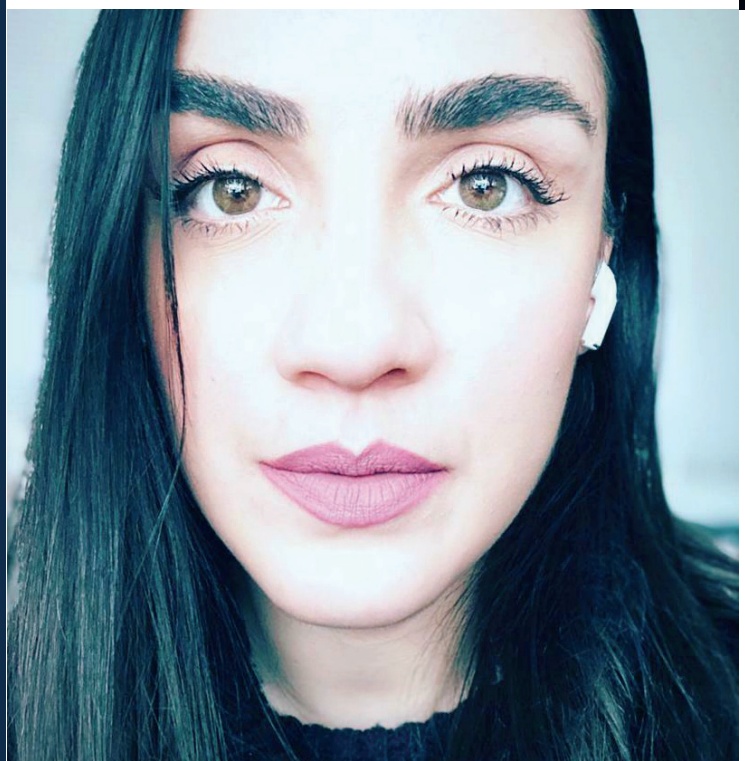
Reinventing a smart, circular and competitive textile industry with advanced myco-fibres

Global climate change, political agendas, and consumers' demands are pushing all industries in a move towards sustainable processes and products. **The H2020 MY-FI project** aims to answer this demand by **providing textile, fashion, automotive, and luxury industries with innovative, biobased, and sustainable materials derived from mycelium.**
Mycelium is the vegetative part of fungi and allows growing innovative materials on plant matter and organic substrates. Through **fungal fermentation carried out on residues from other industries**, mycelium can be grown and processed into clusters of myco-fibers to produce **advanced materials**, taking advantage of their **unique properties** while **valorising industrial byproducts and leftovers**.



> In the fashion sector, we have always experimented with innovative and suistainable technoogies and materials. Thanks to the MY-FI project, we are excited to work with a valuable and unprecedented mycelium material for fashion. With Dyloan's digital technologies we have tested the characteristics of the material and enhanced its properties, in order to make the material even more unique.

Mariagrazia Sanua, WP4 project leader
DYLOAN Bond Factory srl

Mogu srl

Universiteit Utrecht

Institut textile et chimique de Lyon

Acondicionamiento Tarrasense Associacion

Asociacion de investigacion de la industria textil

Forschungsinstitut fur leder und kunststoffbahnen Ggmbh

Bio Base Europe Pilot Plant

DYLOAN Bond Factory srl

Organic waste systems NV

Centro ricerche fiat scpa

Volkswagen AG

Spin 360 srl

Axia innovation UG

France Croco

Consortium Meet us

Who we are

Founded in Normandy in 1979, France Croco is one of the leading tanneries in Europe. It has always excelled in high quality products and positioned itself as one of the major players in the tanning industry. In 2013, the KERING Group acquired the tannery and built a brand-new factory making France Croco one of the most modern tanneries in Europe, fitted with the very latest technological equipment.

Our role in MY-FI

Within the MY-FI project, France Croco is involved in the scaling up and the industrialization of the transformation process for mycelium materials. Thanks to the employment of innovative machinery, France Croco is successfully treating the fist batches of mycelium material, following the protocols co-developed with researchers in WP2.

