AddTex

PILOT SERVICES

OF THE HUBS AND RECOMMENDATIONS FOR THE FUTURE

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Project n°101056303 – Advancing industrial digital and green innovations in the advanced textile industry through innovation in learning and training.

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Introduction: The AddTex Project

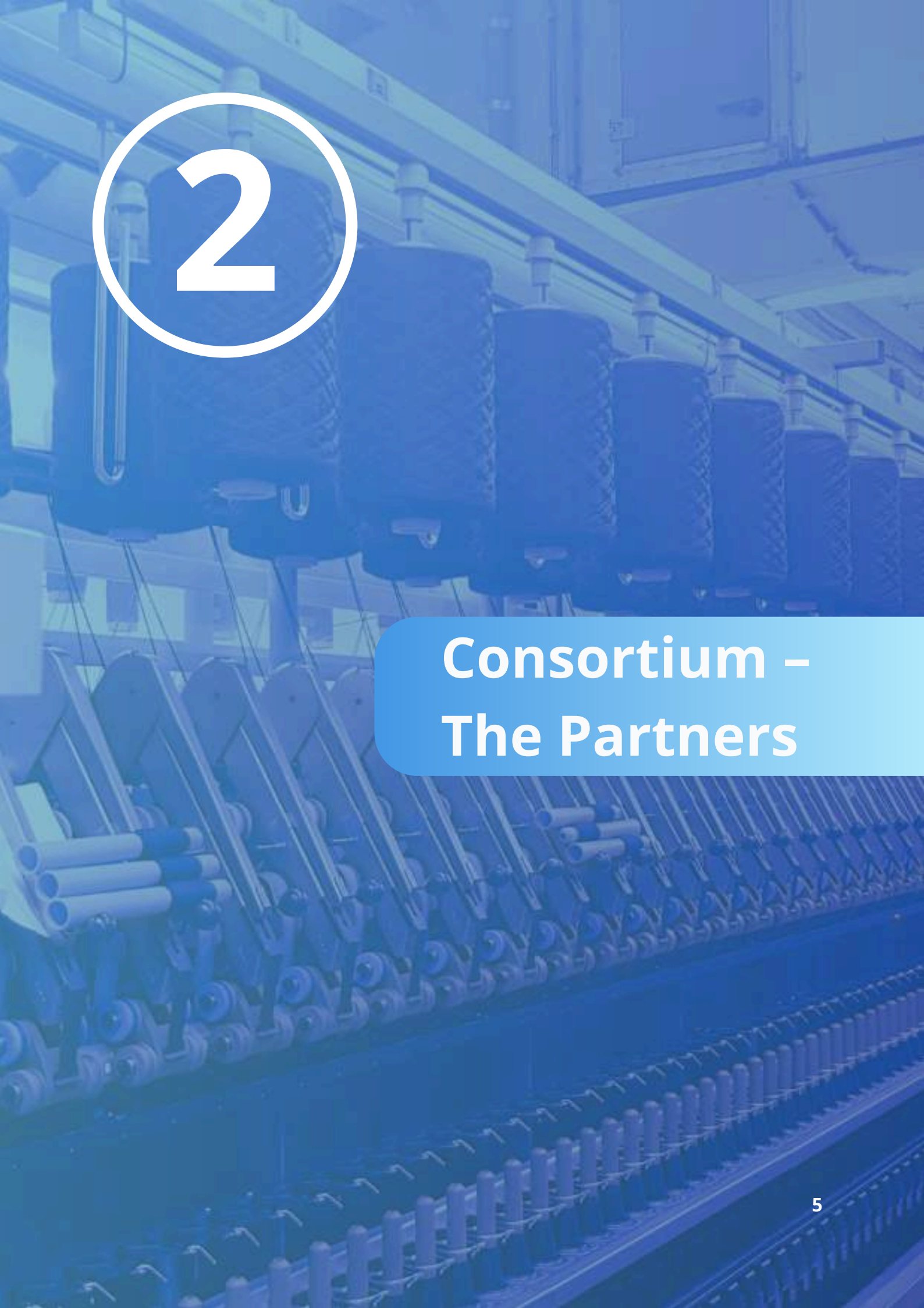
The AddTex project

Advanced textile materials are a thriving sub-sector in the textile and clothing ecosystem across Europe, based on high added value and differentiation as unique selling proposition. Innovation in this field is key in the resilience building of the EU textile sector and in ensuring its competitiveness, particularly in volatile, uncertain, complex and ambiguous (VUCA) environments, such as were presented through the COVID-19 pandemic.

