TEX-BREIN

Interregional community of TEXtile ecosystems for the circular transition: Building capacities, REINforcing network and organisations

SUMMARY OF

ACHIEVEMENTS AND RESULTS

Creating stronger ecosystems, driving circular textile innovation, delivering lasting impact.



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PROJECT LEADER

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PROJECT PARTNERS

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PIOT - ZWIAZEK PRACODAWCOW PRZEMYSLU ODZIEZOWEGO I TEKSTYLNEGO (PIOT) Poland

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TEX-BREIN - Interregional community of TEXtile ecosystems for the circular transition: Building capacities, REINforcing network and organisations

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TEX-BREIN brought together textile and apparel organisations, innovation centres, research institutions and industry experts from Czechia, Italy, Portugal, Poland, Spain and Sweden to accelerate the transition towards a competitive, innovative and circular European textile ecosystem.

Key Objectives

- Strengthened cooperation between European textile ecosystems and innovation actors.
- Increased the innovation and circularity capacity of SMEs and support organisations.
- Developed skills in circular economy, sustainable materials, digitalization, traceability and new technologies.
- Supported the adoption of circular business and production models.
- Created new opportunities for cross-regional cooperation, investment and knowledge exchange.
- Contributed to the implementation of the EU Strategy for Sustainable and Circular Textiles.

What TEX-BREIN Delivered

The project combined capacity building, webinars, e-learning, learning expeditions, expert exchange, networking and SME support. A major focus was the development of a portfolio of business cases from companies and the structuring of re-Hubs, focusing on practical regional solutions that supported textile reuse, recycling and circular value chains.

Main achievements

- 21 business cases demonstrated opportunities for circular textile innovation and investment;
- 3 pilot re-Hubs supported regional circular textile solutions;
- stronger interregional networks and partnerships connected industry, research, innovation and public stakeholders; skills and innovation capacity of SMEs and textile ecosystem organisations were enhanced;
- new knowledge, tools and cooperation opportunities supported the green and digital transformation of the European textile sector.

TEX-BREIN

Connecting ecosystems • Building capacity • Reinforcing cooperation • Accelerating circular textile innovation



Ecosystem Building

Established the knowledge and strategic foundation for the TEX-BREIN project. Its main purpose was to understand the structure, strengths, needs and innovation potential of textile ecosystems across six European regions and to identify opportunities for stronger interregional cooperation.

The work covered Severovýchod (Czechia), Łódzkie (Poland), Toscana (Italy), Norte (Portugal), Catalonia (Spain) and Västra Götaland (Sweden), bringing together regions with different levels of development, industrial structures, research capacities and circularity maturity.

Key Objectives

- **Mapped the regional textile innovation and circularity ecosystems and identified their main actors and capabilities;**
- Identified stakeholders representing the Quadruple Helix – industry, research and academia, public authorities, and civil society/intermediaries;
- Assessed regional strengths, weaknesses and innovation capacities through benchmarking;
- Identified real sector needs related to the green, digital and smart transition;
- Identified opportunities for complementarity, knowledge transfer and interregional value-chain cooperation;
- Connected identified needs with Regional Smart Specialisation Strategies (RIS3) and provided evidence for future policy and investment actions.

Main Achievements

A major achievement was the development of the Innovation Mapping, providing a common baseline for all six regions. The analysis identified regional specializations and complementary strengths, as well as shared challenges such as limited textile waste collection, insufficient advanced sorting and recycling infrastructure, policy and EPR implementation gaps, and difficulties in translating research results into SME innovation.

The second key achievement was the Regional Innovation Boosting Action Plan. Based on the mapping, stakeholder interviews, workshops and dialogue with regional policymakers, the Action Plan transformed the evidence collected into concrete recommendations and priorities for action.

Ecosystem Building therefore created a solid foundation for the next stages of TEX-BREIN: SME engagement, investment project development and re-Hub pilots as well as skills potential building. It also identified opportunities to transfer knowledge and technologies between more developed and less developed regions, strengthen European textile value

chains and accelerate the transition towards a more innovative, resilient and circular textile sector.

