



Techtera



French Textile Innovation Cluster

A+A 2023

Booth hall 9 C60-3

Press kit



La Région
Auvergne-Rhône-Alpes



SUMMARY

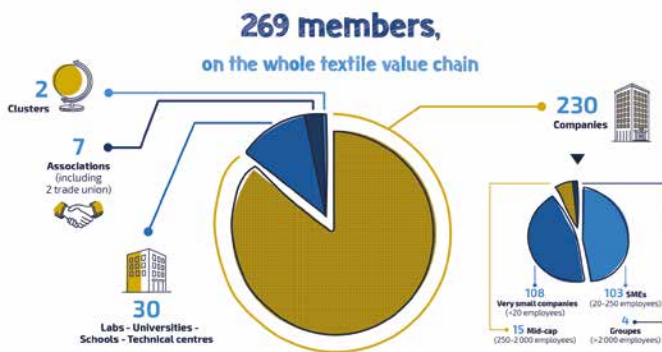
Techtera: source of textile innovation for our future.....	4
The textile sector in France and in the Auvergne-Rhône-Alpes region.....	5
What are the challenges for the textile sector?	6
Excellence comes with innovation.....	7
· Alpex Blocker: protection, performance and comfort (page 8 - Alpex Protection)	
· Karapace®, the extreme textile protection by Chamatex Group (page 9 - Chamatex Group)	
· Modyf and Blåkläder are incorporating the clim8® thermoregulation technology. (page 10 - clim8)	
· A digital twin of textile products for improved transparency. (page 11 - clim8)	
· IFTH puts digital at the heart of the ecological transition (page 12 - IFTH)	
· S2G XR, the B2B marketplace platform in extended reality (page 14 - Mitwill Textiles)	
· Dragon, the only self-adjustable harness on the market. (page 15 - MKM Couture)	
· Oteplace: Innovation for Industrial Safety (page 16 - Otego)	
· When RFID becomes invisible (page 17 - Primo1d)	
· Eweave, the revolutionary smart textile made in France (page 18 - Satab)	
· Technisangles tackles the challenge of designing sustainable products (page 19 - Technisangles)	
Latest projects supported by Techtera	20



TECHTERA: SOURCE OF TEXTILE INNOVATION FOR OUR FUTURE

Techtera is the French innovation cluster dedicated to textile. It animates a network of more than 269 members with the main objective of boosting competitiveness through collaborative innovation.

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 Philippe Sanial, technical director of the chomar group, the cluster brings together the skills of 14 employees.

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 French Defence Procurement Agency (DGA),
- 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 2021, reinforcing the cooperation between the two countries, on both research and market.

Our members are supported on:



- innovation and collaborative R&D projects, from the idea to the dissemination of results,
- enhancing the drivers of innovation with environmental, technological, and economic catalysts,
- 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.

PRESS CONTACT TECHTERA
Sonia Descoins • communication@techtera.org
+33 (0) 420 302 880



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

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 (€14 billion in 2021), exports (€9.94 billion in 2021) and recruitment (62,500 jobs in 2021).

The French textile industry currently comprises 2,164 companies, of which 85% are SMEs. One strong characteristic of the ecosystem is the absence of large enterprises, except for a few in which textiles represent only a part of their activity.

In this national context, the Auvergne-Rhône-Alpes regional ecosystem constitutes the largest pool of companies in the national sector, with 584 companies (accounting for 27%), generating a turnover of €3.5 billion (in 2020) and providing more than 17,000 jobs.

THE TECHNICAL TEXTILES SECTOR

Technical textiles refer to textile products with specific technical properties that provide tailored functionalities for well-defined applications. In France, the technical textiles industry accounted for approximately 30% of the total textile production in 2022. It serves as the primary driver of the French textile sector, encompassing 511 companies with a combined revenue of €7.8 billion and employing 36,500 individuals.

Traditionally known for its expertise in silk weaving, the Auvergne-Rhône-Alpes region has emerged as the leading French hub for technical and industrial textiles, contributing to 70% of the national revenue in this sector in 2022.

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 (IN 2022)

Sports and recreation (5-10%)

Applications:

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

Protective gear and safety equipment (5-10%)

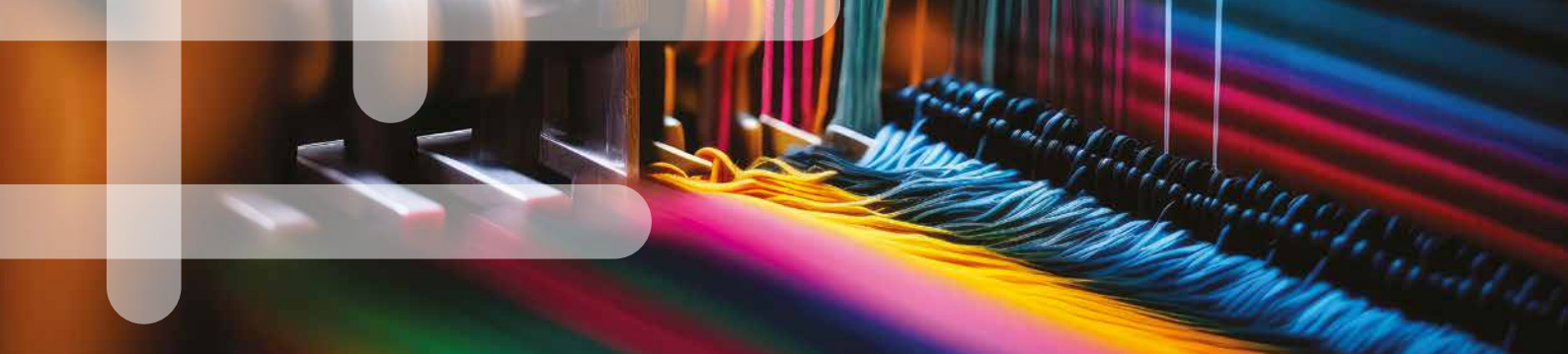
Applications:

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...



WHAT ARE THE CHALLENGES FOR THE TEXTILE SECTOR?

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 necessity for ensuring the safety of all workers in their professions,
- the increasing development of mass customization,
- the desire for entertainment and self-care by individuals,
- The need to differentiate in a globalized market context.

Beyond these societal challenges, the textile industry faces significant industrial imperatives:


- 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,
- to help workers grow and advance through lifelong training and the enhancement of the sector's appeal.

To meet these challenges, Techtera supports its members on three major technological axes:

- **high-performance smart materials:** additive manufacturing, smart textiles, textiles and composites, development of new high-performance textile materials...
- **the circular economy:** encompassing bio-sourced and alternative materials, recycling, eco-efficient processes, and short supply chains,
- **industry 4.0 and new economic models:** involving vertical and horizontal integration of the industry, personalization, and servitization.



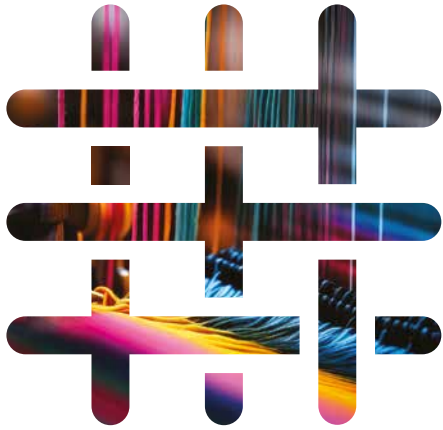
EXCELLENCE COMES WITH INNOVATION



For the fourth consecutive edition, Techtera will be present at the A+A trade fair alongside with twelve manufacturers on a collective space of 174 square meters.

Endowed with a strong entrepreneurial and innovative spirit, our companies are great ambassadors for promoting French and regional excellence.

They present their latest innovations in protection, health and safety at work.



ALPEX BLOCKER: PROTECTION, PERFORMANCE AND COMFORT

Latest innovation from Alpex Protection, Alpex Blocker is a new range of moisture barrier aimed at the most performant turnout gear for emergency response department.

It has been developed and designed to enhance protection and improve wearing comfort.

That range of laminated products are exceeding the requirements of all the standard norms, whether EN469 or NFPA1971, and also bring protection against industrial chemicals and pathogen agents.

Part of that range is entirely PFAS-free. The Alpex Blocker Blue, for instance, is the most recent NFPA certified product without any PTFE.

Composition of Alpex Blocker

The Alpex Blocker range consists of various laminated products, two ply or three ply, combining an inherent flame retardant textile (mostly aramid), with a water-proof and breathable barrier.

The innovative parts relate to the type, construction and structure of the textiles, and on the PFAS-free barrier.

Who is using Alpex Blocker ?

Alpex Blocker products are dedicated to the emergency response department world-wide, whether in accordance. They are used as moisture barrier in the turnout gear, offering the maximum protection against all kind of liquids while boosting the thermal performance.

The highly breathable barriers enhance comfort and reduce the heat stress.

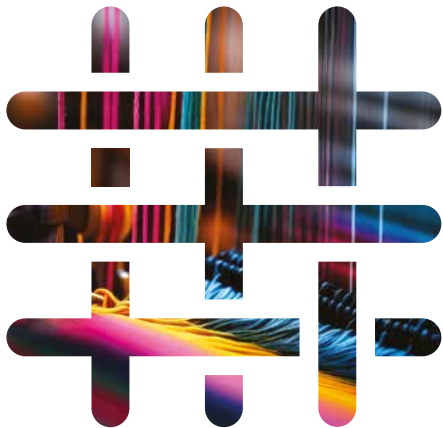


¹The EN 469 standard sets the requirements for design and minimum performance expected from protective clothing worn for firefighting.

²The NFPA 1971 standard is applicable to protective ensembles dedicated to fighting close-proximity or structural fires.

