



Circular & Biobased Textiles

Innovation Hub

What happened in
2024?

Where European Sustainable Textile Experts Meet

In February 2024, together with STFI (DE), RISE (SE), Centexbel (BE), Centrocot (IT), and CETI (FR), the Textile ETP launched the Circular & Biobased Textiles Innovation Hub to **help textile companies, research organisations, brands and retailers to learn, network and collaborate on the hot topics of circular and biobased textiles.**

Combining online and in-person events, the Innovation Hub offers a wide scale of formats and targets a broad range of textile sustainability and circularity topics, so that textile professionals from different backgrounds can all find relatable and valuable content.

This brochure summarises the first year of the Innovation Hub, the topics targeted in our different webinars and the physical meet-ups and networking opportunities where Hub members had a chance to meet in person.

The Circular & Biobased Textiles Innovation Hub is a long-term initiative with a yearly recurring subscription, open for new joiners all year-round.

What happened in **2024?**



Sustainable supply chain

Tracing materials in a sustainable supply chain

Data sharing

Ecodesign for recycling



Ecodesign

ESPR

DPP

Recycled content claims

Ecodesign for recycling



Circularity and recycling

Mechanical textile-to-textile recycling

Textile waste management

Repairability

Industrial capacities for true European textile circularity

Mechanical recycling

Respinning of recycled fibres

Chemical recycling of polyester

Complex textile structures' disassembly



Biobased materials and processes

Bio-derived and circular elastane

European cotton



Sustainable chemistry

Microplastics

PLA in the textile market

SSbD framework

Chemicals in contribution to circular & biobased textiles

REACH

Alternative textile dyes



Networking events and visits

Techtextil 2024 - April, Germany

Textile ETP Annual Conference - May, Belgium

Circular Textiles Days - September, Netherlands

Online networking session - March

ECOSYSTEX Conference 2024 - October, Italy

Our networking events and visits



REGIO GREEN TEX
Strengthening textile circularity in Europe's regions

OBJECTIVES

- Map the needs and potentials of the textile industry in creating a circular economy among European regions.
- Support SMEs pilot projects to accelerate the innovation, development and use of the best materials with more recycled content.
- Build a dynamic, agile recycling ecosystem by making demand and offer meet on a digital platform.
- Create the regional hubs to support a more circular textile value chain in line with EU requirements and SMEs needs.

INNOVATION DIMENSION

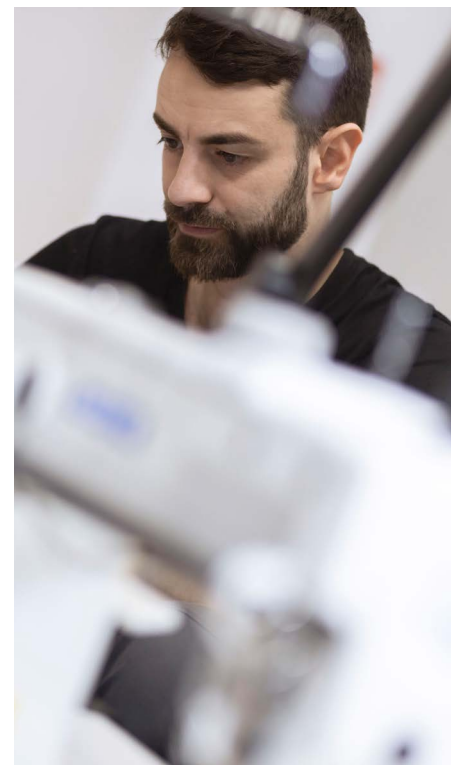
- 40% of SMEs
- 100% of SMEs
- 100% of SMEs
- 100% of SMEs

INVESTMENT DIMENSION

- 30% of SMEs
- €12.6M
- 70% of SMEs

REGIONAL DIMENSION





Our online activities

Biobased materials & processes

Strategy roundtable: European cotton

This strategy roundtable brought together European textile professionals to discuss the state, challenges, and opportunities of European cotton. Topics included trends in European cotton farming, strategies for manufacturers to remain competitive, navigating global crises, spinning sector requirements, the importance of traceability, and funding solutions for sustainable growth. The discussion also addressed questions on material choices, price premiums, quality, ELS cotton, farmers' crop decisions, the EU cotton label, comparisons between European and imported cotton, and traceability in production volumes.



Omar Maschi
Centrocot S.p.a



Ana Tavares
CEO, RDD Textiles



David Allo
Head of
Sustainability,
TEXFOR



Antonios Siarkos
CEO, SIARKOS SA



**Dimitris
Polychronos**
CEO, Nafpaktos
Textile Industry SA

Meet the Expert: Bio-derived and circular elastane with The LYCRA Company

The LYCRA Company's strategy for decarbonisation focuses on renewable or recyclable sources, durable fibres, and recyclable fabrics and garments. They detailed the process of converting field corn into the renewable ingredient QIRA, which is used to produce LYCRA renewable fibre. Current efforts are centered on improving the recyclability of stretch garments, including ongoing research and collaborations to develop technologies for recycling LYCRA fibres in blended fabrics.



