Progress report 2021
At the heart of textile evolution

Techtera

Innovation → Market → Technology → Business Idea → International

Collaborative

plan success
A word from the president

Dear members,

Since its creation, Techtera has always been a fertile melting pot for innovation: encouraging the development of new technologies, supporting new areas, anticipating new constraints and building on them to foster new opportunities. This great collaborative energy developed within the cluster is a fantastic stimulus to innovation and value creation.

You will find out about these actions and enthusiasm within this report, thanks to the initiatives launched in 2021, and which respond to our strategic roadmap. Here are some examples:

- A stronger Europe thanks to interclustering projects promoting transnational cooperation between European clusters.
- Reaffirmation of the place given to digitisation and processes with the creation of the ICI 4.0. club, dedicated to Industry of the Future in the textile sector.

258 members, on the whole textile value chain

- **73 608** web pages visited
- **9 535** newsletter subscribers
- **99** Techtera press mentions
- **+35,5%** LinkedIn subscribers
- **+9 %** Twitter subscribers

- **214** Companies
- **31** Labs - Universities - Schools
- **5** Clusters
- **6** Associations (with 3 Trade union)
- **97** Very Small Companies (<20 employees)
- **102** SMEs (20-250 employees)
- **11** Mid-cap Companies (250-2 000 employees)
- **4** Groups (> 2 000 employees)
Greater commitment to sustainable development and the circular economy through calls for projects and the organisation of workshops, especially on the issues of sustainability and textile innovation ...

The year 2022 will also be an opportunity for us to rethink our roadmap with a programme for the years 2023 to 2027. We will obviously call on you to respond to your new requirements for cooperative innovation and development.

Finally, leaving the presidency after 10 years of involvement, I wanted to end this editorial with a "big thank you" to everyone with whom I had the chance to work and grow. I add a little personal touch with a special "Thank You" to the Techtera team and the administrators.

I wish you all the very best.

Louis Vovelle – President

CERTIFICATIONS:

The ISO 9001 for TECHTERA’s quality management system. The European Cluster Management Excellence Label Gold for Techtera’s highly sophisticated management and dedication to continuous improvement.
Innovation workshops
Themes launched

Market exploration

Competitiveness Workshops

Do the groundwork
Prepare the land to make your development projects fertile!

Printed electronics
Biosourced materials
Polymers for sports & leisure applications
Alternatives to fluorinated products
Monitoring and research of solutions in relation to the recycling of elastane
Impact of the pandemic on R&D in the textile sector in the framework of EU-TEXTILE 2030 and CONTEXT
Textiles & Acoustics
Textiles & Energy

Textiles Tomorrow and the Circular Economy with CIRIDD, the Auvergne–Rhône-Alpes Region, the Metropolis of Lyon and Unitex
Morning sessions presenting Horizon Europe calls
Discovery of the regional digital campus
Maintaining R&D jobs
DGA call for expertise: innovations for the flexible protection of the combatant

Materials watch: smart textiles for health, construction, PPE, sport and transport as part of the CONTEXT project
PPE watch: overview of the German PPE market
Creative watch: Trend Programs
- Fashion trends
- Megatrends
- Première Vision trends Meeting

Sport watch:
- Sustainability and innovation, the challenges of textiles for the sports and clothing markets (Performance Days, FashionSustain conferences and Frankfurt Fashion week)
- German sports textiles market

Sport watch:
- German sports textiles market

PPE watch:
- Overview of the German PPE market

Sustainability and innovation, the challenges of textiles for the sports and clothing markets (Performance Days, FashionSustain conferences and Frankfurt Fashion week)
German sports textiles market

Textiles Tomorrow and the Circular Economy with CIRIDD, the Auvergne–Rhône-Alpes Region, the Metropolis of Lyon and Unitex
Morning sessions presenting Horizon Europe calls
Discovery of the regional digital campus
Maintaining R&D jobs
DGA call for expertise: innovations for the flexible protection of the combatant
The textile sector is constantly renewing itself! Today’s students are our talents of tomorrow. Techtera has organised its first Fibres & Talents contest to highlight student textile innovation projects. This is a great opportunity to promote the diversity of training courses required by the textile industry: design, scientific and technological studies, engineering studies, research degrees, etc.

