



techtera



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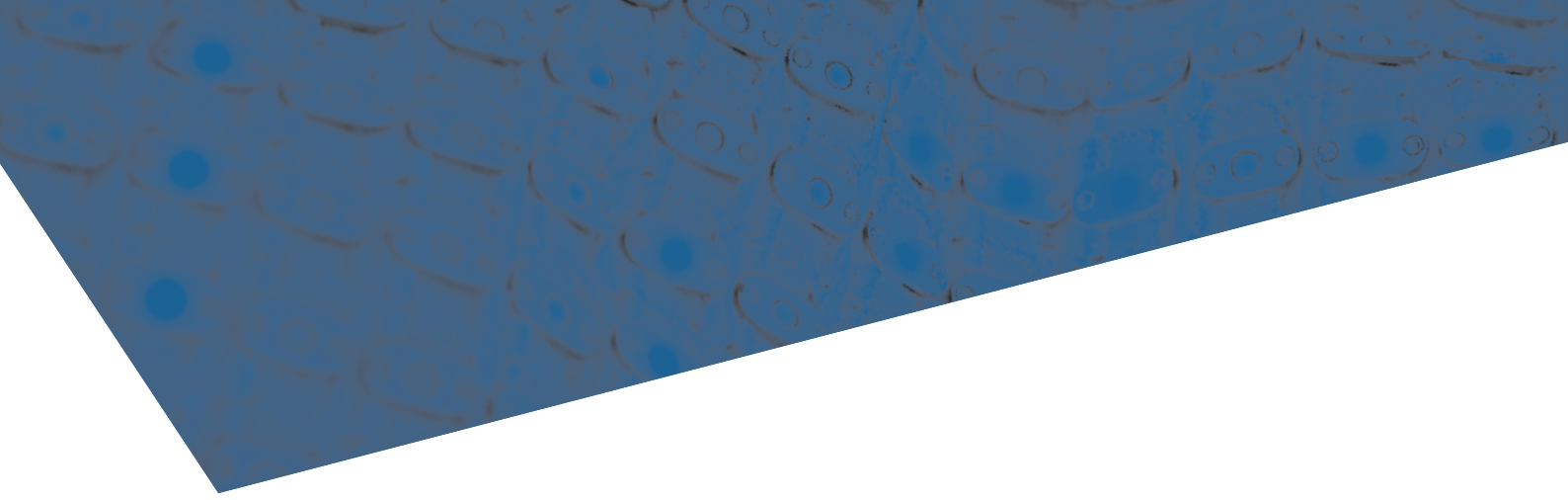
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At the heart
of textile evolution

Press kit



Auvergne-
Rhône-Alpes



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TECHTERA: AT THE HEART OF TEXTILE EVOLUTION

Techtera is the French innovation cluster dedicated to textile. It animates a network of more than 248 members with the main objective of boosting competitiveness through collaborative innovation.



Techtera's members are supported on:

- innovation and collaborative R&D projects, from the idea to the dissemination of results,
- increasing the levers of innovation, with environmental, technological and economic keys.
- strategy, creation and anticipation of trends in clothing and decoration,
- the marketing of their innovation by individual or collectif support on trade shows, and international collective missions.

The cluster is also involved in structuring actions for the textile industry and related to other sectors, application markets, through interclustering partnerships or European projects.

Under the presidency of Louis Vovelle, Innovation and R&D Vice President of Elkem Silicones, the cluster brings together the skills of an expert team.

It relies on a wide network of partners:

- the innovation clusters,
- the collective of the Auvergne-Rhône-Alpes region for the industry of the future,
- the European textile platform Euratex,
- the network of fashion players (ESMOD, IFM, ENSAD...),
- the main actors of defence and security (DGA, AID...)
- the main clusters and research centers.

At the international level, Japan is the historical partner of Techtera since 2005. In 2014, the French and Japanese ministries of economy have signed a memorandum of cooperation with associations like Techtera and JCFA (Japan Chemical Fibers Association). The latter was renewed in 2017, then in 2020, reinforcing the cooperation between the two countries, on both research and market.

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THE TEXTILE SECTOR IN FRANCE AND IN THE AUVERGNE-RHÔNE-ALPES REGION

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The textile industry groups three types of activity: the manufacture of threads (spinning, miling, texturing...), the manufacture of textiles (weaving, knitting...) and their treatment (finishing, coating, impregnation...).

