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10 Organizations
5 Countries
7.63M Project Budget

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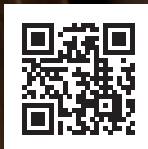
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Co-funded by the European Union under
the GA no 101130000



PENGUIN



Bioinspired and
advanced fibres
and materials for
sustainable
outdoor textiles
with biomimetic
functionalities

Project details

Start date: MAY 1, 2024

Duration: 4 YEARS

Project Budget: EUR 7.63M

In brief

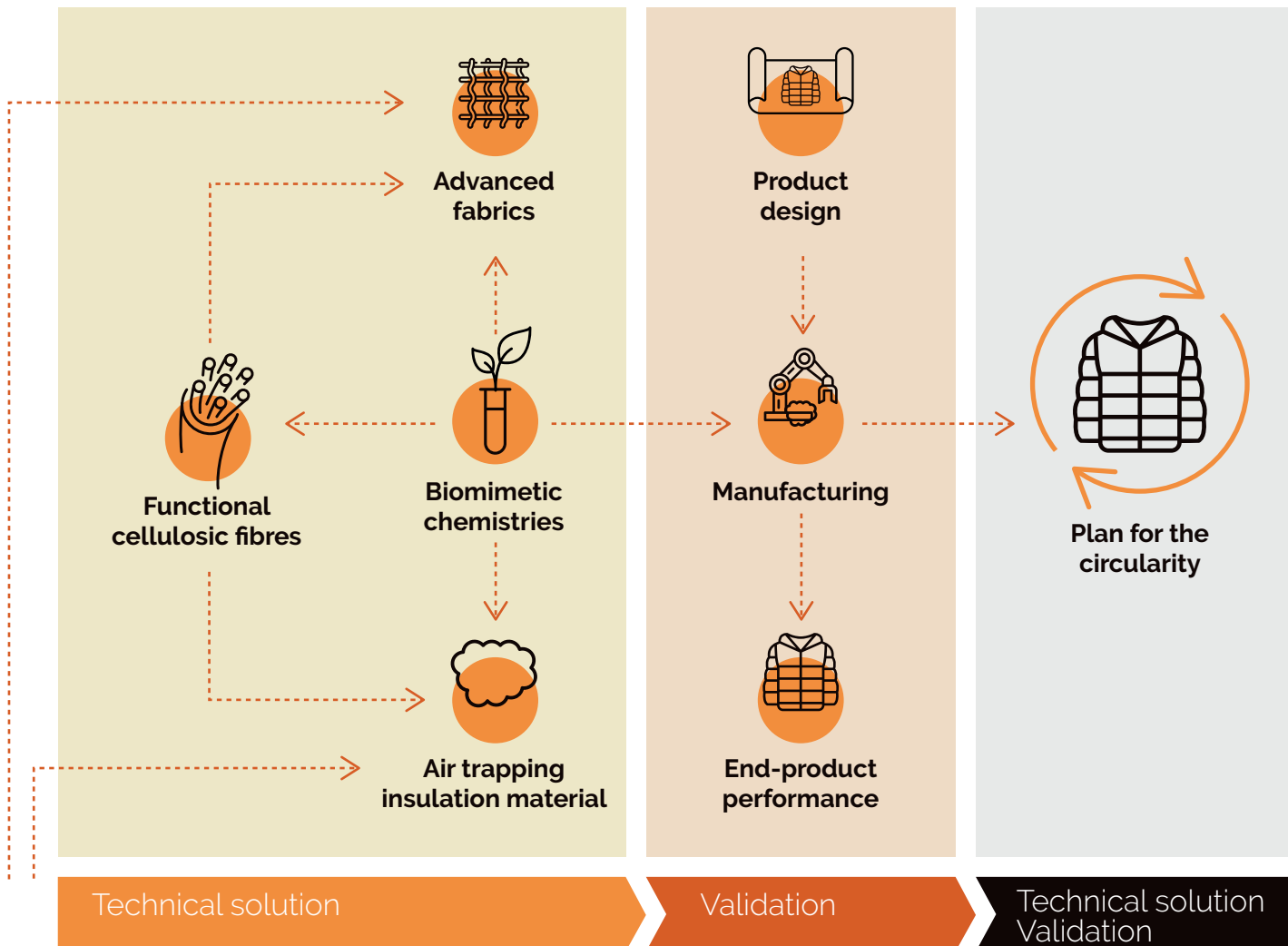
PENGUIN is focused on creating sustainable, recyclable materials for outdoor clothing using cellulose-based fibres inspired by penguin's natural protection, aiming to maintain Europe's leadership in the textile sector, reduce environmental impact, and foster circular economy through innovative material and recycling technologies.

Procedure

Bio-inspired solutions:

Concept integration:

End-use:



Objectives

- Functional textile fibre development
- Advanced insulation material and fabric development
- Computational techniques & SSbD
- End-product validation, economic feasibility
- Circularity and eco-design

Impacts

- Scientifically, the development of cellulose-based textiles is leading to more sustainable and high-performance materials.
- Economically, these advancements are positioning companies for market growth and fostering a more independent European textile industry.
- Societally, the shift towards more sustainable production and recycling practices in the textile industry is poised to have a positive environmental impact, reducing both chemical use and greenhouse gas emissions.