3 Techtera prizes and 3 sponsor prizes (totaling more than €2,000 in rewards and lots of publicity for the winners) were awarded during the event of July 22, 2021.

The 6 winners, from the three major textile regions of France and the Île-de-France area, presented very diverse projects in three categories – key areas of textile innovation for the innovation cluster:

- **Advanced materials and high-performance materials (including smart textiles). Sponsor: ELKEM SILICONES**
- **The circular economy and new business models. Sponsor: PORCHER INDUSTRIES**
- **The industry of the future and digitisation. Sponsor: SCHAEFFER PRODUCTIQUE**

Congratulations to all and a big thank you to the sponsors!

Techtera, a partner of the French Ministry of Defence, launched a call for expertise concerning flexible protection of combatants as part of the Centurion programme. About fifty industrial and academic organisations came forward. The first developments, which should begin in 2023, will make it possible to perfect, by 2030, the equipment for the soldiers of the future.

In order to better understand the issues and developments in the textile application sectors, Techtera has organised several monitoring surveys on events and targeted markets:
- The Performance Days trade fair and the FashionSustain conference on the themes of sport, clothing and sustainability,
- The German PPE market,
- The German market for sports textiles,
- Creative watch.

This second edition, organised in partnership with UNITEX, CIRIDD, Campus Text’in, and financed by the Auvergne–Rhône–Alpes Region and the Lyon metropolis, brought together 185 people around the themes of the sustainable production of biosourced textiles, the upgrading of unsold items and production offcuts. A winning three-part strategy to redesign the textile sector of tomorrow: round tables, BtoB meetings and a Hackathon. **New to the edition:** the Hackathon, organised by the “Fabrique de l’Innovation” (University of Lyon), was dedicated to students in order to propose innovative solutions in team mode based on the major challenges of the textile industry. It was a burst of energy and creativity concentrated within 48 hours.

Building on its success, the format will be renewed for the 2022 edition.
Clubs
- Club STEVi (Smart Textiles) – Club RECIT (Circular Economy) – Club ICi4.0 (Industry of the future)
  - Working groups and the birth of projects
  - Return of technology-watch
  - Meetings with project leaders

Innovation Workshops
- In-depth study of the themes

Potential of vitrimers in textiles
Potential of additive manufacturing:
  - Flexible materials
  - Smart Textiles
Sectoral project: elastane recycling: What solutions?
Sustainable development, valorisation of textiles and flexible materials in partnership with the Pôle Textile Alsace

Interclustering
- Hub of cluster for the factory of the Future
- CONTEXT: Network of European technical textile experts
- Launch of European projects to support beyond EU export in addition to TEXGLOBAL:
  - REC–N–COMP: recycled materials based composites
  - EU–ALLIANCE: technical textiles, connectivity, advanced technologies, advanced materials for the sector
- Submission of 3 European interclustering projects
- ECA (European Clusters Alliance): involvement in the European network of clusters
- EDIH (European Digital Innovation Hub): digitalisation of SMEs in Auvergne–Rhône–Alpes

Structuring of Techtera
- TechteraFab (industrial acceleration platform)
- Recruitment of a new innovation Project Manager
- 100% of the Techtera team employed by the structure
- Training of the team

Competitiveness Workshops
- European Defence Fund
- TechteraFab: service offer
- Horizon Europe: call for projects 2022
- Keys to successful fundraising
- ERP: keys to a successful implementation in your structures
- How to meet the challenge of mass customisation in an industry of the future approach
- European funding for smart textiles & testimonials in the framework of CONTEXT

Meetings and opportunities
- 45 CARTTEX business opportunities

Plant
Sow the first seeds and let them germinate!

Digital

Target
EU-ALLIANCE, new international opportunities for dual-use materials and technologies

The EU-ALLIANCE European project, of which Techtera is the coordinator – with five partner clusters – was officially launched on September 15, 2021. This 2-year project will offer opportunities for the development of intra-European and extra-European cooperation in the markets of Defence and Security. The objective of the cluster and its partners is to support the internationalisation of small/medium enterprises in the fields of technical textiles, connectivity, cutting-edge technologies and advanced materials, in order to reach dual-use markets Defence/Security in four targeted countries: USA, Canada, Japan and Indonesia.

