

At the heart of textile evolution

Smart Textiles



Techtera is the French innovation cluster for the textile industry.

We support more than **195 members** in the emergence, structuration and implementation of their collaborative projects of innovation. Since 2005, we have approved and supported **190 financed R&D projects**. We also provide services regarding the business development of our members: international actions (trade fairs, collective missions...), market launching projects for innovative products, identification of textile solutions for all industries.

Smart Textiles is the trending topic in the textile industry, and one of the key technologies identified by Techtera. The cluster supports **collaborative research projects** on the different applicative markets of Smart Textiles (clothing, protection, sports, health...), and builds the **links between textile industry and the players of the digital sector and the Internet of Things**.

IoT
Wearables
Start-up
New business models
Connected
Sensor
Interactive
Electronic
Design
New uses
Data
Digital
Cross-innovations

2.05 Bil €

Forecasted size of smart textiles global market in 2023 for protection, sports and health.

Interactive, smart, connected... **Textiles are innovative!** Textile technologies lead to the creation of complex multi-materials systems for manufacturing connected objects, possibly wearables.

Innovation on smart materials and new industrial processes open **new technological horizons** in order to imagine the uses of tomorrow. These smart, interactive and connected products presents **core properties of textiles**: conformability, flexibility, comfort and lightness.

+21%

Forecasted annual growth rate of smart textiles until 2023 for protection, sports and health.

Connected textiles...

Sensor



Actuator



Energy



Conduction



Data transfer



The Techtera services

Techtera supports all players in the development of their Smart Textile systems activities:

Club Smart Textiles & Wearables – STeW

Techtera has built, and leads the club STeW, an innovation group for sharing and collaboration among members:

- Meetings, visits
- Emergence and support of innovation projects
- Working groups
- Prototypes
- Structuring of the sector

(Exclusive to members of the cluster)

Collective actions & dedicated services

The cluster organizes and supports collective actions to further develop the network, knowledge and exchanges:

- Projects generation, editing and structuring in 6 fields: health, PPE, clothing / decoration, sport, transport, building
- International explorative collective missions
- Highlighting textile innovations on dedicated exhibitions : events on Internet of Things and interactive textile
- Market and technological intelligence

R & D projects

BEM : develop a complete mannequin (bust and robotized limbs), anthropomorphic, evolutive and instrumented.

ETINCELS : provide textile solutions embedding sensors that will allow to answer to thermal-related stress situations encountered by security professionals.

FILOGRAPH : develop a smart textile made of natural and/or biosourced yarn, coated with graphene, with conductive properties that will provide a free-battery equipment.

LIGHTEX INSIDE : industrialisation of the Lightex® technology, a process of weaving optical fibres to achieve flexible or rigid luminous surfaces, with very low space requirements, low power consumption and long life.

LITEVA : develop multifunction textiles for emitting the appropriate alerts for the safety of autonomous vehicles users.

ORGTEX : use organic materials in biomedical monitoring systems, that will provide biocompatible solutions for lower-cost interface between the human body and advanced electronic devices.

PRIDYN : develop four safety schemes embeded security textile sensors (DCR 2.0 screens, mudslide barrages, rockfall protection kits, forest screens) for protection from natural hazards (rock and soil).

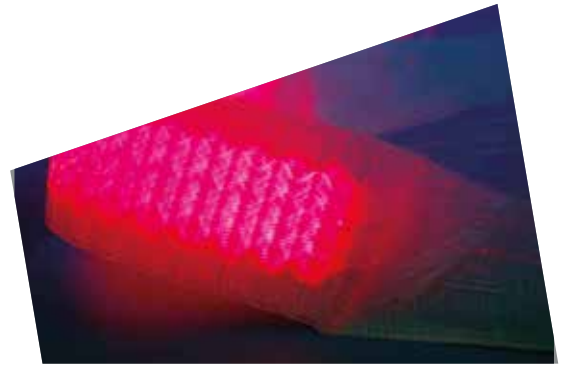
QAICARS : develop an air-treatment concept for inside cars to quickly and durably deal with chemical pollutants smells and microorganisms.

REMOPP : restore mobility to paralyzed people following a neurological system affection by developing tools and protocols offering an innovative use of functional neuromuscular electrostimulation.

SEALCOAT : provide a transport system that avoids the road infrastructure for transporting heavy loads with self-repairing materials.

SMART BANDAGE : detect wound infection as soon as possible by embedding a diagnostic solution in the bandage.

TEXIMED : develop medical devices (bandages, implants, photodynamic therapy) to address specific pathologies.



— Lighting textiles for medical applications
MDB TEXINOV

THESEE : industrialise the E-Thread™ yarn embedding RFID chips for applications in traceability, anti-theft and anti-counterfeiting.

FOURMI : design a textile fiber optic sensor to develop a new system for structures monitoring to anticipate structural damage and limit heavy maintenance work.

European partnership

CONTEXT: Techtera takes part in the CONTEXT programme that promotes European exchanges between experts to generate research, development and innovative projects in the field of smart textiles.

Smart Textiles

3.0 bench

— Garment Technology
— Structures AD Confection, Annaury, Moutray et Armor

Lighting textile for medical application

— MDB-Textinov

Lighting Bias

— AJ Bias

BiliCocoon®

— NeoMedLight

Connected ribbons

— SATAB

Electroluminescence, shape memory butterfly

— SABLE CHAUD

Urban Connect

— Sigvaris

#CHOOSE

— © Brocher Technologies/Eram

Applications



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Techtera is supported by:

