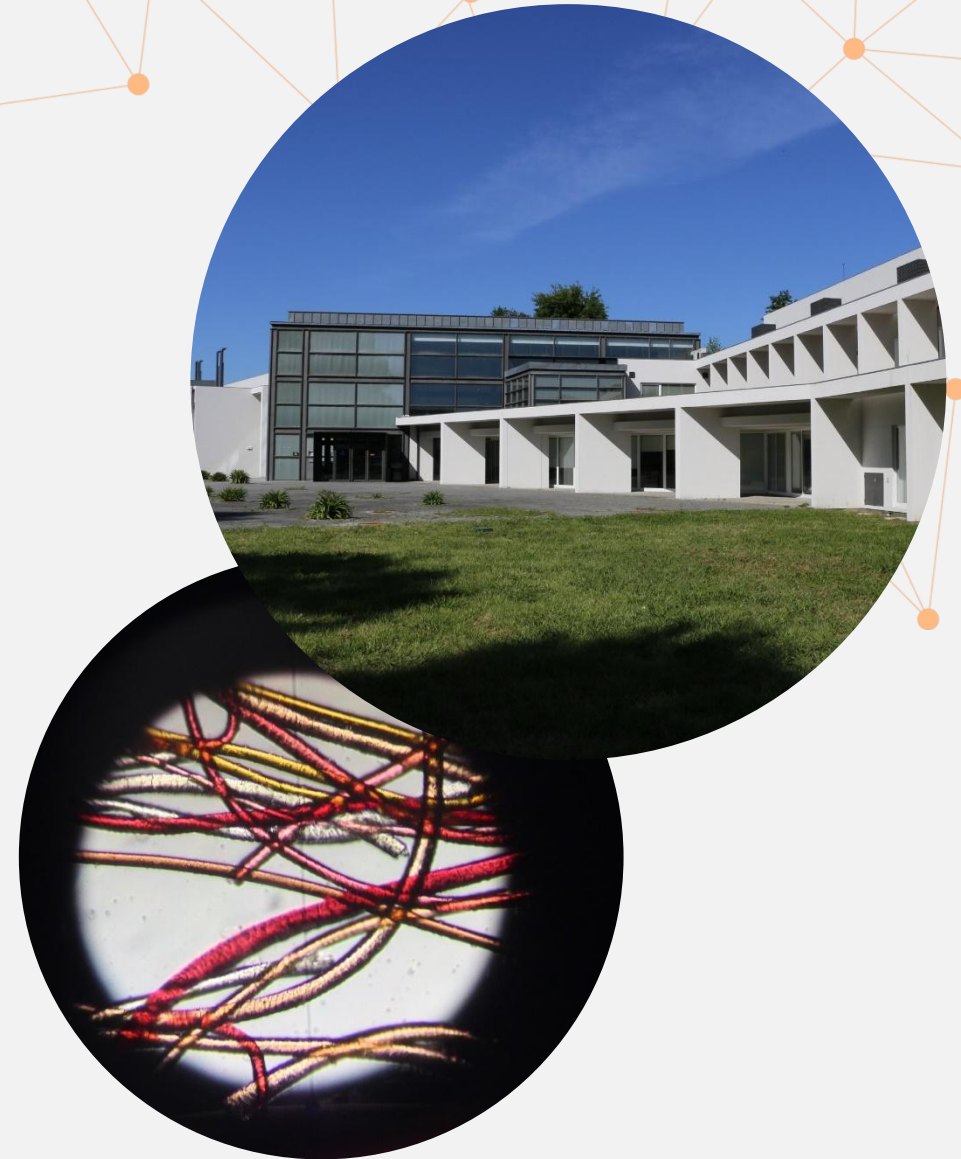
The EU experience of the Technological Centre for the Textile and Clothing Industry of Portugal