³PFAS: perfluoroalkyl and polyfluoroalkyl compounds used since the 1950s for their non-stick, heat-resistant, and waterproof properties.

⁴PTFE: polytetrafluoroethylene, commonly known as Teflon®



KARAPACE®, THE EXTREME TEXTILE PROTECTION BY CHAMATEX GROUP

The patented technology Karapace® is the result of an alliance between 2 textile innovations for sport shoes and for racing pilotes suits to meet the requirements of high-risk professions (firefighting, military, police):

- Matryx® : the high-performance textile for sports shoes combining breathability, lightness and resistance,
- Racing : flame-resistant fabric for racing suits ensuring fire resistance, safety and breathability.

The association of these two universes makes Karapace® a high-performance textile solution for extreme protection and resistance.

Karapace®, innovative textile technology

Karapace® technology ensures high flame and heat resistance and extreme performance, thanks to a weave combining aramid fibers with coated para-aramid filaments.

Karapace® makes possible to do yarn zoning to adapt the textile properties to different zones of the garment to meet the requirements of protection and safety.

The individual coating of the para-aramid yarns increase the breathability of the textile, an essential element for the comfort and life of professionals.



Protection et resistance, Karapace® is designed to become a real bodyguard.

Protection: flash over, molotov cocktail or anti-personal mine, Karapace® protects people from fire and heat.

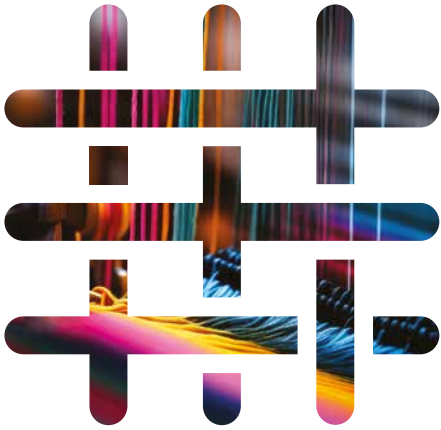
Resistance: Karapace® ensures very high mechanical resistances, many times higher than standards for fire fighters or police or military to guarantee your performances and safety in extreme situations. .

Breathability: Karapace® guarantees the breathability you need for your activity. Your body breathes, stays dry and resists heat.

Sustainability: equipment life is extended thanks to this durable textile to offer a long-lasting protection.



PRESS CONTACT CHAMATEX GROUP
Thierry Decroux • tdecroux@chamatex.fr
+33 (0) 475 698 687



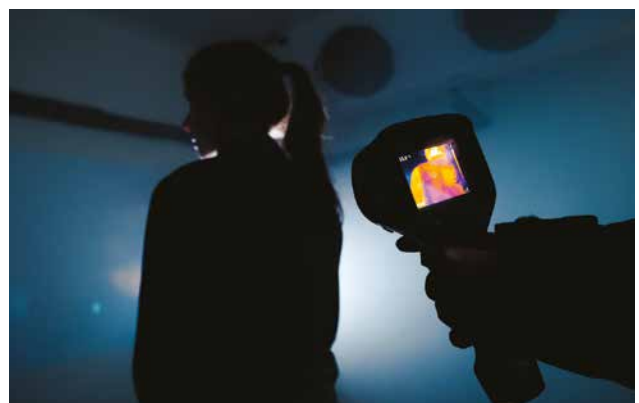
MODYF AND BLÅKLÄDER ARE INCORPORATING THE CLIM8® THERMOREGULATION TECHNOLOGY

Established in 2016, the company clim8 develops innovative, fully autonomous intelligent thermoregulation systems.

The patented clim8® technology, equipped with tiny integrated thermal sensors, enables real-time monitoring of skin temperature, environmental analysis, user profiles, and specific activity-based needs. Based on the gathered data, heating elements integrated into clothing at strategic zones for optimal comfort and warmth automatically activate when needed. Consequently, these garments detect and respond in real-time to the human body like a second skin, whereas competing systems offer only fixed temperature selections.

Furthermore, the technology is managed through the clim8® mobile application, which includes a brief questionnaire at the end of each usage session. Based on user responses, the device will automatically adjust heating algorithms for future uses, allowing the product to learn from its use and become more efficient over time.

Already widely adopted in the leisure textile industry and glove manufacturing, clim8 is now venturing into the workwear market by partnering with Modyf and Blåkläder brands this year. The thermoregulation system will be available on a range of work jackets.





A DIGITAL TWIN OF TEXTILE PRODUCTS FOR IMPROVED TRANSPARENCY

clim8 unveils its "digital product passport" at the A+A trade fair. This digital solution allows brands to create a digital twin of their textile products, accessible through a QR code or a specific integrated NFC chip for each item. By scanning them with a smartphone, consumers can view product information provided by the manufacturer, including composition, origin, washing instructions, usage tutorials, and more.