The AddTex project's main objective is to support the resilience and sustainable GREEN, DIGITAL & SMART transition and advancement in the textile sector through innovative learning and training. In this way, the project aims to strengthen and stimulate a sense of initiative and entrepreneurial attitudes, mindsets and skills in learners, educational staff and skilled workers, in line with the Green Deal and Entrepreneurship Competence Framework. The strength and expertise of established and developing industry clusters will continue to build competencies, support the textile sector growth and present opportunities for impact driven, sector-specific research.

Facilitation of knowledge transfer and exchange throughout the industry ecosystem is vital to sustainable growth and smooth transition. The AddTex project supports continued cluster activities, engaging academics and researchers in collaborative research to foster new, innovative and multidisciplinary approaches to teaching and learning.

Figure 1: Organization of the AddTex project.



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Consortium – The Partners

The AddTex Project is a consortium of 12 partners from 10 countries representing different parts of Europe, presenting balanced geographic coverage and different situations in terms of the advanced textile materials sector.

There is a mixture of institutions with different profiles, capacities and complementary competences including HEIs, VETs, training centres and industry related profiles. Key mobilizers and enablers are clusters, which bring together the triple helix of innovation with industry, research, and public sector.

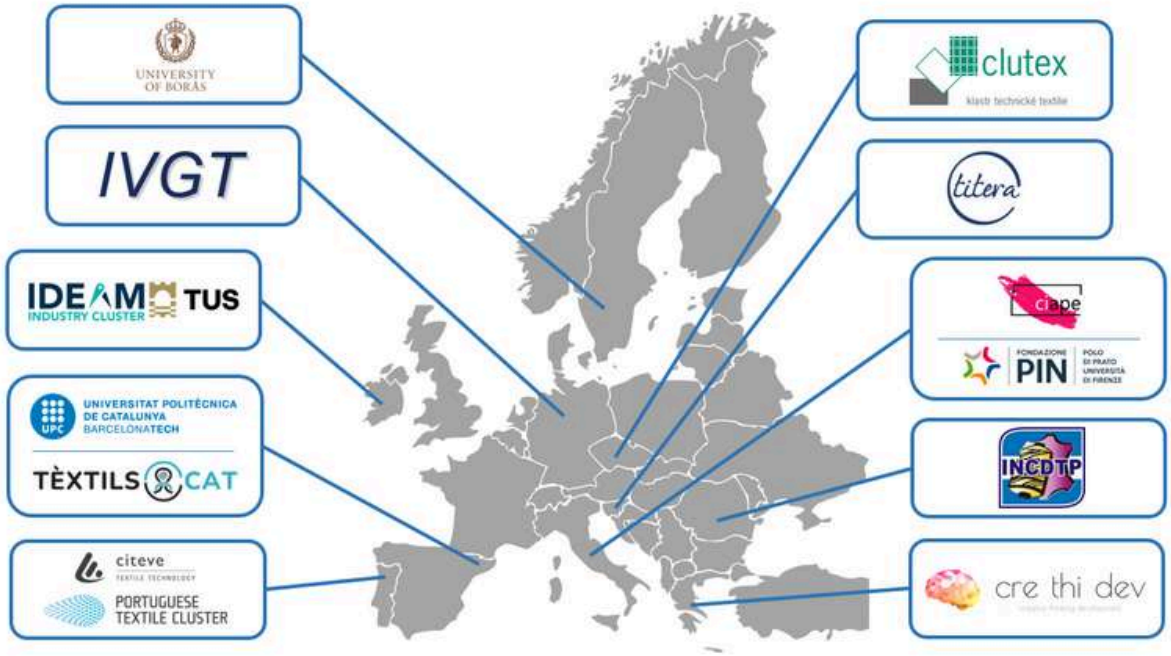

Figure 2: Partners of the AddTex project

CIAPE is an Italian non-profit cultural association promoting lifelong learning in an innovative and inclusive way. CIAPE holds sound expertise in designing and carrying out training activities aimed at developing and validating soft skills, as well as the competences required in the future labour market. The organization works, on a daily basis, in synergy with more than 300 like-minded entities and organizations from all over Europe and beyond.

CITEVE – The Technological Centre for the Textile and Clothing Industry of Portugal (CITEVE) is a private non-profit organization active since 1989, dedicated to research, innovation, and technology transfer for the Textile & Clothing (T&C) industry. Its mission is to support the sector's technical and technological development, promote innovation, and help shape industrial public policies. As a VET provider and intermediary, CITEVE facilitates the alignment between industry skill needs and specialized training opportunities. It also manages the Portuguese Textile Cluster, working to strengthen cooperation across the T&C value chain and enhance the sector's endogenous capabilities.