In the 1980s, this sector experienced a significant decline in the face of globalisation of markets, competition from low-cost countries, and pressure from the clothing industry. To ensure their survival, companies in the sector have reorganised and diversified to focus on activities with high added value. The strategy is paying off and since 2010, the French textile industry has returned to growth in its turnover (€13.9 billion in 2019), exports (€9.7 billion in 2019) and recruitment (61,910 jobs in 2019).

But the health crisis has undermined this stability, causing the entire sector to stall. The clothing industry, for example, fell by 11% in France and 24% in Europe, while the technical textiles industry fell by 6%, with significant disparities between segments. Manufacturers targeting the automotive and aeronautics markets were the most affected, unlike those supplying or repositioning themselves on the health (manufacture of masks in particular) or sports/leisure markets.

The Auvergne-Rhône-Alpes region brings together nearly a third of the companies in the sector (584 companies with a turnover of €3.5 billion in 2019) and is the leading and is the leading employment area in the French industry (17,330 jobs).

THE TECHNICAL TEXTILES SECTOR

The technical textile refers to textile products with technical properties offering specific functionalities adapted to well-defined uses. In France, the technical textiles industry now accounts for about 40% of total textile output (in value). It is the main driver of the French sector: 511 companies, for a turnover of 10,009 M€ and a workforce of 36,500 employees.

Transportation equipment (35-40%)

Aerospace, automotive, railway, maritime

Applications:

textile-reinforced rubber products, carpets, safety (belts, airbags, lifejackets, life rafts...)

Health and hygiene (15-20%)

Applications:

cleaning, hospital linen, health devices, protection, biotextiles

Building (10-15%)

Construction in the building, civil engineering

Applications:

building materials and components, stabilisation, separation, drainage, structural and soil reinforcement, erosion control

MAIN APPLICATIONS OF TECHNICAL TEXTILES

Sports and recreation (5-10%)

Applications:

canvases for paragliders, parachutes, sails, tents, sports equipment, camping equipment, sportswear...

Protective gear and safety equipment (5-10%)

Applications:

chemical protection, anti-flame and anti-cut equipment, outdoor use (radiation protection...), other safety equipment (ropes, straps...)

Other industrial applications (15-20%)

Applications:

filtration, insulation, belts, cleaning, draw, packaging...

THE TEXTILE SECTOR IN FRANCE AND IN THE AUVERGNE-RHÔNE-ALPES REGION

The societal challenges that guide and determine the products of tomorrow:

- increasing demand for transparency and ethics,
- the need to live better and longer,
- the need for every worker to be safe while working,
- a logic of mass customization more and more developed,
- awareness to do better with less, in a logic of saving resources,
- everyone's desire to be entertained, to take care of oneself,
- the need to differentiate in a context of globalisation of markets.

Beyond these societal challenges, the textile sector is confronted with strong industrial challenges:

- demonstrate agility, ability to adapt and be responsive in a competitive environment,
- have a CSR strategy that is compatible with the increased requirements of end-users, regulation, and ecological transition
- learn how to take advantage of the great versatility of textile potential applications, and anchor its ability to renew itself by identifying target markets with high added value,
- make teams grow and progress through lifelong training and boost the attractiveness of the industry.

To meet these challenges, Techtera supports its members, leading companies in the market and witnesses to the industrial and technological excellence of the sector, on three major technological axes:

- Intelligent high-performance materials: additive manufacturing, smart textiles, textiles and composites, development of new high-performance textile materials...
- The circular economy: bio-sourced and alternative materials, recycling, eco-efficient processes, short circuits...
- Plant 4.0 and the new business models: vertical and horizontal integration of the industry, customisation, servitisation...

For the third consecutive edition, Techtera will be present at the A+A trade fair alongside with twelve manufacturers in the sector. On a collective space of 144 square meters, Alpex Protection, Barral, Cernay Pro, CETI, Clim8, Europrotect, IFTH, Mitwill Textiles, Otego, Rovitex, Techni Sangles and Texinov will be presenting their latest innovations in the field of protection, health and safety at work.

ALPEX PROTECTION will present NNF 430 LAM, a three layer laminated product using a Nomex® Nano Flex membrane and used for firefighters balaclava. This new material is highly breathing, beyond being fully fire resistant and enables filtration of fine particles coming from ashes and smokes.