In Numbers

6 European regions | 8 project partners | Quadruple Helix stakeholder mapping | 6 regional ecosystem analyses | Interregional benchmarking | Regional Innovation Boosting Action Plan | Basis for future investment and Re-Hub development





Capacity Building - Building Skills, Innovation Capacity and Readiness for Circular Textiles

Successfully strengthened the knowledge, skills and innovation capacity of SMEs, clusters, support organisations and Re-Hub staff. It connected the ecosystem analysis carried out in Ecosystem Building with the development of investment projects and supported stakeholders in preparing for the green and digital transition of the textile sector.

What Was Achieved

A comprehensive Capacity Building Action Plan was developed, based on the needs and competence gaps identified across the TEX-BREIN regions. Two complementary programs were established: “Towards Circular Textiles – Empowering Industry Change”, addressing SMEs and the wider textile ecosystem, and “Skills for Impact – Partner Training for Project Success”, strengthening the capacities of TEX-BREIN partners.

The main training programme was implemented through webinars, workshops, learning expeditions, mentoring and tailored coaching. Training covered key areas of the circular textile transition, including circular economy, innovation and TRL, product lifetime extension, biobased materials, circular design, Extended Producer Responsibility, biotechnology, Digital Product Passport, traceability, regulatory compliance and sustainable textile systems.

Key Results

12 webinars were delivered, attracting 506 participants from 20 countries, including SMEs, companies, research organisations and public institutions. 316 unique participants took part, significantly exceeding the original participation target. Two international workshops were organised during learning expeditions in Borås, Sweden and Famalicão, Portugal. They enabled participants to exchange practical experience, explore EPR and circular business models, and work collaboratively on regional challenges and opportunities. A dedicated mentoring tool – “Upskilling in Textile Circularity” – was developed for SMEs and ecosystem stakeholders. It consolidated practical resources, reports, tools, training materials and regulatory information covering circular economy, design for circularity, technologies for circularity and recycling, DPP and EPR. The tool was designed for further use and replication by clusters, innovation hubs and sectoral organisations. In addition, three partner-training modules were implemented to strengthen the partnership's ability to engage SMEs and support innovation, focusing on Generative AI, co-design methods and social media.

Impact

Capacity building increased knowledge, strengthened practical competences and created new connections between stakeholders across European textile regions. It provided SMEs and support organizations with concrete knowledge and tools to adopt circular solutions, while creating a stronger basis for investment project development, cross-regional cooperation and future Re-Hub implementation.

CAPACITY BUILDING delivered the knowledge, skills and connections needed to turn circular ambitions into practical innovation and investment opportunities.





SME engagement & Project Portfolio - From SME Ideas to Investment-Ready Projects

Successfully engaged SMEs across six European regions and transformed their innovation needs into concrete investment project concepts supporting the green and digital transition of the textile sector. Built directly on the ecosystem mapping and the capacity-building activities, turning knowledge, networking and identified opportunities into structured business cases.

Objectives

- Engaged SMEs from both more and less developed European textile regions;
- Stimulated circular and digital innovation and strengthened textile value chains;
- Developed new cross-border and cross-sector partnerships;
- Transformed SME innovation ideas into structured and fundable projects;
- Connected promising projects with suitable European, national and regional funding opportunities;
- Created a pipeline of investment opportunities linked to circular economy and Re-Hub development.

From Ideas to Projects

A structured process was implemented: Expression of Interest (EoI → Evaluation → Mini Business Plan (MBP) → Validation → Funding Opportunity. Project ideas were assessed against strategic alignment, innovation potential, circularity and environmental impact, market readiness and potential for interregional cooperation.

The Learning Expeditions in Prato, Borås and Norte of Portugal, together with webinars, cluster activities, targeted communication and matchmaking, created valuable opportunities for SMEs to meet potential partners and develop new project concepts. Several collaborative projects emerged directly from relationships established during the Learning Expeditions.