CLUTEX cluster technical textiles has been establish on 14th June 2006 in Hejnice after the period of mapping of suitable companies for clusters.

our mission is to provide services for member companies in the field of preparation of joint projects, joint marketing activities, sharing professional information, sharing contacts and activating new ones inter-cluster/inter-disciplinary activities at national and international level.

IVGT is Germany's biggest textile association representing the interests of approximately 170 member companies from the sectors of textile raw materials, finishing, yarns and fabrics as well as Technical Textiles. As an industrial association we contribute with our work in a significant way to maintain and strengthen the general framework for textile production.

CRE.THI.DEV. is a Greek non-profit company aiming at community development through research and development of action plans. The company establishes close cooperation with local and regional authorities, government authorities and business associations to promote innovation, entrepreneurship and sustainable development through research projects and the raising of awareness in local communities towards available development projects.

Asserting itself as an active and dynamic operator on the national and European research market, the National Research and Development Institute for Textiles and Leatherworking Bucharest INCDTP promotes and develops multidisciplinary applied research activities in the field of textiles-garments and leather-shoes-rubber consumer goods, for economic agents in the sector and for other various related fields.

PIN is a foundation whose mission is to present itself as a network between the University of Florence and the local economic and political fabric, with the aim of ensuring continuous training for students and managers in order to be able to provide the skills required by the needs of the world of work, to use innovative tools to create new perspectives, give life to research, build relationships.

Tèxtils.CAT is a cluster, with a non-profit association structure, formed by companies in the value chain of the advanced textile materials sector in Catalonia and other organizations supporting innovation. Its main goals are to promote innovation, especially in cooperation; to foster links in the Catalan advanced textile materials sector and to give visibility to the cluster and its members at an international level to boost the green and digital transition.

TITERA specializes in smart textiles, offering technical expertise across various applications that meet diverse standards and user needs. Company's unique business model focuses on understanding user experiences, allowing to integrate knowledge into industrial solutions. This positions TITERA to better facilitate the introduction of innovative concepts through workshops and webinars.

TUS is a multi-campus university spread across six campuses throughout Ireland's Midwest and Midlands region. By providing a healthy supply of high-quality graduates and an additional focal point for growth and innovation, we can help regional development take a big step forward. Our continuous focus on partnership, innovation and staying agile shows, we understand the importance of working with key stakeholders across industry and society.

At the University of Borås, learning, knowledge, and innovation of high quality and with significant social relevance take place in a setting that meets the highest international standards of quality. We are well-known internationally for our Swedish School of Textiles and our Swedish School of Library and Information Science. Science Park Borås is also a part of our university; it is a national leader in Sweden when it comes to addressing issues of sustainability and consumption.

The Universitat Politècnica de Catalunya – BarcelonaTech (UPC) is a public institution seeking higher education in the fields of engineering, architecture, science and technology, and is one of the leading universities in Europe. Our mission is to contribute to the construction of a sustainable world, including research, technology transfer, the diffusion of knowledge and the training of professionals in engineering, architecture, science and technology.

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The AddTex Hubs

What are the Hubs?

A hub is a centre or geographic concentration that brings together companies, entrepreneurs, investors and other relevant players in each sector or industry. It is characterized as a vibrant and dynamic business ecosystem, where collaboration, innovation and knowledge sharing are encouraged.

In a hub, companies and entrepreneurs can access a series of resources and advantages that facilitate their development and growth, such as shared services, education and training programs, business mentoring or connections to key networks.
Taking advantage of the different nature of the AddTex partners and with the objective to fulfil one of the project objectives (generate synergies between industry and academy,), the project creates 4 hubs in 4 different countries: Czech Republic, Germany, Portugal and Spain. Those hubs will be the connection between the industry and the academy in their respective countries during the project execution and will extend their activity when it is finished thanks to the business model created.