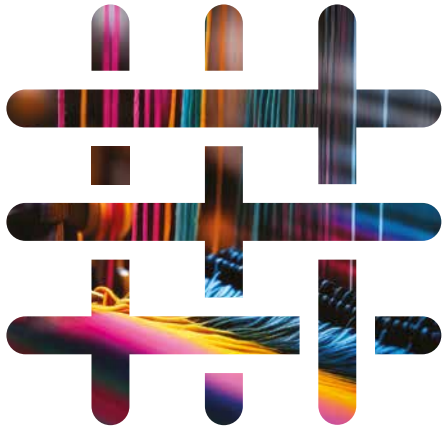
This digital passport aims to ensure greater transparency in the product's lifecycle and composition, anticipating the transition from traditional textile labels to more comprehensive digital labels as desired by the European Union and the United States. Future regulations are expected to require more transparency for consumers, displaying exhaustive information about the countries involved in the product's manufacturing (not just the assembly country), potentially allergenic components, authenticity, and more, all in multiple languages, with updates based on regulatory changes and long-term information sustainability.

Already implemented in clim8® products, this plug & play system is now offered to industry professionals. While clim8's primary goal is to facilitate compliance with international regulations, the

possibilities are extensive. The teams are already considering additional functions, such as identifying the garment's owner, aiding inventory management, tracking the periodic replacement of PPE, and even exploring the implementation of an eco-score to evaluate the carbon footprint of a product throughout its lifecycle.



The founders of clim8.
From left to right, Julien Guéritée, Florian Miguët
and Pierre Mouette.



IFTH PUTS DIGITAL AT THE HEART OF THE ECOLOGICAL TRANSITION

In the clothing sector, considerable quantities of fabric are used and then discarded in the early stages of pattern creation and sampling. Faced with this waste crisis, it is imperative that companies rethink their approach to product design and development.

Digital technologies, particularly 3D CAD, offer an exceptional opportunity to innovate and move design and sales models towards a more sustainable future. They challenge traditional garment development and manufacturing processes at every stage, from pattern creation to sampling, prototyping and marketing. These solutions save time and money, reduce the environmental footprint, and improve coordination between industry players.

The Institut Français du Textile et de l'Habillement (IFTH) supports companies in their digital transition and the appropriation of new technologies thanks to several innovative facilities, proposed and implemented within the LAB by IFTH, located in the heart of Paris, in particular:

Computer-aided design (3D CAD)

These solutions make it possible to design models and patterns, check fabric fit, simulate the impact of a new material on a model to observe the garment in motion, change colors and visualize creations on avatars (virtual mannequins). The result is optimized design time, improved interdepartmental exchanges, and a reduction in the number of sketches and prototypes required to create a model.

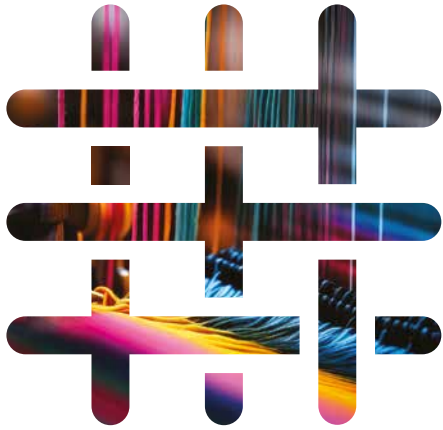
Fabric virtualization

Virtualization makes it possible to create a digital fabric from a physical textile sample, in order to feed a fabric library which is then used by 3D CAD software. The most efficient equipment today is the 3D scanner, which measures all relevant characteristics in record time to recreate a material with a realistic physical rendering, while automatically identifying the colors of a pattern.

Characterization of textile materials

For the virtualization of a material to be truly relevant and for the rendering to be as realistic as possible, it is essential to successfully digitize its physical characteristics, i.e. its drape. The mechanical and dimensional properties of a material - mass per unit area, thickness, bending - are essential for reproducing its drape using 3D CAD tools, and for assessing its behavior in movement.





"bodyscan" body measurements

The "bodyscan" body measurement solution is a fast, reliable way of creating digital avatars that are as close to reality as possible. Thanks to a photogrammetry solution coupled with Artificial Intelligence, this technology can determine 120 body measurements based on just two photos.

Digital technology makes it possible to act at several levels of a textile product's value chain to make it more sustainable.

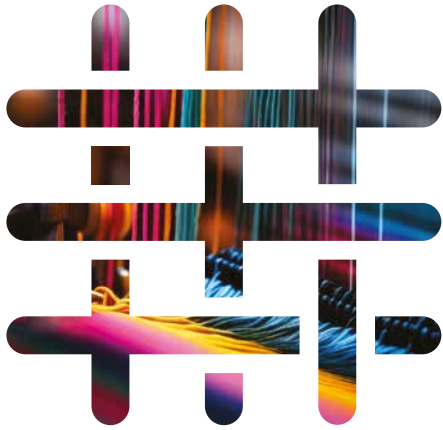
- Product creation and development: unlike the traditional physical prototyping process, which generates many semi-finished or inaccurate products, virtual prototyping eliminates unnecessary waste generation.