BARRAL will present its range of masks. Created in April 2020 during the health crisis, Barral has entered the healthcare market with a range of eco-designed surgical and FFP2 masks, meeting the needs of the healthcare and industrial sectors.



Member of
the Pôle Textile Alsace

EUROPROTECT will unveil the Twin Kub®, a new a new generation of textile, based on a diamond weave. This innovative composition optimises the mechanical resistance mechanical strength and heat transfer to the the finished product while guaranteeing comfort, protection and durability.

IFTH, industrial technical centre for textiles and clothing, will present its support offer (tests, certification, training) for players in the field of personal protective equipment,

as well as its development and prototyping solutions for technological and environmental innovation.

CLIM8 will introduce the ColdWork™ M-Pact® heated gloves developed in partnership with Mechanix wear. This personal protective equipment uses Clim8® intelligent and self-regulating heating technology. This technology monitors skin temperature in real time, analyses the environment, the user's profile and specific needs. In response, the heat is activated when the comfort temperature drops regulates the skin temperature when the user starts and stops activities.

CERNAY PRO, a department of Manufacture Hartmann - Euro TF, will present its range of technical fabrics, and in particular its camouflage printed, various camouflage printed fabrics and the possible adaptations in terms of support, design and finish (water repellent treatment, permethrin...).



Member of
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EXCELLENCE COMES WITH INNOVATION

CETI will highlight its Textile-to-Textile recycling platform. Thanks to its knowledge of mechanical and thermomechanical recycling processes, nonwovens and spinning, CETI helps companies to identify the best choices in terms of recovery of production waste or end-of-life materials. This recycling platform is equipped to carry out tests on semi-industrial lines, in the prototyping phase, in order to transfer the optimal solutions to an industrial production scale. In addition, its national and international textile ecosystem also enables industrialists to find appropriate partners, suppliers and producers.

ROVITEX, a company specialised in the assembly of materials, will detail its various bonding processes and its sourcing and consulting services in the choice of materials to be used. It will also highlight its nanox complexes. Rovitex highlight his nano membrane range which has fine filtration characteristics and high breathability, in order to produce laminated complex in particular for firefighter clothing (bataclava and intervention clothing) for the medical sector (masks and coveralls).

MITWILL TEXTILES will present the S2G (style 2 Garment) platform, which reduces the economic and environmental cost of sampling while optimising the speed of prototyping through a 3D garment visualisation solution.



Member of
the Pôle Textile Alsace

MDB TEXINOV will present its latest innovation: the the TexiShield® FFP3 mask. Part of the the TexiShield® range of single-use respiratory protection masks TexiShield® range of single-use respirators, it is characterised by its high level of tightness and filtration levels above the 99% standard for 0.6 micron micro-particles. Made of spunbond and meltblown, materials with high filtration capacity, the TexiShield® FFP3 mask, certified NF EN 149, forms an effective barrier against the toxicity from specific chemicals.

OTEGO will be showcasing Fireshield, a multi-layer fabric fabric specially designed for use in suits used in firefighting. It provides a maximum level of protection protection against radiant heat with a minimum total weight (<950g/spm), allowing firefighters to gain mobility and mobility and reduce the risk of heat exhaustion.

TECHNISANGLES will highlight its variable width strap. This patented product, with high abrasion resistance (fitted the European and American standards) is mainly used in security harness manufacturing. A single strap could have two or three different widths, easing passing in buckles.

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THE TECHTERAFAB: INDUSTRIAL ACCELERATION PLATFORM

Techtera offers a totem place for the sector, enabling it to host projects. This platform creates a bridge between ideation and industrialisation and aims to meet the growing demand for industrial agility.

TechteraFab host the French cluster team, 150 sqm offices, meeting rooms and technical hall of 350 sqm for users equipment hosting. The latter will be divided in 3 blocks:

- an open area composed of 30 sqm modules for hosting research and innovation research and innovation work in the context of collaborative projects,
- a collective area with the provision of machines and prototyping equipment,
- a private technical area of 80 sqm, where where hygrometry and temperature are controlled controlled in order to work with specific materials materials such as carbon fibre.