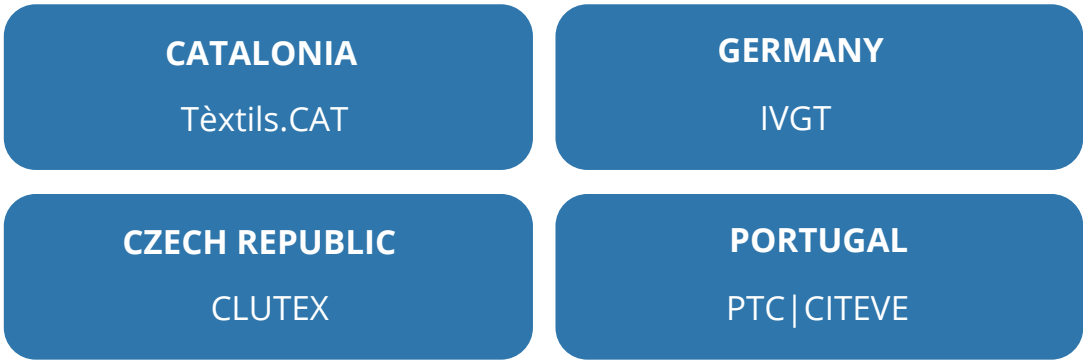


Figure 3: Hubs created in the project.

Functions of the Hubs

The hubs are critical to fulfil the mid and long terms impacts of the project and the continued upskilling of the textile industry, scaling up the capacity building beyond the pilot phase that AddTex represent.

The hubs will facilitate continued interactions between academia and industry, capacity building through the different tools created during the project and to operate as a collaboration cornerstone to continue mobilities and virtual internships at EU level.

Pilot services of the Hubs

In the framework of the AddTex project, the hubs offer four main activities as a pilot services example:

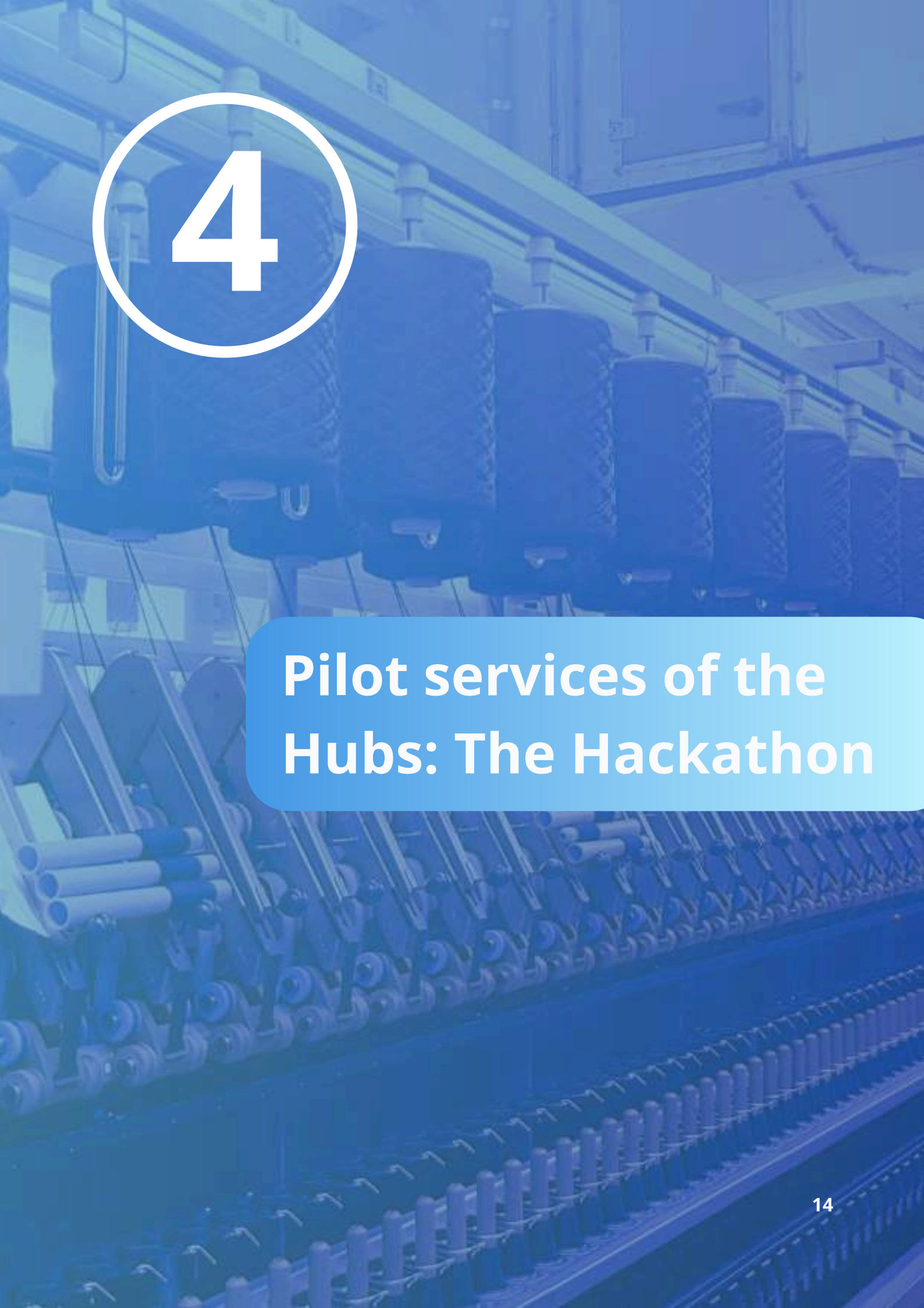
Hackathon: An activity in form of a team challenge that enables the students to know and intervene in real problems of the textile industry.