- Material sourcing: 3D virtualization enables fabric and accessory suppliers to present digital samples, thus avoiding waste of physical materials.
- Product sales: 3D prototyping can help reduce excessive garment inventories and returns by digitally modeling the body in 3D, and even enabling virtual fittings to check for correct fit.

The digital technologies offered by IFTH help companies to accelerate product development, streamline their supply chain and improve their sales model. These technologies also contribute to sustainability by prioritizing material waste and minimizing returns, offering a tangible route to a more environmentally-friendly future for the fashion industry..

ABOUT IFTH

French technological reference center for each company or brand from the fashion, clothing and technical textile sectors. Its skills, laboratories and technical platforms, which can be mobilized throughout the life cycle of fashion and textile products, make IFTH a complete and unique solution on the national territory. Every day, IFTH supports French textile brands and industries to guarantee the quality, durability and safety of products to protect the health/safety of the end consumer; to initiate, consolidate and strengthen the eco-responsible approaches of each player in the sector; and to develop processes that will make it possible to ensure the future of the clothing and textile sectors. IFTH is the exclusive representative of the international OEKO-TEX® certification association in France. IFTH also manages the National Bureau for Sectoral Standardization (BNITH), by delegation from AFNOR.



S2G XR, THE B2B MARKETPLACE PLATFORM IN EXTENDED REALITY

Most garment SMEs use analogous solutions to monitor their operations. S2G XR, powered by Mitwill Textiles Europe, will digitise their product offer, link it to a database of standardised manufacturing information and give SMEs access to a new pool of customers on the XR trading platform in a metaverse B2B marketplace platform for textile traders in extended reality (XR).

The virtual XR textile trading centre will present garments and fabrics in unlimited high-definition 3D environments, powered by interactive collaborative communication tools. In the S2G XR metaverse showrooms, suppliers and manufacturers present their products to potential B2B buyers and interact directly with them on the extended reality platform. Intelligent search filters will enable effective sourcing according to target price, delivery time, production country, certification, style, colour, season, material, etc.

Participating in S2G XR will be a disruptive technological leap for the SMEs, giving them a competitive edge in the textile industry.



ABOUT MITWILL TEXTILES EUROPE

Mitwill Textiles Europe is a design-based textile company with a digital microfactory in Alsace (France), creating a collection of printed textiles. Mitwill is a pioneer of virtual tools for corporate fashion and workwear for European SME companies. S2G XR is supported by a EUROSTARS grant of the European Union.

PRESS CONTACT MITWILL TEXTILES EUROPE
Hervé François • textiles@mitwill.com
+33 (0)688 122 112



MKM
COUTURE
CONCEPTION & FABRICATION

DRAGON, THE ONLY SELF-ADJUSTABLE HARNESS ON THE MARKET

Located in the heart of the Alps, in Annecy, MKM Couture has been specializing in the design and production of technical and safety articles since 1993.

In 2003, the company introduced the CiLAO brand and created the first ultralight harness (less than 80g), whose strength was guaranteed not by traditional straps but through edges. Building on this patented innovation, the company strengthened its collaboration with product users, mountain professionals, to advance its research and development, ultimately becoming a recognized specialist in Class 3 Personal Protective Equipment (PPE) (capable of preventing fatal or irreversible injuries).

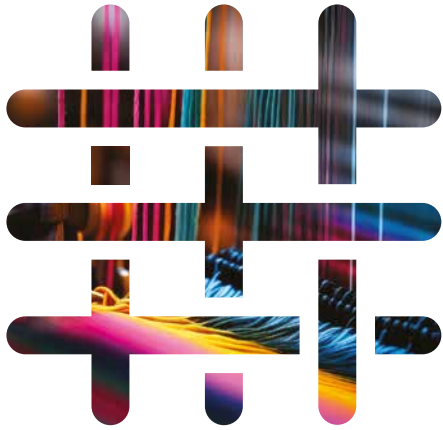
With the dual objectives of preserving user safety and ensuring maximum comfort, MKM Couture, under its CiLAO brand, has designed the Dragon harness, a patented technology that eliminates buckles and adjustments. This harness, worn like shorts, eliminates the time-consuming and tedious process of adjustments. It is primarily intended for climbing schools or adventure parks, which appreciate the significant time savings it offers during group activities, as the harness automatically adjusts to the user's size through retractable elastic bands. Users can thus equip themselves safely.

Furthermore, the attachment point (pontet d'encordement) is located above the center of gravity to prevent any risk of inversion in case of a fall.

Certified CE EN 12277, the harness can withstand a load of 1,500 kilograms. To complete the equipment, MKM Couture is one of the few companies in the sector to offer customized lanyards manufactured in less than 10 days according to the client's specifications. This quick turnaround is made possible through the internalization of production, entirely carried out in its factory in Haute-Savoie, France.