Rec-N-COMP, towards the internationalisation of European technologies for more sustainable composites

Techtera is a partner of the REC-N-COMP interclustering project, aimed at supporting the internationalisation of European small/medium enterprises whose activities relate to the manufacture of composites based on recycled materials, including textiles. A joint internationalisation strategy will be developed and tested, targeting three countries: USA, Japan and Singapore. A market study will be carried out for each country and a mission organised, with the possibility for fifteen small/medium enterprises to participate in these trips as from the second half of 2022. Through this project, which will end in the spring of 2024, the innovation cluster is building cooperation with four European textile counterparts.

Industry of the Future is one of the three strategic axes of Techtera’s roadmap. In 2021, as part of the ICI4.0 Club, members defined the specificities of Industry of the Future applied to textiles. They were particularly interested in ERP (digital transformation tools). A visit to the regional digital campus was organised and several projects were highlighted.

In the Auvergne-Rhône-Alpes Region, the theme of mass personalisation was developed within the framework of all the innovation clusters working on Industry of the Future.

Also, on a European scale, Techtera is involved in the establishment of two European Digital Innovation Hubs (EDIH). The purpose of these groups is to constitute a single organisation, physical or virtual, aimed at connecting companies to the resources and ecosystems they need to succeed in their digital transformation.

Industry of the Future & Techtera: fertile ground for tomorrow’s textile industry

Quantified focus

16 PROJECTS labelled

33 PROJECTS including 13 EUROPEAN PROJECTS submitted

586 PARTICIPANTS in the «plant» actions

European Projects Partnerships: Great for fostering internationalisation

Industry of the Future is one of the three strategic axes of Techtera’s roadmap. In 2021, as part of the ICI4.0 Club, members defined the specificities of Industry of the Future applied to textiles. They were particularly interested in ERP (digital transformation tools). A visit to the regional digital campus was organised and several projects were highlighted.

In the Auvergne-Rhône-Alpes Region, the theme of mass personalisation was developed within the framework of all the innovation clusters working on Industry of the Future.

Also, on a European scale, Techtera is involved in the establishment of two European Digital Innovation Hubs (EDIH). The purpose of these groups is to constitute a single organisation, physical or virtual, aimed at connecting companies to the resources and ecosystems they need to succeed in their digital transformation.

Industry of the Future & Techtera: fertile ground for tomorrow’s textile industry

Quantified focus

16 PROJECTS labelled

33 PROJECTS including 13 EUROPEAN PROJECTS submitted

586 PARTICIPANTS in the «plant» actions

European Projects Partnerships: Great for fostering internationalisation

Industry of the Future is one of the three strategic axes of Techtera’s roadmap. In 2021, as part of the ICI4.0 Club, members defined the specificities of Industry of the Future applied to textiles. They were particularly interested in ERP (digital transformation tools). A visit to the regional digital campus was organised and several projects were highlighted.

In the Auvergne-Rhône-Alpes Region, the theme of mass personalisation was developed within the framework of all the innovation clusters working on Industry of the Future.

Also, on a European scale, Techtera is involved in the establishment of two European Digital Innovation Hubs (EDIH). The purpose of these groups is to constitute a single organisation, physical or virtual, aimed at connecting companies to the resources and ecosystems they need to succeed in their digital transformation.

Industry of the Future & Techtera: fertile ground for tomorrow’s textile industry

Quantified focus

16 PROJECTS labelled

33 PROJECTS including 13 EUROPEAN PROJECTS submitted

586 PARTICIPANTS in the «plant» actions

European Projects Partnerships: Great for fostering internationalisation

Industry of the Future is one of the three strategic axes of Techtera’s roadmap. In 2021, as part of the ICI4.0 Club, members defined the specificities of Industry of the Future applied to textiles. They were particularly interested in ERP (digital transformation tools). A visit to the regional digital campus was organised and several projects were highlighted.