Virtual international internship: The prize of the hackathon, that consists of deepen the knowledge of the company that has exposed their problem, and an opportunity to further develop the solutions raised in the hackathon.

Back-to-school programme: A series of masterclasses with an origin at the MOOC, open to everyone and focused on the main topics of the project: green, smart and digital evolution of the European technical textiles sector.

Coaching programme: As a reward for participating in the hackathon, the cluster asks the company which are their necessities, and they offer coaching to solve some of them.

All those pilot services will be detailed in the next sections.



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Pilot services of the Hubs: The Hackathon

What is a Hackathon?

A hackathon is an event, typically spanning from a few hours to several days, where individuals from various backgrounds come together to collaborate intensively on a specific project or to solve a particular problem. The name itself is a blend of "hack," referring to exploratory and creative problem-solving, and "marathon," highlighting the event's focused and often fast-paced nature. Participants usually work in teams to rapidly develop innovative solutions, which can range from software prototypes to hardware or even non-technical solutions, often culminating in presentations or demonstrations of their work.

The AddTex hackathons were carried out in collaboration with all project partners and brought together professors, students, cluster managers and experts from across Europe. For two days, university students developed solutions to real-life challenges posed by companies. The challenges were focused on the main topics of the AddTex project: sustainability, digitalisation processes, and smart and advanced materials.

At the end of the hackathon, all the participating teams had to present their results in pitches. A jury consisting of company and association representatives evaluated the pitches using a points system. The four winning teams were given the opportunity to further develop their award-winning solution in a one-week virtual or real internship.

The Hackathons in the AddTex context

During the AddTex project, four hackathons were held, one in each hub:

PIN / IVGT/Schmitz Textiles: New business model for textile recycling

schmitz textiles

In 2023, Schmitz Textiles launched elegance eco, the first awning fabric made from recycled PET bottles with full traceability back to the polymer and set the challenge at the hackathon to develop innovative recycling solutions for further reducing textile waste.

TUS / Portuguese Textile Cluster/CITEVE + Tearfil : Smart traceability

Tearfil Textile Yarns

The spinning company Tearfil purchases raw materials for its spinning mill from various suppliers and faced the challenge of being able to clearly trace the raw materials back to the spun yarns.

UBORAS / Tèxtils.CAT +LIASA – La Industrial Algodonera : Creation of a 100% recyclable paper luxury bag

La Industrial Algodonera, S.A. (LIASA) manufactures cords and ribbons and set itself the challenge of developing a luxury bag made from a single material that is 100% recyclable, including all parts, especially the paper handles.

UPC / CLUTEX +SCILIF (SUNFIBRE): extile accessory with safety features /HI-visibility

SCILIF s.r.o. owns the rights to SUNFIBRE® technology, which glows over long distances in poor visibility and darkness and set itself the challenge of developing a marketable garment that would improve the visibility of pedestrians in the city during the autumn/winter period.

Testimonial

"With the collaboration of Tèxtils.CAT, we took part in a two-day hackathon with a group of students from the University of Borås, and we couldn't be happier with how it went. It was a great opportunity to connect with young talent and see how they approached some of the real challenges we face in the textile industry. Their ideas were creative, fresh, and surprisingly practical. The whole experience was really useful for us, and it showed just how valuable these kinds of collaborations between companies and universities can be."

Jaime Cabré, LIASA

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Pilot services of the Hubs: The Virtual Internships

The Idea of the Virtual Internships

The virtual internship offers hackathon winners the opportunity to gain practical experience with real innovation and product development processes. Students acquire practical skills, deepen their knowledge and work on further developing their own winning idea.