PRESS CONTACT MKM COUTURE
Richard Dorgnon • richard.dorgnon@mkm-couture.com
+33 (0) 450 520 035



OTEPLACE: INNOVATION FOR INDUSTRIAL SAFETY

Otego, world leader in technical textiles, is revolutionizing the way industrial protection professionals do business with the launch of its own marketplace: Oteplace.

Otego's revolutionary new initiative is positioned at the heart of major industrial sectors such as metallurgy, foundry, construction, logistics and many others. This ground-breaking online platform, Oteplace, has been carefully designed to meet the urgent needs of these industries, focused on the safety and protection of workers.

It offers much more than just a place for networking: Oteplace is a truly global sales and purchasing platform. It enables industrial protection professionals to connect and do business on a global scale by offering their products on a single site.

Oteplace's primary mission is clear: to improve the safety of workers in their working environments. We are faced with a series of complex challenges relating to the safety of employees in the workplace. These challenges include protection against thermal hazards, falls, hazardous chemicals, and various other perils that can threaten their physical integrity.

Oteplace offers bold, innovative solutions to this crucial reality. These are advanced protection products, specially designed to evolve in parallel with the hazards to which employees are exposed. These innovative solutions are often little-known, but they deserve to be widely publicized. There is a strong commitment to raising awareness of these new products, these technological advances that can truly redefine workplace safety standards.

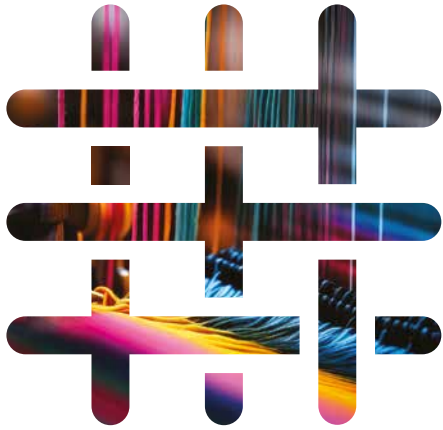
Thierry Mosa, CEO of Otego, describes this vision with conviction: «Oteplace embodies our mission to protect people with a capital H, our vision of a future

where industrial protection is not only effective, but also ethical and global. It's an opportunity for merchants to connect to the world and contribute to a positive transformation of our industry.»

Oteplace goes beyond being simply an online sales platform. It's a collaborative ecosystem that encourages exchange, cooperation and innovation between industrial protection professionals. The commitment is based on the promotion of quality, standardized and certified products, guaranteeing buyers access to a diversified offering tailored to their specific needs.



PRESS CONTACT OTEGO
Thierry Mosa • info@otegotextile.com
+33 (0) 437 858 000



Primo1D

WHEN RFID BECOMES INVISIBLE

Founded in 2013, Primo1D has successfully miniaturized Radio-Frequency Identification (RFID) technology to integrate it into a simple thread.

Named E-Thread™, this technology, protected by a strong portfolio of international patents, relies on micro-encapsulation of electronic circuits, which is streamlined, straightforward, and robust. To manufacture this RFID thread, the two conductive strands of the antenna are linear and directly connected to the RFID chip before being encased by the thread. A unique identification number is then encoded, allowing data to be recorded in the cloud.

Although industries in the composite materials and rubber sectors (now manufacturers of electrical cables and tires) are interested in this technology, the primary market remains the textile industry.

The E-Thread™ RFID thread, enclosed within a ribbon, is included in hems or seams, making it imperceptible in everyday use. Being embedded at the source, this revolutionary wired tag guarantees real-time knowledge of the status of each garment throughout the supply chain, up to the point of sale, to facilitate inventory and restocking operations. It can also be activated as an anti-theft measure, with the advantages of being imperceptible, non-removable, and capable of deactivation upon leaving the store, respecting customer personal data and privacy.

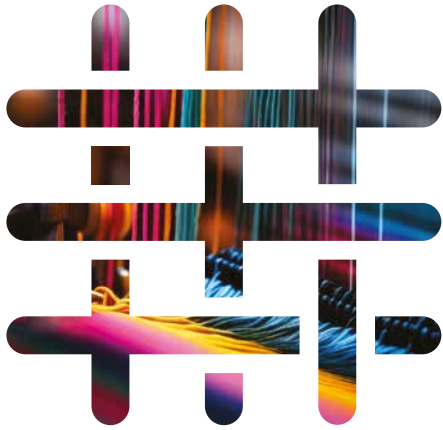
Furthermore, the technology provides a relevant solution to circular economy challenges by facilitating the development of new business models such as rental or second-hand sales. Recycling will also be simplified. One of the current difficulties lies in having exhaustive knowledge of the materials used in a given

item. By being embedded in the product from its origin, the E-Thread™ wired tag, with its unique identification number, connects the product to the cloud, allowing the tracking of the entire product lifecycle and precise information on where, how, and by whom it was manufactured.

Primo1D's RFID thread still offers many advantages, including managing the cleaning cycles of workwear, renewal dates for Personal Protective Equipment (PPE), authentication of luxury products, and the potential for development limited only by the needs of the industry professionals.