16 June 2026

Horizon Europe opportunities for the textile sector

Technological Centre for the Textile and Clothing Industries of Portugal

Commitment to Quality,
Compliance and Innovation



Services

Testing

Product & Process Certification

Research, Technology
Development & Engineering

Sustainability, Bio
& Circular Economy

Manufacture Digitalization
& Industry 4.0

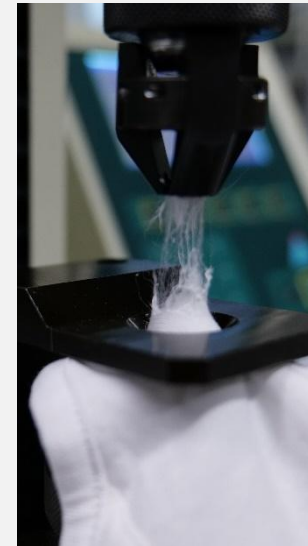
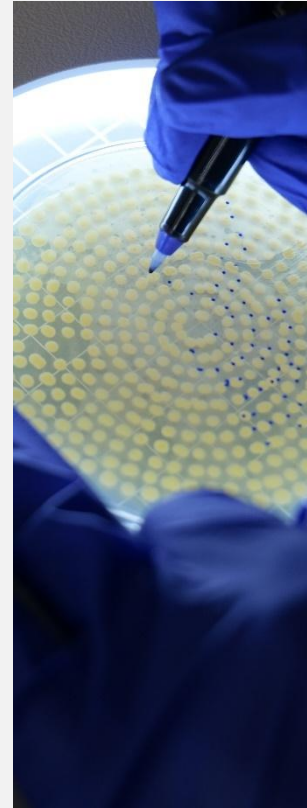
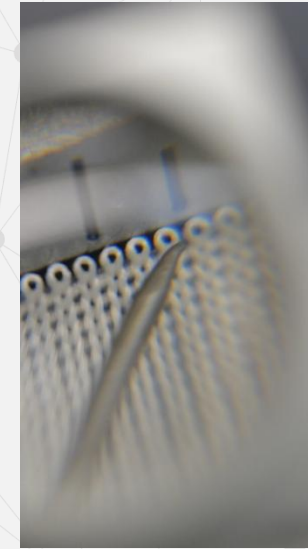
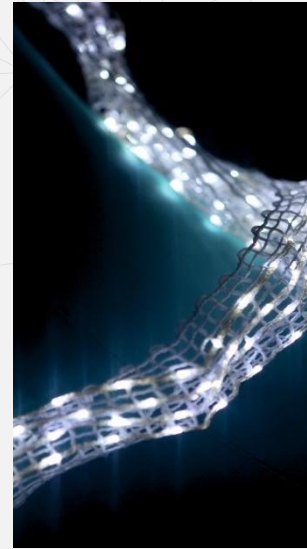
High Level Training & Coaching

Support to Innovation Capacities
& Entrepreneurship

International Consultancy

Design & Fashion Intelligence

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Market oriented

Fashion

Sports

Defence and PPE

Mobility & Transport

Workwear

Health & Well-being

Architecture & Construction



CITEVE Group (core)

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TEXTILE TECHNOLOGY



R&D focused on promoting a circular value chain



Circular Materials and Processes

Innovative recycling approaches
(mechanical, chemical,
biotechnological)

Upcycling & zero waste processes

Eco-design & Eco-Engineering tools

New business models

HE projects under CL4



waste2
biocomp

Coordinator:
CITEVE

citeve
TEXTILE TECHNOLOGY

Waste2BioComp - Converting organic waste into sustainable bio-based components



HORIZON EUROPE
2021

Cluster 4



Starting date
1 June 2022

GA 101058654



Duration
36 months



Maturity
TRL 3-4 → TRL 6



Funding
5.8 M€
RIA
100% financing

TWIN-TRANSITION-01*

(TWIN-TRANSITION-01-05)

13 partners

8 WPs

3 VCs

*104 projects approved, of which 26 with Portuguese participation, with an approval rate of 20%

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HE projects under CL4



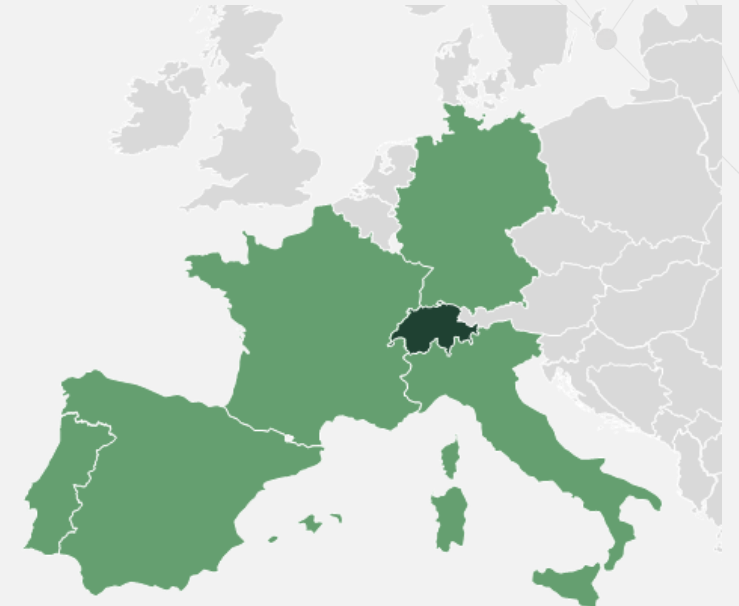
waste2
biocomp

Coordinator:
CITEVE

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TEXTILE TECHNOLOGY

Waste2BioComp - Converting organic waste into sustainable bio-based components

- **Goal:** Demonstrate **relevant scale production of bio-based products and materials**, as alternatives to **replace traditional materials** with high environmental footprint, using **innovative manufacturing technologies** that cover their entire life cycle, and will allow their use in a **closed loop**.
- **Consortium:** 5 SMEs ■, 3 large industries ■, 5 research entities ■