Key Achievements

32 Expressions of Interest were collected from SMEs and other relevant stakeholders across the six regions. 21 project ideas were selected and developed into comprehensive Mini Business Plans, exceeding the original target of 17 SME-led projects.

The final portfolio included: 11 individual investment projects; 10 collaborative projects involving partnerships between SMEs; 20 companies involved in collaborative initiatives; 24 investment-ready business cases in total, including 3 Re-Hub business cases.
A dedicated Funding Opportunities Database was also developed, mapping relevant European, national and regional funding instruments and providing a practical basis for matching project concepts with appropriate funding routes.

Impact

Successfully transformed SME needs and innovation ideas into structured investment opportunities, strengthened interregional business cooperation and created a concrete pipeline for future funding.

From networking and inspiration to business plans, partnerships and investment – the project turned textile innovation ideas into projects ready for the next step.





Textile re-Hub Pilot Cases From Regional Needs to Circular Textile Ecosystems

Effectively translated the knowledge, needs and opportunities identified in the previous activities into three regionally adapted Textile re-Hub pilot models for Norte (Portugal), Severovýchod (Czech Republic) and Łódzkie (Poland).

Objectives

- Developed three potential Textile re-Hub models in Less Developed Regions;
- Transferred knowledge and good practices from more developed European textile ecosystems;
- Strengthened regional capacity for textile recycling and circular business models;
- Defined re-Hub mission, vision, governance, services, stakeholder structure and financial sustainability;
- Identified the infrastructure, technologies and partnerships required for future implementation;
- Prepared the re-Hubs as potential investment-ready models for future funding and replication.

Three Regional Re-Hub Models

Three different development pathways were defined, reflecting the specific maturity and needs of each region. For each textile re-Hub the governance, services, stakeholder engagement and financial sustainability models were established, technical and infrastructure needs were identified, including future sorting, recycling, testing, prototyping and digital solutions, regional KPIs and development roadmaps were established, including targets for innovation, partnerships, training, investment and environmental impact. The models were additionally subjected to external expert assessment and stakeholder validation. These assessments confirmed the strategic relevance of all three models while identifying the next steps required to move from concept and pilot structures towards long-term implementation. long-term implementation.

Key Achievements

PORTUGAL – Norte | PORTUGAL GREENTEX HUB
An operational pilot model built on existing CITEVE infrastructure and the experience of RegioGreenTex. The Hub combined recycling technologies, prototyping, industrial validation, training, consultancy, networking and SME support. Its technical infrastructure already covered sorting, shredding, mechanical and chemical processing, spinning and non-woven production.

CZECH REPUBLIC – Severovýchod | TEXtile ECO FUTURE

A structuring and ecosystem-building model responding to the lack of advanced sorting and recycling infrastructure, fragmented recycling capacity and regulatory uncertainty. The model connected industry, research, public authorities and regional stakeholders and established a pathway towards future investment, pilot projects, skills development and circular infrastructure.

POLAND – Łódzkie | LODZKIE TEXTILE RE-HUB

The Lodzkie Textile Re-Hub was designed to address a major gap in Poland – the lack of dedicated infrastructure for textile sorting, recycling, testing and industrial validation. It was designed to create a shared platform combining advanced technologies, R&D, training and SME support, enabling companies to develop and scale circular textile solutions.

Impact

Created a common European framework for regionally adapted Textile re-Hubs, showing how different regions can build their own pathways towards circularity, from an operational recycling hub, through an ecosystem-enabling model to a long-term transformational hub.

From regional challenges to concrete circular ecosystems – it had created the models, partnerships and pathways for the next generation of European textile recycling and innovation.