This innovative and original offer is part of the current trend of equipment sharing between industrials. Nowadays, when companies want to develop and manufacture prototype of final products before industrialisation and commercialisation, they are used to work alone. They must then face some problems of skills and equipment provision, costs or space availability for a short period. Once this work has been completed, the question of the sustainability of these resources arises.

TechteraFab will provide a solution to these problems by proposing within the same place human and material resources for:

- making finished prototypes,
- producing small series of finished and semi-finished products,
- validating an economic model,
- validating the industrialisation of a product.

Following up from different actions carried out by Techtera, the benefits provided by this innovation hub are primarily focused on carrying out collaborative innovation projects.

However, TechteraFab's offer is aimed at a large audience:

- to all actors in textile industry: industrials, creators, schools, equipment manufacturers, fablabs...
- to many sectors: sports, health, fashion, PPE, aeronautics...
- to a wide range of flexible materials companies, with focus on smart textiles and assembly methods, common topics in Techtera's three strategical axes.

Through TechteraFab, some partnerships will be developed with IFTH, Centrale Lyon, ITECH, TEXT-IN platform and EMLyon to pool material and expertise.



INNOVATE AND CONQUER NEW MARKETS

Innovation is a strategic priority for companies evolving in the textile industry. It aims to cope with competition, specially from abroad, to diversify its outlets by promoting the penetration of textiles into new areas of application and to increase its market power with customers.

But that says research and development, also means strong financial, human and material investments, which could represent a risky gamble for SMEs. Techtera supports the development of industries in the sector through collaborative research and allows them to establish themselves into new markets, including international, through dedicated services.

COMPANIES' NEEDS IN R&D

- Participate in the emergence of innovative projects: collaborate with contractors, take part in disruptive projects for the sector, consolidate pre-existing links or meet new industrial partners.
- Pool resources and risks.
- Structure its innovation project: ensure the viability and solvency of the project.

TECHTERA'S ANSWERS

Generate and support projects

Labeling of projects

The Techtera label guarantees the viability of a project, its technical and economic strength. Thus, a project labeled by Techtera is twice as likely to be funded by public bodies.

This label is given after a double examination of the project, carried out by:

- the Innovation Commission, composed of experts who evaluate the innovation of the project and its orientation towards a given call for projects,
- the Executive Office (BE) conducts a second review on the basis of the opinion issued in Innovation Commission, then by analysis of the architecture of the project. At the end of this second examination, the BE officially awards the label of Techtera.

Project editing

Techtera supports its members in their innovation process, helping them at each key stage: emergence, structuring (identification of technological barriers, budget, work packages, consortium agreement), labeling, financing, monitoring and product launching into the market.

THE COLLABORATIVE PROJECTS IN 2020

Since 2005, 227 collaborative R&D projects have been labeled and accompanied by Techtera for a total budget of € 580.4 million.



25 projects in the process of emergence



17 projects ready to bloom



15 labeled projects



12 funded projects



4 projects launched

Foster the emergence of ideas

Innovation Workshops

The aim of the Innovation Workshops is to stimulate innovation in companies through collaborative research projects.

They bring together researchers and industrialists, deal with a particular technology and lead to the creation of R & D projects.

Examples of themes: assembly, chitosan, 3D printing.

Valorisation Workshops

The aim of the Valorisation Workshops is to spread the benefits of R&D projects labelled by Techtera and carried out by the members of the cluster. Beyond this, the objective is to promote the transfer of know-how by highlighting the results of R&D projects and opening them to commercialisation.

Examples: valorisation of the benefits of the TEX-SHIELD Project (development of hydrophobic treatments low in fluorine capable of replacing perfluorinated resin treatments), RFID workshop...

Techtera Network Workshops

The objective of the Techtera Network Workshops is to build a dynamic of innovation in the textile industry by generating R&D projects and by animating specialized networks: meeting with key players, targeted communication, grouped actions, meeting and exchange spaces.

They discuss innovation in each of Techtera's five strategic business areas:

- security / PPE,
- building / infrastructure,
- fashion, luxury, decoration,
- transport,
- health / sports.

They led to several development or collaborative projects such as:

- the development of thermal and optical protection against UV and infrared radiation (SOLARCLYM project - see page 14),
- the design of innovative and resistant metalised textiles (MIROIR project - see page 15).

Techtera's clubs:

- RECIT: Recycling and Circular Economy,
- STeW: Smart Textiles and Wearables,
- ICI 4.0: Industry of the future.