The internship can be completed flexibly, either as a full-time week or spread over several days. The participating companies, which were already involved in the hackathon, set real challenges and integrate the students into relevant processes such as development, team meetings or project planning.

Following the design sprint methodology, each internship day has a specific goal, which promotes structured learning and rapid acquisition of skills.

Students typically invest 2 to 40 hours per week, depending on the complexity of the task and their involvement in company activities.

Mentors from the companies ensure progress and provide feedback through regular check-ins (15 to 30 minutes per day).

Students document their work, share their research findings and contribute to the further development of their idea.

The virtual internship is a meaningful introduction to real innovation ecosystems – benefiting both students and companies.

Implementation

IVGT - Schmitz Textiles

In contrast to the virtual format, the winning team of the German hackathon competition was invited to a nine-day internship. In addition to Schmitz Textiles in Emsdetten, the students visited several other companies in the industry for short internships, company tours and a visit to the Hannover Messe 2025 trade fair at the joint stand for technical textiles. The company visits showcased a wide range of technologies, production methods and sustainability strategies, complemented by cross-industry perspectives through exchanges with experts at the trade fair.
The students showed great interest in the industrial processes and rated the experience as a valuable source of inspiration, especially regarding the differences from their home industry. The language barriers in production underscored the need for targeted preparation. Schmitz Textiles sees the combination of hackathon and practical experience as a forward-looking model and plans to continue supporting this format.

Tèxtils.CAT - LIASA

The students impressed LIASA with their fresh, analytical approach to a long-standing operational challenge. Their project proposal was well thought out, realistic and potentially implementable – a starting point for further consideration of more sustainable practices. The structured approach enabled them to engage intensively with strategy, design constraints and economic aspects.

The internship was an enriching learning experience for the students. The importance of practical relevance and the feasibility of industrial solutions became particularly clear. The opportunity to get to know company processes and decision-making paths provided valuable insights into the real world of work and underlined the importance of sustainability and technological change.

Portuguese Textile Cluster/CITEVE - Tearfil

The winning team of the hackathon organised by TUS in collaboration with PTC/CITEVE had the opportunity to complete a virtual internship at Tearfil to further develop the proposal originally presented during the hackathon.
During the internship, the students were able to deepen their knowledge of the proposal and examine its objectives, requirements and potential impact in greater detail.
Through regular meetings, constructive feedback and knowledge sharing, company representatives supported the team's work to adapt the ideas to the actual expectations of the industry.
The direct contact enabled the development of joint solutions based on constructive dialogue and a cooperative process. This experience was a valuable learning experience both on a technical level and for the development of interpersonal skills such as teamwork, communication and problem solving.

CLUTEX – Sunfibre

The virtual internship at SunFibre provided students with a practical and creative learning experience that went beyond the original hackathon. Based on a concept developed there, the students worked on a real prototype. The team of four students approached the task with impressive care and professionalism. What really surprised us was the practicality of their product proposal and the well-thought-out development behind it. They even tried to improve our technology by integrating motion sensors, which showed great initiative and creativity. The students expanded their technical knowledge, strengthened their teamwork, idea exchange and digital collaboration skills. They gained insights into procurement, functional design and the integration of innovative materials into everyday products.
We believe this was a very enriching experience – especially for the students – and we are proud to support young innovators who bring fresh ideas to the textile industry.

Testimonial

"The Virtual Internship, within the scope of the European project AddTex, was a differentiating experience with relevant added value for Tearfil. The work with a multidisciplinary team, which experienced and focused on the challenge of traceability in the textile sector, ended up generating relevant knowledge for use in the context of Tearfil's performance. The evolution that was achieved throughout each of the stages and meetings held was very fruitful, allowing us to plan and manage the work with due rigor and endogenize the information that was being generated by Tearfil. In a comprehensive, but above all challenging, abstract theme, it was possible to deepen and generate knowledge that Tearfil can use internally, to work within the scope of its internal processes."

Christina Castro, TEARFIL

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Pilot services of the Hubs: the Back-to-school programme

What is the Back-to-school programme?

Back-to-school programmes in a business context refer to structured measures that companies implement in cooperation with educational institutions (primarily colleges and universities) and industry associations to specifically promote knowledge transfer, the development of young talent and/or innovation.

