Textiles & flexible materials for **Transports**

Techtera





TECHTERA is the innovation cluster for textiles and flexible materials in the AUVERGNE-RHONE-ALPES region, French leader in the textiles and composites sectors.

We support more than **130 members** in the emergence, structuration and implementation of their collaborative R&D projects. Since 2005, we have approved and supported **200 financed R&D projects**. We also provide services regarding the business development of our members: international actions (trade fairs, collective missions...), business launching projects for innovative products, identification of textile solutions for all industries.

Textiles and flexible materials offer solutions for **innovation in transport.** They provide better insulation and resistance, comfort and safety, sustainability and lightness, airtightness and waterproofness. They are essential to the creation of **composite materials.**

More than 20 projects focused on textile applications for transports have been supported by TECHTERA. They account for a global budget of more than 105 million euros.



European market of textiles for transports (2014)



Share of the technical textiles production dedicated to the transports market, in value terms (2015)



Share of composites with textile reinforcements in the composition of an airliner (2015)



European level certification

The "CLUSTER MANAGEMENT EXCELLENCE LABEL GOLD" is given by the EUROPEAN CLUSTER EXCELLENCE INITIATIVE. It acknowledges the highly sophisticated cluster management of TECHTERA, and the success and commitment of the cluster to further improve its organizational structure and routines. **TECHTERA is the first textile cluster to obtain the Label Gold**.



Export rate of regional textile companies on the transports market (2015)

R&D Projects

TECHTERA helps you to develop your network and finance your ideas for the development of products and/or services.

Textiles and flexible materials can be found in all kinds of transports, offering essential functions. TECHTERA supports collaborative projects aiming for the improvement of those functions.



Lighten and improve materials for transports

Our projects for the challenges of the industry:

AERONAUTICS

ACAPULCO: develop thermoplastic components reinforced with long or continuous fibres focusing on semi-structural parts with dual radius.

BALLOO: Design a demonstration flexible reservoir based 3D textile preforms for more efficient aircraft, with regard to current standards, in case of crash or ballistic impact, etc.

MULTIMAFS: Develop materials that improve the electrical conductivity and mechanical strength of composites based on carbon fibres, used in aircraft.

NEXTGEN : develop a new generation of protective sheaths for electric cables in the aerospace industry.

NHYCCO: develop new hybrid yarns for protective clothing and composite applications with high per-formances.

NICE: develop a polymer matrix and an impregnation technology to create a product designed for the specifications of the Airbus Group, at a competitive price and in compliance with REACH requirements.

SMOUSSIF: develop silicone foams and textiles coated with such foams for various applications including creation of lighter structures, electrical and acoustic insulations, fire resistance, antistatic properties and seal.

TEXTILUB: develop a new generation of self-lubricating composite textiles for aviation articulations, meeting the challenges of sustainable development.

AUTOMOTIVE

FOMOTEX: develop nonflammable coatings, in latexfree textile layers with multifunctional characteristics and meeting current regulations.

INCREASE: develop a manufacturing process for composite parts with high fibre content through injection/ compression.

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

MY DECO: to create an industry of excellence for the development and manufacture of decorative sheets made of thermoplastic polyolefin.

NCF HP²: develop a new generation of Non Crimp Fabric based on carbon fiber and associated textile processes for the manufacture of thermosetting composite parts.

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

AIRSHIPS

SEALCOAT: provide a transport system that avoids the road infrastructure for transporting heavy loads.

STRATOBUS: develop an autonomous stratospheric airship that will carry territory monitoring and tele-communications applications.

BOATS -----

INOVANEX: develop a technical textile for designing a range of compact, lightweight, small boats.

BIO BASED AND RECYCLED MATERIALS

ACTINAT: offer treatment with fluorine gas technology present on the MISTRAL platform inaugurated in 2015.

BIONICOMP: allow bio sourced composites to catch up with the effectiveness of "traditional" composites by offering lighter-weight materials with less environmental impact, by improving their performance with natural fibre reinforcements and elastomer and thermoset matrices... This will use an ionisation-activated grafting technique to optimise fibre/matrix adhesion.

TECHNYMAT: develop materials from textile pro-

duction waste and end-of-life textiles to create three groups of high value-added materials: plastics, sound and heat insulation materials, materials for manufacturing synthetic yarn from recycled products.

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

VALTEX: develop an industry for the recovery of textiles end-of-life vehicles and professional garments in order to recycle them into new products.

Textiles and flexible materials for transports

Belts Tyres Filters Airbags Riggings Carpeting Bodywork **Structural parts** Aircraft enveloppes **Composite reinforcements Composite brake pads Rotor blades** Insulation **Dinghies Fenders** Fairings **Seats** Tanks Sails



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