MORE INFORMATION?

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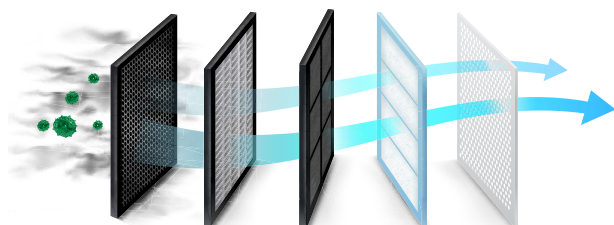
LAST PROJECTS ACCOMPANIED BY TECHTERA

OZONE

To develop and qualify a device for air and surface treatment.

Budget: €997K

Markets: agri-food, health, public reception



RESOL

Recycling of PVC textile composites in short circuit by coating processes.

Budget: €900K

Number of partners: 4

Markets: transport, protection



CODETEX

To develop a mobile primary decontamination facility for fire suits and equipment for fire fighting.

Budget: €995K

Number of partners: 3

Markets: protection, security, defence



EU-ALLIANCE

To promote exchanges between the textile sector, ICT and the fields of application of and security applications at European level for the development of technological or commercial partnerships.



Budget: €500K

Number of partners: 6

Markets: security, defence

MORE INFORMATION?

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LAST PROJECTS ACCOMPANIED BY TECHTERA

CALME

To develop an innovative multifunctional facade cladding system with mineral appearance in the context of renovation and new construction.

Budget: €3M

Number of partners: 4

Market: building



SENTMI

Development in the civil engineering sector of a 2D fibre optic surface sensor solution for infrastructure monitoring to prevent incidents.

Budget: €2.28M

Number of partners: 4

Market: building



TEXGLOBAL

To support the growth, competitiveness, international presence and industrial modernisation of European textile SMEs by improving their innovation capacity. The project will provide SMEs with a service package to identify international growth opportunities in three countries: USA, Mexico and Vietnam.



Budget: €500K

Number of partners: 5

Markets: protection, transport, clothing

AEROTEX

To develop new industrial manufacturing processes for high-performance flexible textile materials for more efficient thermal insulation.

Budget: €927K

Number of partners: 5

Markets: protection, clothing, health

MIROIR

To design semi-industrial solutions for the metallisation of innovative, resistant, flexible materials; for luxury and personal protection.

Budget: €3.2M

Number of partners: 7

Markets: protection, luxury

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PROJECTS ACCOMPANIED BY TECHTERA AND LED BY OUR MEMBERS

SOLARCLYM: to develop a UV and infrared protection system that maintains transparency and translucency

Led by an industrialist and bringing together seven other partners, SOLARCLYM aims to develop thermal and optical protection against UV and infrared radiation. The device should eventually allow the preparation of varnishes or polymers used in the production of coatings.

The project is innovative from three points of view:

- SOLARCLYM's thermal barrier will maintain transparency or translucency, while effectively and durably protecting products exposed to the sun's light spectra from overheating, aging and damage;
- this protection will achieve the desired degree of protection for the intended applications (textiles and varnishes) by involving few different compounds;
- the device will include selective coatings (infrared and UV reflections that allow light to pass through) and will regulate these reflections as a function of temperature. Its insulating performance will also vary according to exposure conditions (for textile applications).

The products targeted by the project are both from the textile market (sun protection) and the varnish market (cosmetics, wood protection, colour protection, decorations on metallic automotive logos).

Project partners:

- An industrial stakeholder
- La Celliose (Pierre Bénite)
- Pylote (Dremil-Lafage)
- Science et Surface (Ecully)
- Influtherm (Villeurbanne)
- ENS Lyon Chemistry Laboratory UMR ENS-CNRS-UCBL 5182 (Lyon)
- IMP - UMR INSA/CNRS 5223 «Polymer Materials Engineering» (Villeurbanne)
- CETHIL - UCBL UMR 5008 - CNRS-INSa de Lyon-University Lyon 1 (Villeurbanne)

Overall budget: €2.5M

Financing : State and local authorities

Co-labelling: Techtera (lead partner), Axelera



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PROJECTS ACCOMPANIED BY TECHTERA AND LED BY OUR MEMBERS PRESENT AT A+A



MIROIR: developing solutions for the metallisation of innovative and resistant flexible materials

In order to face the increased competition due to the migration of a significant part of the world textile production to emerging countries, SMEs in the French textile industry have had to evolve their activity towards high added value areas such as luxury and technical textiles. However, these two areas are also extremely competitive. Maintaining their position requires major investments and a constant search for innovation. The production of metallised fabrics is a cross-cutting objective in both fields. Metallization is sought for aesthetic reasons in the first case, and technical reasons in the second.