In the Auvergne-Rhône-Alpes Region, the theme of mass personalisation was developed within the framework of all the innovation clusters working on Industry of the Future.

Also, on a European scale, Techtera is involved in the establishment of two European Digital Innovation Hubs (EDIH). The purpose of these groups is to constitute a single organisation, physical or virtual, aimed at connecting companies to the resources and ecosystems they need to succeed in their digital transformation.
Innovation projects and results - Communication and Dissemination

Project support
- Partnerships
- Identification of funding
- Opinion of the Innovation Commission
- Labelling

Support for international trade fairs
- A+A (PPE)
- Medica (Health)
- Performance Days (sport, functional textiles)
- TEXTIVAL (Textiles and flexible materials Business meetings)

Techtera interventions:
- Textival: business meeting and conference on the Industry of the Future
- MecaPlusTronic: B2B trade fair & conference dedicated to Mechatronics, Plastronics and printed electronics
- 9th International conference on applied research & materials (Tunisia): networking activities on smart textiles in the framework of CONTEXT
- EUTT (European Industrial Exchange on Technical Textiles) - Conference on "Effect of pandemics on innovation" chair of the session on digitalisation

Increased visibility of the textile sector and members:
- Creation of a new website
- Press relations: Projects press releases and press kits
- Event communication
- Monthly newsletter (French, English, Japanese)
- Development of a digital community on social networks

Workshops Resulting from the Innovation Workshops
- Textile & Acoustics
- Textiles and the challenges of a clean city
- Microplastic release from textiles
- Alternatives to fluorinated products
- Heated textiles in the framework of CONTEXT
- Anti-cutting textiles
  - In partnership with the Pôle Textile Alsace – Recovery and recycling of production waste
  - Recycling of technical textile fibres
- Development processes for functional and sustainable regenerated cellulose fibres
- Support to the international collaborative network for silk actors (Silky cities)
- Resilience and dual transition for textile retail

Ripen
Take care of flowering to ensure fruitful development!
Since 2005, 243 PROJECTS have been financed for an amount of 618.7 MILLION EUROS.

**R&D projects funded**

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Market</th>
<th>Budget</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CALME</strong></td>
<td>Create an innovative system of multifunction facade cladding with a mineral appearance, for renovation and new construction.</td>
<td></td>
<td>Budget: 2.99 million €</td>
<td>PSPC Regions, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>CODETEX</strong></td>
<td>Develop decontamination systems for firefighters’ clothing (dirty with soot, deposits of all kinds).</td>
<td></td>
<td>Budget: 1 million €</td>
<td>R&amp;D Booster, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>CONVERTIR</strong></td>
<td>Develop an innovative textile production tool for the manufacture of carbon fibre-based materials.</td>
<td></td>
<td>Budget: 2.16 million €</td>
<td>French recovery plan</td>
</tr>
<tr>
<td><strong>DIAGONAL</strong></td>
<td>Develop “safe by design” systems based on nanomaterials for the functionalisation of products.</td>
<td>Markets:</td>
<td>Budget: 6.34 millions €</td>
<td>Europe H2020</td>
</tr>
<tr>
<td><strong>DYNAMIC MOLDING</strong></td>
<td>Develop an innovative moulding process by 3D printing.</td>
<td>Markets:</td>
<td>Budget: 1.03 million €</td>
<td>PIA Concours Innovation ILAB</td>
</tr>
<tr>
<td><strong>GAFAC</strong></td>
<td>Replace traditional resins by mineral resins for composites used in the building sector (façade coating, etc).</td>
<td></td>
<td>Budget: 500 000 €</td>
<td>Pack Ambition Recherche, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>LACTIF</strong></td>
<td>Imagine and develop innovative systems based on high-performance materials for the protective equipment sector.</td>
<td>Markets:</td>
<td>Budget: 610 000 €</td>
<td>ANR Labcom</td>
</tr>
<tr>
<td><strong>OZONE</strong></td>
<td>Develop and qualify a device for treating air and surfaces including textiles with ozone.</td>
<td>Market:</td>
<td>Budget: 990 000 €</td>
<td>R&amp;D Booster, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>PRISMA</strong></td>
<td>Deploy intelligent processes, and nomadic online analyses in real time.</td>
<td>Market:</td>
<td>Budget: 3.98 million €</td>
<td>PIA3 Régionalisé, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>RESOL</strong></td>
<td>Develop recycling units for the textile and composite materials sector.</td>
<td>Market:</td>
<td>Budget: 900 000 €</td>
<td>R&amp;D Booster, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>REVIEN</strong></td>
<td>Develop systems for recycling PVC-based flexible composites.</td>
<td>Market:</td>
<td>Budget: 1.85 million €</td>
<td>PSPC Régions, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>SENTMI</strong></td>
<td>Develop textile-based systems to control the stock of French infrastructure and organisations, with a view to preventing incidents.</td>
<td></td>
<td>Budget: 2.28 million €</td>
<td>PSPC Régions, Auvergne-Rhône-Alpes Region</td>
</tr>
<tr>
<td><strong>SYMPHONIES</strong></td>
<td>Design new compression products and digital services based on new “green” manufacturing processes.</td>
<td>Market:</td>
<td>Budget: 10.54 million €</td>
<td>PIA3 Régionalisé</td>
</tr>
<tr>
<td><strong>TEXTILIA</strong></td>
<td>Integrate artificial intelligence technologies into the textile production tool, with a view to digitising the value chain.</td>
<td>Markets:</td>
<td>Budget: 3.16 million €</td>
<td>PIA3 Régionalisé</td>
</tr>
</tbody>
</table>
Supporting the textile industry to Europe
A strategy that is bearing fruit!