WEBINARS

1. Inspiring Innovation in Textiles
   https://tex-brein.eu/project-activities#:~:text=Inspiring%20Innovation%20in%20Textiles%C2%A0
2. Mastering Innovation: From Concepts to TRL and the Tools that Drive the Process
   https://tex-brein.eu/project-activities#:~:text=Mastering%20Innovation%3A%20From%20Concepts%20to%20TRL%20and%20the%20Tools%20that%20Drive%20the%20Process
3. Introduction to the Circular Economy in the Textile Industry
   https://tex-brein.eu/project-activities#:~:text=Introduction%20to%20the%20Circular%20Economy%20in%20the%20Textile%20Industry
4. Overview over high technology readiness levels (TRL) for circular textiles
   https://tex-brein.eu/project-activities#:~:text=OVERVIEW%20OVER%20HIGH%20TECHNOLOGY%20READINESS%20LEVELS%20(TRL)%20FOR%20CIRCULAR%20TEXTILES
5. Extend the Lifespan of Products and their Parts
   https://tex-brein.eu/project-activities#:~:text=Extend%20the%20Lifespan%20of%20Products%20and%20their%20Parts
6. Innovations in Biobased Fibers and Materials for the Textile Industry
   https://tex-brein.eu/project-activities#:~:text=Innovations%20in%20Biobased%20Fibres%20and%20Materials%20for%20the%20Textile%20Industry
7. Designing for Circularity & Longevity
   https://tex-brein.eu/project-activities#:~:text=TEX%2DBREIN%20Webinar%3A%20Designing%20for%20Circularity%20%26%20Longevity
8. Extended Producer Responsibility (EPR) – Guidelines for the Textile Sector
   https://tex-brein.eu/project-activities#:~:text=Extended%20Producer%20Responsibility%20(EPR)%20%E2%80%93%20Guidelines%20for%20the%20Textile%20Sector
9. Biotechnologies Applied in Textile Processing
   https://tex-brein.eu/project-activities#:~:text=Biotechnologies%20Applied%20in%20Textile%20Processing
10. Unlocking Transparency, Trust, Sustainability, and Circular Value
    https://tex-brein.eu/project-activities#:~:text=Unlocking%20Transparency%2C%20Trust%2C%20Sustainability%2C%20and%20Circular%20Value

11. Regulatory Compliance and Certification in the Textile Industry
https://tex-brein.eu/project-activities#:~:text=Regulatory%20Compliance%20and%20Certification%20in%20the%20Textile%20Industry
12. System Demonstrator for a Sustainable Textile System
https://tex-brein.eu/project-activities#:~:text=System%20Demonstrator%20for%20a%20Sustainable%20Textile%20System%C2%A0%F0%9F%8C%B1

REPORTS

INNOVATION MAPPING REPORT
https://tex-brein.eu/images/DELIVERABLES/D1.1_Innovation_Mapping_Report.pdf

CAPACITY BUILDING AND MENTORING GUIDELINES FOR REGIONAL SUPPORT ECOSYSTEM STAKEHOLDERS AND APPLYING SMES.
https://tex-brein.eu/images/CAPACITY_BUILDING_AND_MENTORING_GUIDELINES_.pdf

REGIONAL INNOVATION BOOSTING ACTION PLAN – TEX-BREIN CONTRIBUTIONS
https://tex-brein.eu/images/DELIVERABLES/D1.2.pdf

FUNDING OPPORTUNITIES DATABASE
https://tex-brein.eu/component/content/article/new-tex-brein-report-funding-opportunities-database?catid=27

POLICY RECOMMENDATION
https://tex-rein.eu/images/DELIVERABLES/D_5.3_Policy_Recommendation_Report.pdf



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LOOKING AHEAD, BUILDING TOGETHER.

We look to the future with confidence and hope.

By strengthening our partnership, we aim to accelerate the circular and digital transformation of the textile sector and create a more sustainable, innovative and inclusive future for all.

CIRCULAR BY DESIGN

DIGITAL BY NATURE

TOGETHER AS PARTNERS

SUSTAINABLE BY CHOICE

Stronger Partnerships.
Smarter Solutions.
Circular Future.

FOR PEOPLE. FOR PLANET. FOR PROGRESS.

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