Metallization allows the development of various functions: electromagnetic shielding, electroconductivity, anti-static, antistatic, etc, anti-static, thermal protection or even anti-bacterial functions.

The MIROIR project aims to design innovative metallised textiles that are resistant to washings and real-life conditions of use conditions of use, while maintaining their aesthetic and functional properties. These

new textiles will be produced using a roll-to-roll an eco-responsible roll-to-roll process continuous mode.

The textile products developed by the consortium members thanks to the metallization solutions will be diverse: metallized textiles, bias and tapes. These will be the basis for finished products such as personal protective equipment (PPE) for industry, the fire service and the army - tapes for luxury packaging - but also by-products such as bias for the production of PPE or saddlery.

Project partners:

- ISA laboratory (Claude Bernard Lyon I University),
- IFTH, French Institute of Textiles and Clothing,
- HEF-IREIS (project leader),
- Science & Surface
- AJ Biais
- Europrotect France
- Julien Faure.

Overall budget: €3.18M

Labelling: Techtera

Co-labelling: Cimes - Viameca

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INNOVATE AND CONQUER NEW MARKETS

COMPANIES' NEEDS IN BUSINESS DEVELOPMENT

- **Reach relevant contacts:** create partnerships, extend and/or consolidate its client portfolio, meet with contractors.
- **Better understanding of the market:** discovering new application markets, keeping abreast of evolutions and major new developments in the industry.
- **Market innovations:** present its products and innovations on key industry events or through a direct approach to validate the right targets.
- **Develop its notoriety in France and abroad.**

TECHTERA'S ANSWERS

Launch its innovations

Techtera aims to inject innovation into the markets. The cluster seeks to transform the collaborative projects it has supported so that the resulting innovative products, processes and services can exist in the markets and be economically viable.

In order to help the innovations find their way into the markets, the cluster offers companies a variety of tools adapted to their needs, enabling them to identify potential new applications, approach targets to validate market potential and gather technical and market information.

Market studies

Techtera leads several market studies per year to allow its members to apprehend the opportunities of textile applicative markets abroad.

Sessions were organised around the Japanese market, one on the transport sector and the other on health and well-being, around the German market, Israeli market, Korean, the United States...

Collective missions

Techtera organises collective missions abroad allowing the participants (companies, laboratories, universities) to engage in various actions: technological and commercial monitoring, business development, identification of partners, network development. Many missions have already taken place in Japan, Korea and Taiwan, Germany, Israel, the United States...



Market mission to Japan (defence and security, textiles and ICT), February 2020.

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INNOVATE AND CONQUER NEW MARKETS

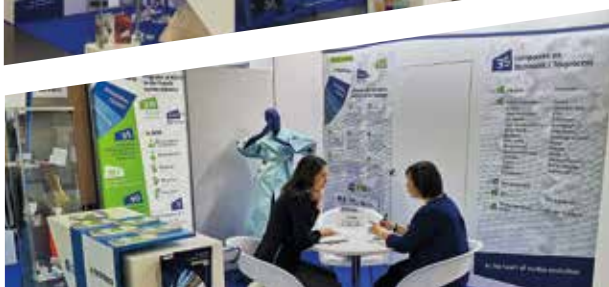
Exhibitions

Techtera supports its members for marketing, communication and logistics at major international trade shows in the textiles and composites sector.

A+A
(PPE)
Düsseldorf



Techtextil
(technical
textiles)
Frankfurt



HEIMTEXTIL
(home)
Frankfurt



Competitiveness workshops

The objective of the Competitiveness workshops is to increase the innovation and market skills of companies and give them keys to read their competitive environment.