Contacts

Contact person: Jean-Marie Gigante

FRANCE CROCO website

Who we are

LEITAT is a Spanish Technological Research Centre specialized in production technologies. It provides R&D activities in the areas of materials science, environment, surface treatments, biotechnologies and renewable energies with deep knowledge and experience in technological transfer to several industrial sectors.

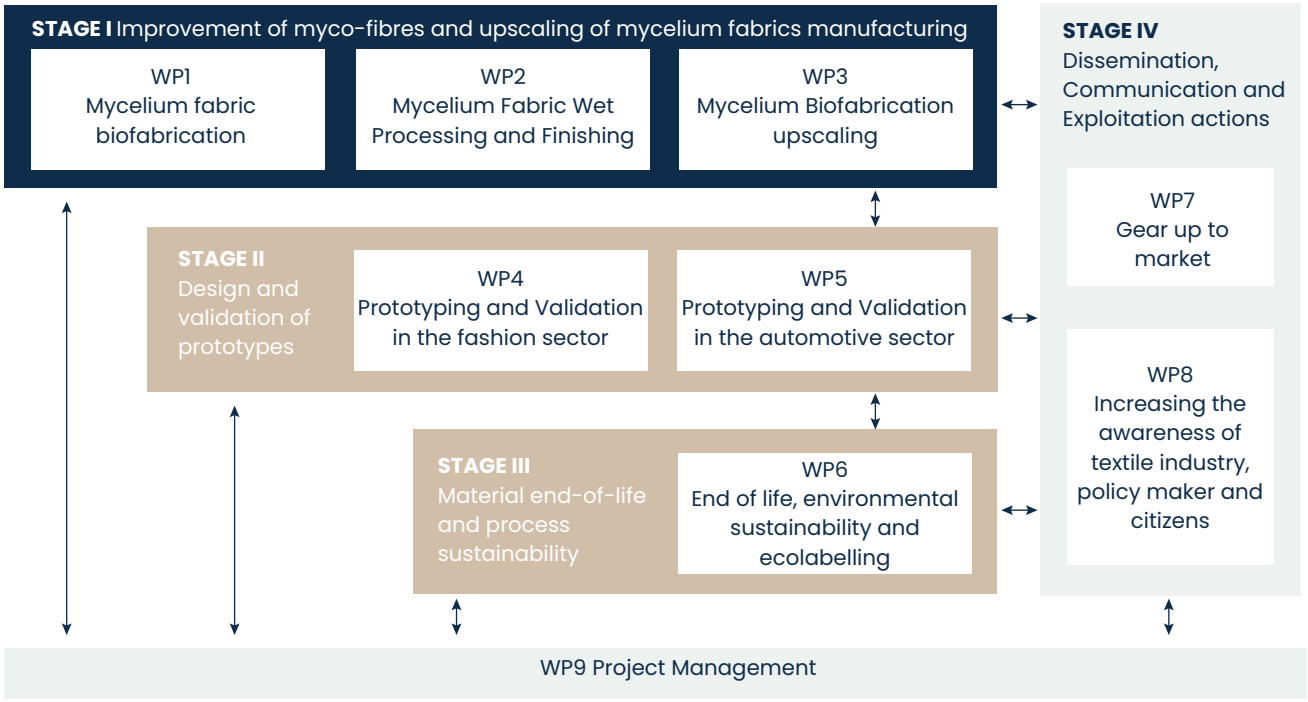
Our role in MY-FI

Within the MY-FI project, LEITAT is involved in the characterization of raw and finished mycelium materials. Moreover, LEITAT is carrying out experiments on the funtionalization of mycelium materials, with technologies inncluding plasma. Finally, LEITAT will assess the compliance of the mycelium fabric with the EU Ecolabel certification.