In the project, the back-to-school programme was a training programme in the form of masterclasses for employees to expand their knowledge and certify their progress. The material used in this activity was the material from the virtual training (MOOCs). The practice-oriented webinars tied in with the MOOC topics and provided practical implementation examples and projects, thus imparting valuable knowledge to company employees. Valuable contacts to implementers and solution providers for specific topics related to the green, smart and digital transformation were thus established. The added value lies in the matchmaking between the companies in the participating clusters.

The Back-to-school programme in the reality

The project's 'Back to School' programme was developed specifically for textile workers.

This groundbreaking initiative bridged the gap between education and industry, providing interested textile professionals with the knowledge and tools they need to confidently master the challenges and opportunities of the green, digital and smart transformation. Building on the innovative training courses of the Smart, Digital and Green Skills Academy, the programme focused on practical applications for industry.

In exciting and interactive masterclasses, participants gained insights into successful real-world implementations and learned actionable strategies for promoting innovation, digitalisation and sustainability in their own companies.

A total of four events were held as part of the 'Back to School' programme, covering the following topics and content:

- **Building bridges between industry and education**
  Insights into innovative solutions, collaboration between industry and academia, and tools for promoting future talent.
- **Smart solutions in the textile industry**
  Practical applications of smart textiles and advanced materials, linking industry and education.

- **Digital transformation in the textile industry**
  Actionable insights and practical strategies for your business and discover how digital tools and innovative technologies are shaping the future of the textile industry.
- **Green solutions in the textile industry**
  Practical insights into sustainable practices in the textile industry and links to the MOOC's educational content.

The four live sessions reached a total of 187 viewers. All sessions are available online on the AddTex website

Testimonial

"It was a pleasure to join the Digital Transformation in the textile sector masterclass. These events are key to presenting our work in this area, showing how digital tools like AI and real-time data analysis can impact efficiency and sustainability in textile production. In this complex and fragmented industry, these events are a great opportunity to learn more about new technologies being developed and potentially lay the basis for future collaborations."

Miguel Ribeiro, Smartex.ai

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Pilot services of the Hubs: the coaching programme

What is the coaching programme?

Coaching is the tool for upskilling the company in the form of an individual tailor-made coaching service. It is a process of mutual dialogue between the coach (here the hub representative) and the coachee (here the company representative) and focuses on solving the individual needs of the coachee. The goal is to move the coachee in the areas most important to him.

The goals of the coachee were defined, his individual possibilities and opportunities were assessed, and specific steps and procedures were determined. During the follow-up meetings, feedback on the implementation, or corrections, was provided. For relevant parts of the action plan, the hub (involved HEIs and/or VETs) subsequently acted as a partner for the implementation of specific activities.

A fundamental feature of coaching is that the coach does not act as a mentor and advisor but seeks solutions in dialogue with the client. It uses creative communication techniques chosen according to the type of coachee (manager or senior company representative).

Coaching Programmes in the companies of the Hub

The coaching programme was primarily intended for companies involved in hackathons, companies which were winners of the hackathons and did the internships.

The cooperation was divided into several meetings according to the needs of the company. At the initial meeting, it was clarified what the company's expectations were, what the basic methodological approach of coaching was, what the possible outcomes were. This was followed by a meeting based on the GROW methodology (G - goal, R - reality, O - option, W - will).

Open and closed questions were used, the coach monitored the coachee's non-verbal expressions, body language, and the atmosphere, aiming for openness. Publicly available online canvases were used, which enabled a graphic representation of the outcomes. The coach processed the outcomes of the discussion into a record, and priorities were set in cooperation with the coachee. The coach optionally processed notes from the meeting as interim material for further communication and considered suitable other methodologies for subsequent communication.

TEARFIL (Portuguese Hub / CITEVE)

The coaching process was implemented through meetings (in-person and on-line), where the specific needs identify by the company were discussed and the potential solutions were agreed. The main output of the coaching activity between Tearfil company technicians (coachee) and Portuguese Textile Cluster/ CITEVE coacher was the explanation of a plan for the Tearfil workers training based on the AddTex MOOC and an overall assessment in the digital needs of the company.

Schmitz Textiles (German Hub / IVGT)

In response to customer enquiries and future EU regulations on sustainability, extended producer liability, the Eco-design Regulation and other requirements of the Omnibus Regulations, the company has decided to analyze its internal processes and interfaces with suppliers and customers. The CO_2 footprint is also to be calculated for several products. Following an initial online discussion and the submission of initial data, a visit was made to the company to talk to those responsible on site and determine the exact scope of the analysis and coaching. Based on the analysis of the data and initial calculations, several tools were presented, and the handling of individual products was tested with the employees. In a third step, the selected tool was used with real data. Based on the feedback, a model for more extensive calculations was created and the results evaluated by Schmitz Textiles. The process is not yet complete at the time of writing and will be continued in the coming months.