Alberto Ceria
The LYCRA Company

Circularity & recycling

Meet the Expert: Chemical recycling of polyester with CuRe Technology

This session featured CuRe Technology's innovative approach to polyester recycling through depolymerisation. The session covered the polyester production process, mechanical recycling challenges, and the «64 billion KG challenge» of recycling polyester, with two-thirds directed to textiles and one-third to packaging.

CuRe Technology's solution was discussed in detail, including a comparison of molecular recycling methods, LCA, market validation, and the company's growth vision, while also addressing key challenges such as feedstock preparation, collection, and separation in textiles, drawing lessons from the packaging industry.



Marco Brons
CTO, CuRe Technology

Learning webinar: Textile waste management

Refashion presented the results of its 2023 post-consumer textiles characterisation study, outlining objectives for 2023-2028 in areas like collection, recovery, recycling, and reuse for textiles and footwear in France. TEXAID and ITA Augsburg shared findings from their study on automation and digitalisation of textile sorting, highlighting current technologies, best practices, and challenges in recycling. PICVISA showcased advancements in textile sorting using AI, machine vision, and NIR technology, emphasising the importance of a circular approach starting from product design while noting that technology alone cannot address all recycling challenges.



Cécile Martin
Innovation & Recycling
Manager, Refashion



Anna Pehrsson
R&D and Technology
Partnerships Lead, TEXAID



Amon Kirchel
Industrial Engineer,
ITA Augsburg

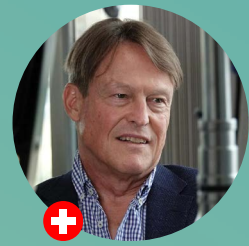


Luis Seguí
Managing Director,
PICVISA

Circularity & recycling

Meet the Expert: Everything you need to know about mechanical textile-to-textile recycling by Säntis Textiles

This webinar discussed the expert's experience in textile sourcing and the development of Säntis' RCO100 machine, which produces cotton yarns with up to 100% recycled cotton. Stefan Hutter showcased projects and collaborations featuring RCO100 yarns and addressed questions on elastane removal, fibre testing, and the use of FibreTrace. He also shared insights on integrating technologies, global recycling practices, and Säntis Textiles' ongoing efforts to create innovative solutions in sustainability.



Stefan Hutter
Founder and CEO, Säntis Textiles

Challenge accepted: Repairability

This interactive session zoomed in on different aspects of the challenge of repairability in textile products through the concrete case of zipper repair as addressed in the CISUTAC project.

Project partners PCH Innovation (DE), De Kringwinkel (BE) and Decathlon Italia joined us to lead the discussion in three break-out rooms, in-between the introduction and recap we had in a plenary session.



Adrien Hobt
Managing Director,
PCH Innovations



Alberto Mereu
Head of Research,
Decathlon



Pierpaolo Rotondi
R&D Director,
Decathlon



Hanne Maes
Innovation Project
Manager, Kringwinkel
Antwerp



Frank Dingemans
Innovation Director,
Kringwinkel
Antwerp

Strategy roundtable: Industrial capacities for true European textile circularity | Part 1: Mechanical recycling

This roundtable discussion covered key challenges for collectors and sorters in meeting recyclers' material demands, trends in post-consumer waste collection, and the availability of suitable waste materials for recycling. It also addressed the growing market demand for recycled fibres and strategies to overcome the economic challenges associated with recycled materials.



Chris Deloof
Executive Director,
ReHubs



Ana Rodes
Head of Sustainability,
Recover



Louisa Temal
Business Development
Manager, SOEX and I:Collect

Circularity & recycling

Strategy roundtable: Industrial capacities for true European textile circularity | Part 2: Respinning of recycled fibres

The second roundtable session addressed topics such as the sources of recycled fibres, the challenges of spinning based on their varying properties, and the impact of sorting and tearing processes. Discussions explored how recycled fibres influence yarn quality, their downstream acceptance, and the necessary steps for achieving success in this field. Key takeaways highlighted that while spinning recycled fibres is feasible, it remains more demanding due to property variations and contamination, requiring further development of processes and equipment. Recycled fibres affect end-product properties, necessitating efforts to gain acceptance, potentially supported by legislation mandating recycled content.



Stephan Weidner-Bohnenberger
Senior rotor spinning expert



Paula Gerritsen
CEO, Spinning Jenny



Josep Pagès
Commercial & Sustainability Director, PAGESVALENTI



Jean-Luc Derycke
Innovation Director, UTEXBEL

Ecodesign

Learning webinar: Ecodesign

The session covered several key topics related to sustainability and circular economy regulations in Europe, beginning with an overview of the ESPR and DPPs. CETI introduced the impact of French sustainability regulations, including the due diligence law, the Circular Economy Roadmap, and the AGEC anti-waste law, noting that while French companies face challenges in implementation, they are generally better prepared than their European counterparts. The webinar was concluded by a discussion on recycled content claims, highlighting the importance of transparency and accountability in the textile industry, with ongoing standardisation efforts and the development of third-party certification schemes to ensure accurate claims about recycled materials and promote sustainable practices.