PRESS CONTACT PRIMO1D
Isadora Romand • isadora.romand@primo1d.com
+33 (0) 456 141 249



WEAVE, THE REVOLUTIONARY SMART TEXTILE MADE IN FRANCE

The French company Satab, the European benchmark in the narrow textiles market, is showcasing a new range of smart textiles. Combining "made in France" textile expertise with IOT (Internet of Things) skills, Eweave offers an innovative smart textile solution offering a range of services for professionals. The range of services delivered by Eweave smart textile linear sensor includes lighting, electrical conductivity, data transfer, on-off switch, water level detection, water leak detection, cut detection, support detection and mechanical tension detection. Unlike conventional electrical wiring, the robustness, thinness, lightness and flexibility of Eweave textile linear sensors adapt to all surfaces and environments over lengths of up to 1 km. By replacing electrical or lighting wiring elements, which previously had to be hidden, with narrow textiles woven using the "made in France" expertise of Satab, Eweave is not just a technological revolution, but also a small revolution in terms of style.

Eweave, above all, on-board electrical conductivity, data transfer and on/off switch functions

Made from polyester and copper wire, Eweave tapes incorporate 2 to 10 conductive tracks, depending on their function. Ready to use and available in lengths from 20 cm to 1 km, depending on application needed, Eweave can also be developed specifically to meet corporate specifications. In addition to the embedded functions that enable Eweave textile linear sensor to conduct electricity, data transfer or integrate an on/off switch. Eweave leads the way in the deployment of global smart textile solutions.

Eweave, more than just an intelligent textile linear sensor, a unique solution for detection, protection and prevention

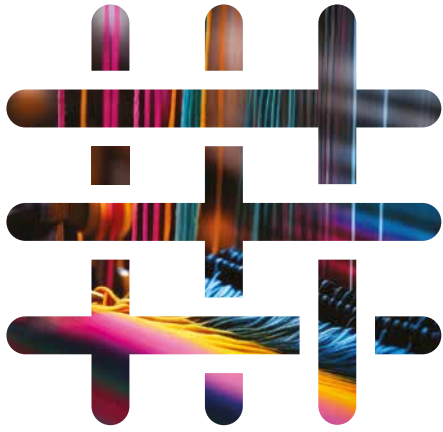
These Eweave detection solutions are made up of three inseparable elements: a connected ribbon, an electronic signal processing unit and a control interface called "MyEweave" allowing for remote monitoring and control of the installations. Its innovative system for detecting water levels, water leaks, cut-outs, contact and shocks features the possibility of geolocating any incidents. The "MyEweave" control interface monitors the systems 24/7 via a dedicated cloud. As soon as a default is detected & located, the interface triggers the chosen alert system (email, message, call). It also provides a follow-up of interventions and a history of alerts.

Eweave, lighting systems a world-unique solution

Thanks to the flexibility and lightness of ribbons, Eweave lighting systems can be installed on any surface and in any environment (indoors or outdoors). These new ribbons can be easily integrated into textiles (e.g. PPE), walls or furniture, and are available in several versions depending on their use. The LEDs are woven directly into the ribbon for an unprecedented aesthetic effect, a COB is integrated into the ribbon for powerful lighting, ambient lighting is created by integrating LEDs into the ribbon and the use of electroluminescent wires integrated into the ribbon provides signage lighting.



PRESS CONTACT SATAB
Céline Gardette • celgardette@gmail.com
+33 (0) 680 891 033



TECHNISANGLES TACKLES THE CHALLENGE OF DESIGNING SUSTAINABLE PRODUCTS

Technisangles, a family-owned company founded in 1926 in Saint Chamond (Loire - France), has been actively engaged in sustainable development for many years, making it a genuine corporate culture today. *"Faced with the significant challenge of preserving the environment, it is our responsibility as business leaders and economic actors to produce with a focus on resource efficiency and reduced environmental impact"*, explains Dolorès Relave-Puig, the company's director, assisted in this role by her two children, Victoria and Antoine.

The initial step for the company was, in 2023, to implement ISO 14001 standards with a proactive and well-defined environmental policy, emphasizing upcycling and recycling. This includes recycling all production waste through dedicated channels and even innovative revalorization, as the company utilizes some of its material scraps to create cushions.

In line with this, Technisangles' research and development unit has been working on developing more environmentally friendly materials and manufacturing processes. These efforts have led to the creation of high-tenacity polyester straps containing 100% recycled materials.

Today, Technisangles is the sole company offering a range of polyester straps made from 100% recycled materials. Highly durable, these straps can be used not only in the traditional luggage market but also in outdoor sports, personal protective equipment, and defense sectors. Technisangles offers a range with widths from 15 to 50 mm, labeled as GRS (Global Recycled Standard). *"According to customer needs, we could even consider a variable-width strap made from this new material,"* details Dolorès Relave-Puig. Variable-width straps are a patented product by Technisangles, notably used in the manufacture of safety harnesses. A single strap can have two to three

different widths to facilitate buckling. This requires specific weaving machines and, most importantly, finely tuned skills and expertise in adjustments. While it may sound simple in theory, in practice, Technisangles is the only European company that has mastered the process for widths of 20/44 mm.