PORTUGAL

■ citeve
TEXTILE TECHNOLOGY

■ Riopelle
SINCE 1927

■ INESC TEC

■ MTEX ■ NS

■ magellan circle
EUROPEAN AFFAIRS CONSULTANCY

SPAIN

■ UNIVERSIDADE DA CORUÑA

GERMANY

■ Hochschule
Kaiserslautern
University of
Applied Sciences

■ nora[®]
by Interface[®]

■ Leibniz-Institut für
Verbundwerkstoffe

FRANCE

■ N I X K A
Together for a Smart Future

■ pili

ITALY

■ propa[®]
group

SWITZERLAND

■ GR3N

HE projects under CL4



waste2
biocomp

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TEXTILE TECHNOLOGY



Shoe insoles

shoe sole materials with
different hardness (3)
three-layered **shoe**
insole (1)

Compounding



Plastic films and packages

flexible plastic film
(≥100m)
rigid plastic package (1)

**Blown extrusion,
injection, compression
moulding**



Bio-based textiles

technical textiles for
sportswear (1)

Spray coating



Printed substrates

garments, shoes, insole,
packaging paper, coated
textiles printed with the
bio-based inks

Inkjet printing

Demonstrators validated in relevant environments, with no toxicity, and comparable with fossil-based benchmarks.

HE projects under CL4



waste2
biocomp

Coordinator:
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TEXTILE TECHNOLOGY

CITEVE role

- Coordination
- Development of inkjet inks with the bio-based pigments
- Validation of the prints with the new inks
- Development of colour removal methods for the new printed textiles (CO and PES)
- R&D on application of the new PHAs on textile:
 - New fibres
 - Spray coatings and Knife coatings
- Toxicity tests (cytotoxicity, presence of harmful chemicals, skin allergic potential, ecotoxicity after degradation in soil)
- Development of training materials for production processes with bio-based materials

HE projects under CL4 (ongoing projects)

- **tExtended** (HORIZON-CL4-2022-TWIN-TRANSITION-01-10, IA)
 - **Goal:** Develop and demonstrate effective processes for textile recovery, waste valorisation, and recycling processes, integrating digital tools and data-driven solutions to support sustainable textile circularity.
 - **CITEVE role:**
 - Data-driven solutions and data sharing tools to support optimal material flow in the recycling value network
 - R&D on a sorting machine prototype, hygienisation and colour removal
 - R&D on textile waste valorisation, textile recycling and using secondary raw materials in textile manufacturing and optimisation of woven, knitted and nonwoven textile structures
 - Development and validation of textile demonstrators
 - Methodology for assessing the circularity potential, symbiosis readiness and IPR management
- **PENGUIN** (HORIZON-CL4-2023-RESILIENCE-01-32, IA)
 - **Goal:** develop and demonstrate (TRL 6-7) the production of advanced bioinspired textile materials that are safe and sustainable by design (SSbD) and meet the performance requirements for outdoor use.
 - **CITEVE role:**
 - Yarn and fabric development using the new bio-based cellulosic fibres
 - Development and optimisation of woven, knitted and nonwoven textile structures
 - Development of bio-based and fluorine-free finishing treatments, including water-repellent solutions
 - Integration of insulation materials into multilayer textile assemblies and sandwich structures
 - Performance testing and validation of materials and garment assemblies (wash durability, abrasion resistance, thermal comfort, mechanical performance, waterproofness, etc.)
 - Support in circularity activities, including recycling, end-of-life strategies and biodegradability assessment
 - Coordination of activities related to prototype validation and testing.



HE projects under CL6



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TEXTILE TECHNOLOGY

TexMaTer - Retrieving novel TEXTile solutions from MARine and TERrestrial biomass



HORIZON EUROPE
2023

Cluster 6

HORIZON-CL6-2023-CircBio-
02-2-two-stage



Starting date
1 Sep 2024

GA 101135502



Duration
48 months



Maturity
TRL 3-4 → TRL 6-8



Funding
4.8 M€
IA

16 partners

10 WPs

1 VC

HE projects under CL6



Coordinator:
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TEXTILE TECHNOLOGY

TexMaTer - Retrieving novel TEXTile solutions from MARine and TERrestrial biomass

- **Goal:** develop **novel cellulosic fibres and bioformulations** for textiles' functionalisation using biomass sources (agricultural residues, and micro- and macroalgal biomass) and post-consumer cellulosic textiles.
- **Consortium:** 7 SMEs, 3 large industries, 4 research entities, 2 associations

Beneficiaries



Associated Partners



HE projects under CL6



Coordinator:
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TEXTILE TECHNOLOGY

CITEVE role

- Coordination
- Extraction of new fibres from marine and terrestrial residues
- Cotton-type spinning of the new fibres
- Textile structures production
- Optimization of bio-based finishing formulations
- Validation of solutions developed
- Study of EoL alternatives



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THANK YOU!



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