Hanna Lindén
*Vice President, Business and
Innovation Area Material
Transition, RISE*



Manisha Marival
*Recycling and Circular
Economy Manager, CETI*



Dirk Simoens
*Director, Belgian
Quality Association*

Sustainable chemistry

Fail & Fix roundtable: The challenging journey of PLA in the textile market

This session explored the evolving role of PLA in the textile market, acknowledging past failures but highlighting ongoing progress and remaining challenges. Speakers discussed their experiences with PLA, debating whether it is a «failed» material or one with fixable issues and future potential. The session began with an overview of biobased materials in textiles, the global production of PLA, and its applications. Insights included the need for improved mechanical properties, cost considerations, and enhanced communication. Optimism about PLA's potential was expressed despite persistent supply chain and technical hurdles, with the discussion focusing on knowledge gaps, performance, viable applications, and the future of PLA in textiles.



Lien Van der Schueren
Senior Researcher,
Centexbel



Sander De Vrieze
Consultant Intellectual
Property & Yarn Engineering,
Centexbel



Marc Ponsa
CEO, Polisilk



Mikuláš Hurta
CEO, NIL Textile

Learning webinar: Microplastics

In this webinar, experts discussed the environmental impact of microplastics and the shedding of microfibrils from textiles, the complexity of microplastics and the importance of reliable analytical methods, and strategies to reduce microplastic shedding. These strategies encompassed eco-design, reducing industrial emissions, and improving finishing processes. Additionally, they examined the role of chemical and mechanical finishing in microplastic release, with insights on washing, tailoring, and best practices to minimise this issue.



Elliot Bland
Researcher, The Microfibre
Consortium



Martin Loder
Researcher, Bayreuth
University



Lorenzo Bautista
Area Manager, Applied Chemistry
& Materials Department, Leitat

Sustainable chemistry

Learning webinar: Sustainable chemistry

This session introduced key initiatives and advancements in sustainability and safety within the textile industry. It outlined the Safe and Sustainable by Design (SSbD) framework, emphasising its design principles and the role of European projects like PARC and IRISS. The discussion also explored a CHT's sustainability goals, highlighting circular and biobased products contributing to carbon neutrality. Additionally, findings from the REACH4Textiles project were presented, focusing on ensuring compliance with EU regulations, risk-based testing, and preventing non-compliant products from entering the European market.



Claudia Som
Senior Scientist, EMPA



Eric Siekmann
Sales Director EMEA Business
Field Textile, CHT



Stijn Steuperaert
Environment & Toxicology
Consultant, Centexbel

Learning webinar: Alternative textile dyes

This webinar explored innovative technologies and market realities surrounding alternative textile dyes, featuring insights from academia and industry. The session highlighted research on sustainable dyeing methods, including waterless dyeing, supercritical CO₂ processes, and natural dyes such as cochineal and tea, as part of projects like Colour4Crafts. It also showcased biological dyeing technology, emphasising the scalability, safety, and cost-effectiveness of Colorifix's process, along with their available colour options. Additionally, the development of bio produced indigo was detailed, covering feedstock use, genome engineering, fermentation, and downstream processes, in response to growing demand for environmentally responsible colorants.



Chris Carr
University of Leeds



Sophie Vaud
Head of Microbial Engineering,
Colorifix



Brian Jester
Founder & CEO,
Synovance

Sustainable supply chain

Learning webinar: Tracing materials in a sustainable supply chain

This session explored innovative tools for enhancing transparency and sustainability in the textile supply chain. Tailorlux presented its tracer technology for quantifying recycled cotton, emphasizing accuracy through homogeneous tracer application, fibre dosing devices, and real-time monitoring for quality assurance. The Sourcery introduced its Connect Platform, a system enabling real-time data sharing, digital contracts, and cost reduction across the supply chain. Their bluechip digital tokens track cotton's journey from seed to fabric, embedding key data like grower demographics and environmental practices, while the Bluechip Exchange incentivises sustainability by redistributing profits to stakeholders generating traceable data.



Tobias Herzog
Managing Director,
Tailorlux



Crispin Argento
Global Managing Director,
The Sourcery

The Organisers

The European Technology Platform for the Future of Textiles and Clothing, Textile ETP in short, is the largest network for textile research and innovation in Europe. It acts as a think tank, strategic connector and EU funding access facilitator for textile industry, research, education and cluster organisations.

Follow the Innovation Hub on LinkedIn



Circular & Biobased Textiles Innovation Hub

The Co-Hosts



Centexbel, Belgium
www.centexbel.be



Research Institutes of Sweden

Research Institutes of Sweden (RISE), Sweden
www.ri.se



CENTROCOT
Innovation experience

Centro Tessile Cottoniero e Abbigliamento (Centrocot), Italy
www.centrocot.it



SÄCHSISCHES
TEXTIL
FORSCHUNGS
INSTITUT e.V.

Sächsisches Textilforschungsinstitut (STFI), Germany
www.stfi.de



TRANSFORMATIVE
TEXTILES

Ceti Transformative Textiles, France
www.ceti.com

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Manisha Marival
Recycling &
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Where European Sustainable Textile Experts Meet