ENVIRONMENTAL CONSCIOUSNESS AT THE HEART OF SPONSORSHIP EFFORTS

The strong environmental commitment of Technisangles is also reflected in its sponsorship activities. The company has chosen to support environmentally neutral sports: funambulism and slackline. In August 2022, it sponsored French funambulist Nathan Paulin, who broke the world record for the longest distance walked at Mont Saint Michel (Normandy). For this 2,200-meter crossing, Technisangles provided a 20mm technical strap made from Vectran and HPME, known for its resistance to stretching and high strength. Indeed, HPME, a high-density polyethylene, and Vectran exhibit exceptionally high breaking strength, which can be 5 to 10 times greater than that of steel cables.

PRESS CONTACT TECHNISANGLES
Dolorès Relave-Puig • drelavepuig@technisangles.fr
+33 (0) 477 292 942

LATEST PROJECTS SUPPORTED BY TECHTERA

Innovation is a strategic priority for companies evolving in the textile industry. It aims to address competition and diversify opportunities by promoting the use of textiles in new application areas.

However, when it comes to research and development, it also involves significant financial, human, and material investments, which can be a challenging venture for SMEs.

Techtera supports the development of industries in the sector through collaborative research.

EU-ALLIANCE*

Support the internationalisation of European SMEs from the sectors of textile and ICT. The project targets in particular the dual-use security and defence markets.



Budget: 500 K€
Number of partners: 6
Markets: security, defence

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.



Budget: 500 k€
Number of partners: 5
Markets: industry, transport, furnishing, decoration, fashion, clothing

MC4**

Establish circular approaches for carbon and glass fiber composites through a European partnership (Multi-level Circular Process Chain for Carbon and Glass Fibre Composites).



Budget: 7 M€
Number of partners: 15
Markets: building, civil engineering, industry, protection, security and defence, sports and leisure, transport

TRIMETIS

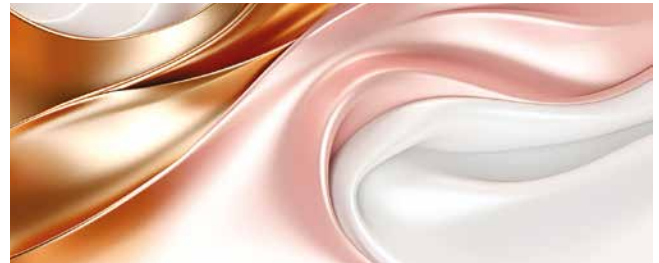
Develop a new technology for the functionalisation of polymeric threads and filaments.

Budget: 2.85 M€
Number of partners: 3
Markets: health, sports and leisure

MIROIR

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

Budget: 3,2 M€
Number of partners: 7
Markets: protection, luxury



TIGER

Develop a prototype of current generation by triboelectricity using a textile yarn, with an electronic system and a flexible battery.

Budget: 917 K€
Number of partners: 3
Markets: protection, security and defence, sports and leisure

ISL PORCHER

On a multi-scale, characterise and model the mechanical behaviour of a fabric subjected to ballistic impact.

Budget: 151 k€
Number of partners: 2
Markets: defence, personal protective equipment (PPE)

*  Co-funded by the COSME programme of the European Union

**  Funded by the European Union



MADE BY
100% RECYCLING
MATERIALS

PTBE

Develop a low-emissivity tent wall for camouflage and thermal comfort.

Budget: 671 k€
Number of partners: 2
Markets: defence, sport

BIO SUSHY

Develop three PFAS-free novel coatings.

Budget: 5 M€
Number of partners: 3
Markets: personal protective equipment (PPE), technical textiles, defence, sport, health, transport

PROPTITEX

Integrate electrochromic technology into textile fibers to create fabrics capable of changing color locally in a controlled manner.

Budget : 1.5 M€
Number of partners: 4
Markets: personal protective equipment (PPE), defence, sport

FOMOF

Develop a French sector for functionalised textile products intended for military and civilian applications.

Budget: 381 k€
Number of partners: 3
Markets: personal protective equipment (PPE), defence, sport

CODETEX

Design a mobile primary decontamination facility for fire suits and equipment.

Budget: 1 M€
Number of partners: 3
Markets: protection, defence

EUROBOOSTEX

Joint European initiative in support of the textile industry for European recovery through digital and ecological transition.

Budget: 1.5 M€
Number of partners: 5
Markets: all textile sector



REGIOGREENTEX

Strengthening innovative textile circularity in Europe's regions.

Budget: 12,6 M €
Number of partners: 43
Markets: all textile sector



Techtera



91 bis chemin des Mouilles
69130 Écully
France

+33 (0) 420 302 880
contact@techtera.org

www.techtera.org