Contacts

Contact person: David Wilde

LEITAT website



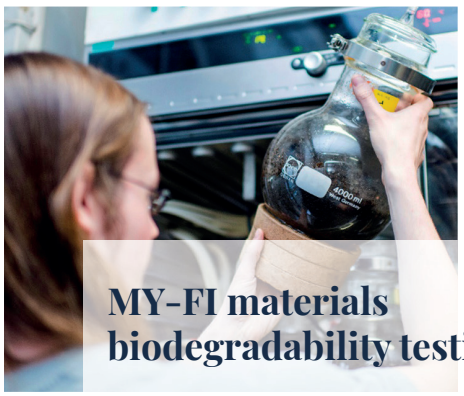
MY-FI WPs Focus on WP4

Work Package 4 focuses on prototyping and validation of MY-FI materials in the fashion sector. **BOND** is leading these activities, and it is supported by **MOGU, AITEX, FRANCE CROCO, ITECH, LEITAT, SPIN,** and **AXIA .** The main goal of Work Package 4 is to **conceive prototypes for the luxury fashion industry, minimising the employed resources, testing technologies for different application methods, and doing the characterization of fabric for prototyping.** One of the tasks to be performed during the project is to test performance properties advancement, such as: absorbency, crease resistance, tensile strength, abrasion resistance, flame resistance, thermal insulation qualities, lustre, resistance to build up of static electricity, thermoplastic; as well as fabric construction and its weight and size. This analysis will outline a Fabric Performance Index, summarising the type and the nature of substrate to be bonded. Moreover, several technologies for different application methods will be tested, like adhesive or conventional thermal bolding, advanced thermal welding, laser cutting, high-frequency embossing, embroidery, and needling. Finally, four set of prototypes of minimal products or artefacts (footwear, leather goods, garments, design) will be produced.

Mycelium-based materials applications in the automotive industry

What makes our new car appealing, comfortable, reflecting our way of being? Interior finishing plays a fundamental role, and fabrics are one of the main passive interfaces between the driver and the vehicle. Thanks to project MY-FI, the automotive sector represented by CRF, and Volkswagen AG is evaluating potential application of mycelium-based fabrics on interior trimming. Check out our website if you want to know more!!

Find out more



MY-FI materials biodegradability testing

MY-FI project ambition is to develop a mycelium-based fabric that is biodegradable and does not release micro-plastics, to drive the textile industry to a more sustainable and circular economy. Normec OWS is investigating the biodegradation behavior and the suitability for treatment by organic recycling such as industrial compostability and anaerobic digestion. Check out our website to find out more

Find out more

Innovation strategy of MY-FI

Within the My-FI project, AXIA Innovation's role is to develop an exploitation strategy to assist the partners in commercializing their products. An essential element of the strategy is market analysis, involving both qualitative and quantitative assessments of the market. AXIA's job will be to provide insight to the partners on the opportunities and threats, and suggest suitable exploitation strategies. Check out our website to find out more!!

Find out more

MY-FI fourth general meeting

From May 3rd to 4th, Leitat hosted the fourth General Meeting in the great city of Barcelona, and the Stakeholder Advisory Board Meeting (SAB) and company visit in the headquarters of Terrassa. These days offered to each partner the opportunity to understand the functionalisation activities carried out by Leitat and applied to MY-FI project samples, such as plasma activation. Check out our website to find out more!!

Find out more

Latest news

4th General Meeting in Barcelona

On May 3rd, MY-FI project partners gathered in the marvelous city of Barcelona for the fourth general meeting. This was the perfect occasion to share the work carried out by each partner. The material is taking shape, and all the partners had the chance to touch and wear the first finished product samples. The next steps will be mainly focused on improving the upscale of the fermentation process, on prototyping for fashion and automotive, and on developing LCA and ecolabelling activities. Moving forward, MY-FI partners will meet again soon online in July, and for the next general meeting in October.

Second SAB meeting

On May 4th, MY-FI project partners had the pleasure to visit the LEITAT facility in Terrassa, together with 9 Stakeholder Advisory Board (SAB) members. During the day, project partners had the opportunity to share the latest news about the project, showing the results achieved so far, as well as the challenges encoutered. Materials and prototypes have been shared with stakeholders, who had the chance to experience the peculiar touch and feel of our mycelium fibres, incresing their awareness toward this materials. The conversation was enriching and stimulating, and the MY-FI project gathered positive and useful feedback for continuous improvement.

MY-FI GM

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