Textiles: One of Europe’s fourteen priority sectors!

The European Union has redefined its strategic objectives and means of action to support European industry.
Objectives: improve Europe’s resilience, reduce its dependence on external supplies, and promote the climate and digital transition.

Fourteen key ecosystems, including textiles, have been listed. For Techtera, this translates into an intensification of activities linked to European cooperation, with a dual role:

✓ As an innovation cluster and head of the network, contribute to this implementation thanks to its expertise,
✓ Provide its members with the benefits of the actions implemented and opportunities for being involved in European projects and initiatives.

Horizon Europe - European funding opportunities: “Allo PCN”!

The European Union’s framework programme – Horizon Europe – funds European research and innovation projects over the period 2021-2027 through calls for proposals.

In order to provide local support for the French community wishing to submit projects, the Ministry of Higher Education, Research and Innovation (MESRI) has deployed a team of National Contact Points (PCN). Its main mission is to help French communities to become aware of the programme’s funding opportunities and to advise on its operating procedures.

In this context, Julie RAFTON-JOLIVET, Business Development and International Director at Techtera, has been appointed National Contact Point for Industry and performs this mission 40% of her time. The textile sector can therefore once again count on Techtera to support it in its innovation projects – with a European dimension!

 Calls for projects, representing opportunities for the textile industries, are identified for you

As part of Horizon Europe, Techtera continues to decipher Calls for Projects relevant to the textile sector (webinars in July and November, Europe ambition day). Several projects have been submitted on the development of composite material recycling demonstrators, bio-sourced materials, cellulose regeneration or the replacement of perfluorinated products. The cluster is confident about the funding of several of these projects and its participation as a partner in various services such as the dissemination of results.

Located in the heart of Paris, “La Caserne” is a sustainable fashion accelerator hub. Techtera is present at La Caserne and already supports several companies in its showroom via a fabric library dedicated to eco-responsible materials. The purpose is to provide manufacturers with a meeting place for the textile industry and the various brands, where they can benefit from the emulation of La Caserne and its ecosystem. It also makes it possible to show collections and to communicate about exhibitors’ materials.
Strengthening the synergies of the sector
Smart and high-performance materials
Circular Economy and resources efficiency
Factory of the future and new business models

Techtera roadmap
Projects maker - 3 technological axes -

TechteraFab: Industrial accelerator platform

Outreach and Business development
Increasing the European dimension
Developing cross-border cooperation
Strengthening the synergies of the sector
Identifying collaborations with the clusters of the region

Expertise and robust organisation, the key words for a long-lasting innovative cluster

Strengthening the Techtera team of experts
Intensification of alliances throughout France