In 2020:
47 workshops
2,360 participants

8 innovation workshops

- Printed electronics
- Additive manufacturing
- Bio-based materials
- Polymers for sports and leisure applications
- Sustainable development and valorisation of flexible textile materials
- Alternatives to fluorinated products
- Monitoring and research of solutions in relation to with the recycling of elastane
- The effects of the pandemic on R&D in the textile sector

10 competitiveness workshops

- Horizon Europe Mornings (4 workshops)
- Recovery plan: preserving R&D jobs
- Preparing to participate at trade fairs
- Presentation of the five states of the art on smart textiles
- Mass personalisation (2 workshops)
- Presentation of the European Defence Fund

1 key account workshop

- Presentation of the Centurion platform (accelerating innovation for the the combatant) by the Directorate General of Armaments

6 trends workshops

- 2 fashion and clothing workshops : analysis and trends
- 2 furniture and decoration workshops : deciphering home trends
- 2 workshops 360° - Megatrends: markets and global trends

TECHTERA COMMITTED TO SUSTAINABLE DEVELOPMENT

Club Recycling and Circular Economy in the Textile Industry (RECIT)

18 members

In January 2017, Techtera created the RECIT club: Recycling and Circular Economy in the Textile Industry in order to promote the emergence of collaborative initiatives of valorisation. It has vocation, ultimately, to contribute to the structuring of a textile waste recovery sector with strong territorial roots.

The work of the RECIT Club is focused on the textile production wastes and address the following topics:

- establishment of the collection from the companies for a consolidation of the deposit,
- traceability and identification of production waste (shapes, quantities, frequency...),
- reduction of production wastes by ecodesign (process, methods and organisation of production),
- technologies for processing production wastes (existing processes and innovation tracks),
- valorisation by upcycling and interactions with designers,
- economic model of a recycling sector (costs, benefits for industry...),
- application markets and products made from recycled textile.

Textile tomorrow: Along the circular economy

The textile industrie, like many others, naturally seeks to integrate environmental issues into their development. However, the sector remains particularly complex to tackle in terms of recovery (mixing of materials, products, colours, presence of hard points, etc.).

Thus, work is needed at all stages of the value chain in order to transform the sector, and many levers exist, including

- finding new viable economic models,
- developing recovery methods with low environmental impact (reuse, overcycling, under-cycling),
- improve recycling technologies,
- massify the deposits,
- develop new materials and and eco-designed products.

To understand these issues and find answers to this problem, more than 300 manufacturers took part from 11 to 15 October in a week meetings and exchanges. The event is organised by Techtera, Ciridd, Unitex, and the campus de métiers, with the support of the Auvergne-Rhône-Alpes Region, the Metropolis of Greater Lyon and OPCO2i.

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TECHTERA COMMITTED TO SUSTAINABLE DEVELOPMENT

R&D projects

Textile recycling

RESOL: to recycle PVC textile composites textile composites in a short circuit by coating processes.

TECHNYMAT: developing materials from production and end-of-life textile waste to create plastic materials, insulation materials, and materials for the manufacture of synthetic yarns from recycling.

REVIEN: working towards the highest possible incorporation of recycled PVC and plasticised PVC, especially for the PVC, in particular for the coating and coating and extrusion of thin layers.

Bio-sourced materials

TEXINTECO: to develop intelligent textiles from bio-sourced materials, recycled and recyclable materials for the automotive sector.

REC-N-COMP: supporting the internationalisation of European SMEs involved in the manufacture of the manufacture of composites based on recycled from recycled materials, particularly textiles. A collective internationalisation strategy will be developed and tested, targeting three countries: the United States, Japan and Singapore.

ECOLASTANE: development of elastane fiber and bio-sourced polyester (70 to 100%) in order to substitute the usual process that includes oil. Use for sport clothing.

Eco-efficient processes

DEPERFLEX: to develop a comfortable, sturdy, repellant material appropriate for sportswear, and eco-friendly thanks to a fluor free coating.

ECOMAT: development of eco-aware silicones and polyurethanes (free mercury and stain catalysts). Use for automotive parts, sole and sport clothing.

ECOSILAC: new eco-designed process for synthetic silicone acrylates, conferring surface properties on various substrates (textile, plastic, glass).

FOMOTEX: to develop nonflammable coatings, in latexfree textile layers with multifunctional characteristics and meeting current regulations. The manufacturing process used will include impregnating dry powders, with a significant reduction in water and energy consumption.

PLUG&WET: to improve productivity while reducing water and energy consumption for a more efficient weaving process.



MORE INFORMATION?

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