SUNFIBRE (Czech Hub / CLUTEX)

The main output of the coaching was an action plan for individual areas – vision, target groups, trends, research, production, team, marketing, sales. Areas of interest: research and development, access to trend studies (ETP platform), international contact network, access to educational resources, fundraising, involvement in cooperation platforms at various levels, participation in partnership projects, involvement in the marketing cluster, protection of intellectual property of new and innovative solutions.

During further cooperation between the company and the CLUTEX hub, a project plan for an international support program was developed and submitted to a specific call, the company presented itself together with the CLUTEX hub at the Styl fair, the company expressed participation in the hackathon, virtual internships and masterclass as beneficial for the further development of the company.

LIASA (Catalan Hub / Tèxtils.CAT)

LIASA participated in the coaching programme with support from Tèxtils.CAT. The program aimed to help the company create a business plan for its new idea: innovative woven tapes for deploying fiber optic cables widely and cost-effectively through sewage systems. LIASA's main objective was to develop a solid business plan for this new opportunity.

In several online meetings, working with its coach, the company used methods like the GROW model and business canvas tools. This process helped LIASA carefully analyze and shape the main parts of its strategy. The coaching focused on key topics, such as defining the unique benefits of its tapes, identifying the right customers and potential partners, studying its competitors, and planning how to produce and deploy the tapes.

The most important result of this coaching for LIASA was the creation of a detailed action plan. This plan outlines key steps, including ensuring the tapes work technically, preparing for larger-scale production, planning its market entry, and making financial forecasts. This coaching strengthened LIASA's overall strategy and prepared the company to successfully launch this exciting new business opportunity.

Testimonial

"During further cooperation between the company and the CLUTEX hub, a project plan for an international support program was developed and submitted to a specific call, the company presented itself together with the CLUTEX hub at the Style fair, the company expressed participation in the hackathon, virtual internships and masterclass as beneficial for the further development of the company."

David Krauz, SUNFIBRE

"As part of the collaboration between Schmitz Textiles and the IVGT hub, a project plan for several products was developed and implemented. The focus was on CO_2 calculations for products and processes. Determining the operational data provided us with important information and made it clear which requirements we need to take into account in our external purchasing and sales activities in the future."

Ralf Bosse, Schmitz Textiles

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Recommendations for the Future

Strategic Goals

The central task of the AddTex hubs is to communicate, collect and process expertise for all stakeholders in the textile industry. To this end, four strategic objectives were evaluated for their functionality.

Functionalities & Perspectives

1. Strengthening the skilled labour base through excellent education and training. Development of modular, practical training programmes. Promoting digital and sustainability skills, as well as process understanding and interdisciplinary thinking. Close cooperation with vocational schools, colleges, universities and industry partners.

2. Promotion of technology transfer and innovation. Development and demonstration of new skills techniques for trainers and trainees (e.g. organisation of workshops, MOOCs, hackathons). Establishment of digital and real communication centres. Mentoring and learning infrastructure.

3. Creation of an open ecosystem for collaboration. Networking of companies, research organisations, education providers and public institutions. Organisation of exchange formats (workshops, masterclasses, research & technology dialogues). European and international cooperation with other hubs and competence centres.

4. Promotion of sustainable, smart technologies and the digital transformation. Integration of sustainable technologies and resource efficiency in all education and development programmes. Development of application-oriented concepts for circular economy production. Participation in national and European trainings and education programmes.

Practical Implementation

After several digital hub activities had already been successfully implemented within the project, the AddTex consortium members organised two on-site concepts as demonstrator events. ‘Experts on tour’ and ‘Expert symposium’ were chosen and held in cooperation with industry and research organisations from 19-20 March 2025 in Tourcoing in northern France. Different objectives were pursued.

Experts on Tour: Organisation of various company and research institute visits with associated discussion rounds and individual presentations.

Expert Symposium: Organisation of an event with presentations and several workshops at one location.

This made it possible to address the different interests of the participants in a targeted manner and then use a further communication component to exchange the different experiences and adventures of both groups at a joint networking dinner. All the concepts implemented are very well suited to be integrated as HUB activities in the work of training organisations.

More similar events will be organised in the framework of the AddTex hubs.

AddTex

Website

Facebook

Instagram

YouTube

LinkedIn