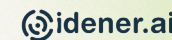


PARTNERSHIP



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Circular bio-based technical textiles with innovative bio-inspired non-toxic functionalisation

ABOUT BIOFIBRELOOP

The BioFibreLoop project will make the EU textile industry more sustainable with a focus on work-, active- and outdoorwear. Recyclable textiles with bio-inspired functionalisation will be produced from bio-based materials.

 **HORIZON Innovation Action (IA)**

 **Duration: 06/2024 – 11/2027**

 **6.5 million EUR EU funding budget for all partners**

 **13 partners**

 **9 countries**

Objective 1 Biomimetic functionalisation of three bio-based materials validated and scaled-up

Objective 2 Digital tools developed and integrated

Objective 3 Recyclability & biodegradation assessments of the bio-based textiles successfully validated

Objective 4 Safety & sustainability assessment for human exposure, environmental, social and economic impact

Objective 5 Process demonstrated in operational environment at TRL 7

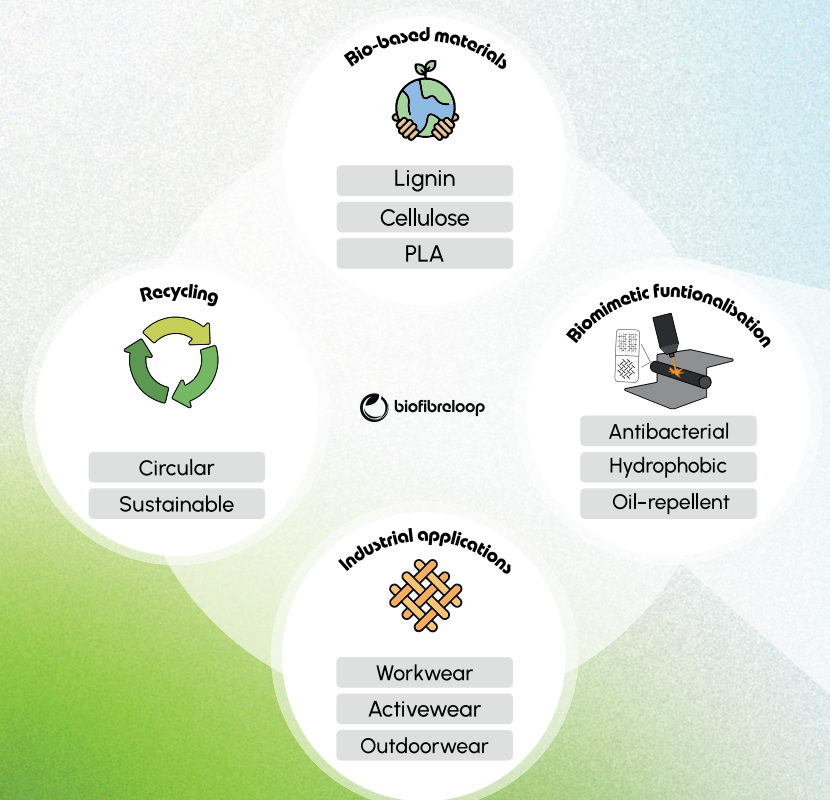
Objective 6 Path to market entry by 2027

CONCEPT

Expected benefits

- nearly waste-free circular economy
- 100% reduction of hazardous chemicals
- intelligent functional properties desired by customers

→ **sustainable and safe production of textiles**



BIOMIMETIC FUNCTIONALISATION

Using a laser, bio-inspired micro- and nanostructures will be created on the surface of heatable embossing rollers made of titanium and stainless steel. These biomimetic surfaces will be replicated on the textiles during textile embossing. Implemented structures bestow the textiles with desired functional properties: antibacterial activity, hydrophobicity and oil repellence.

