



**Circular
Bio-based
Europe**
Joint Undertaking

CBE JU contribution to biobased textile innovation

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Project Officer
16/06/2026

 **Bio-based Industries
Consortium**



**Co-funded by
the European Union**



Circular Bio-based Europe Joint Undertaking

€2 billion

public-private initiative
advancing a competitive
bioeconomy for a
sustainable future

Launched in
2021,
operates until
2031

Part of Horizon
Europe
programme

Supporting
European
bioeconomy

Building on
the success of
its predecessor
BBI JU



European Union
Represented by the
European Commission



Bio-based Industries
Consortium

CBE JU-funded projects in numbers

2014-2026



243
projects



1,860
participants

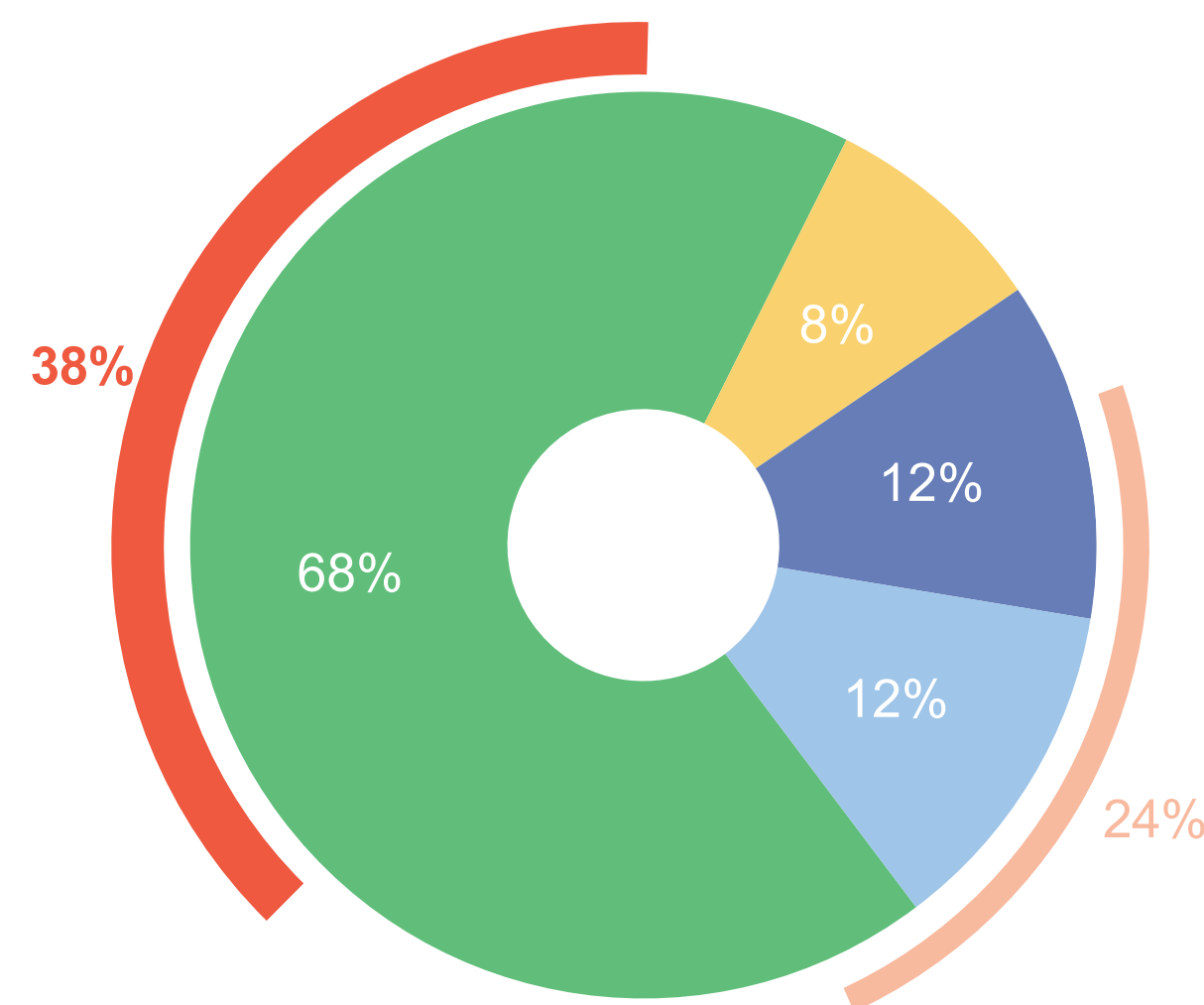


1.44 billion
invested in projects



46
countries

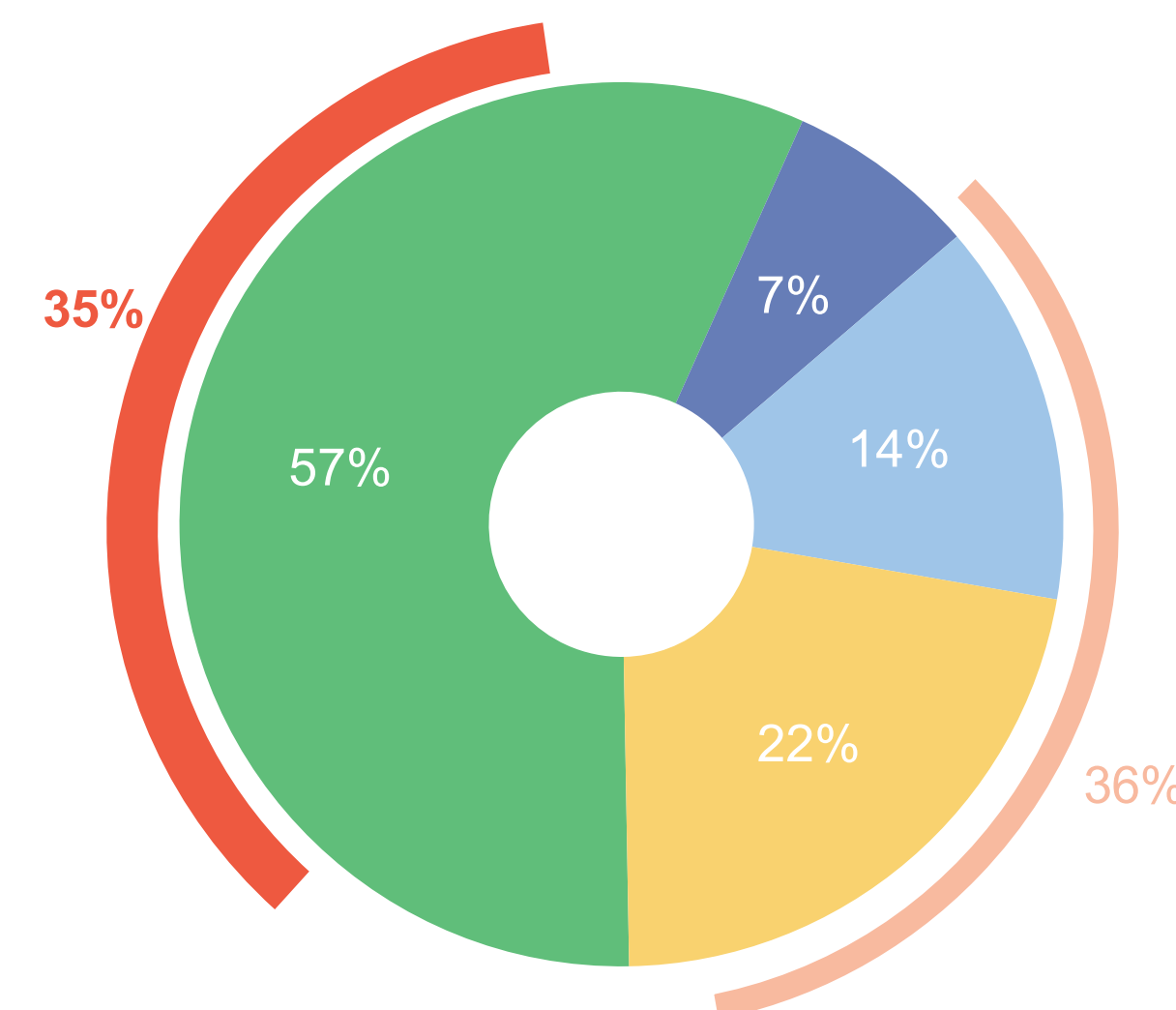
Participants



Higher education establishments
Research centres

Private companies
Other

Funding



Small and medium-sized enterprises
Universities & research centres

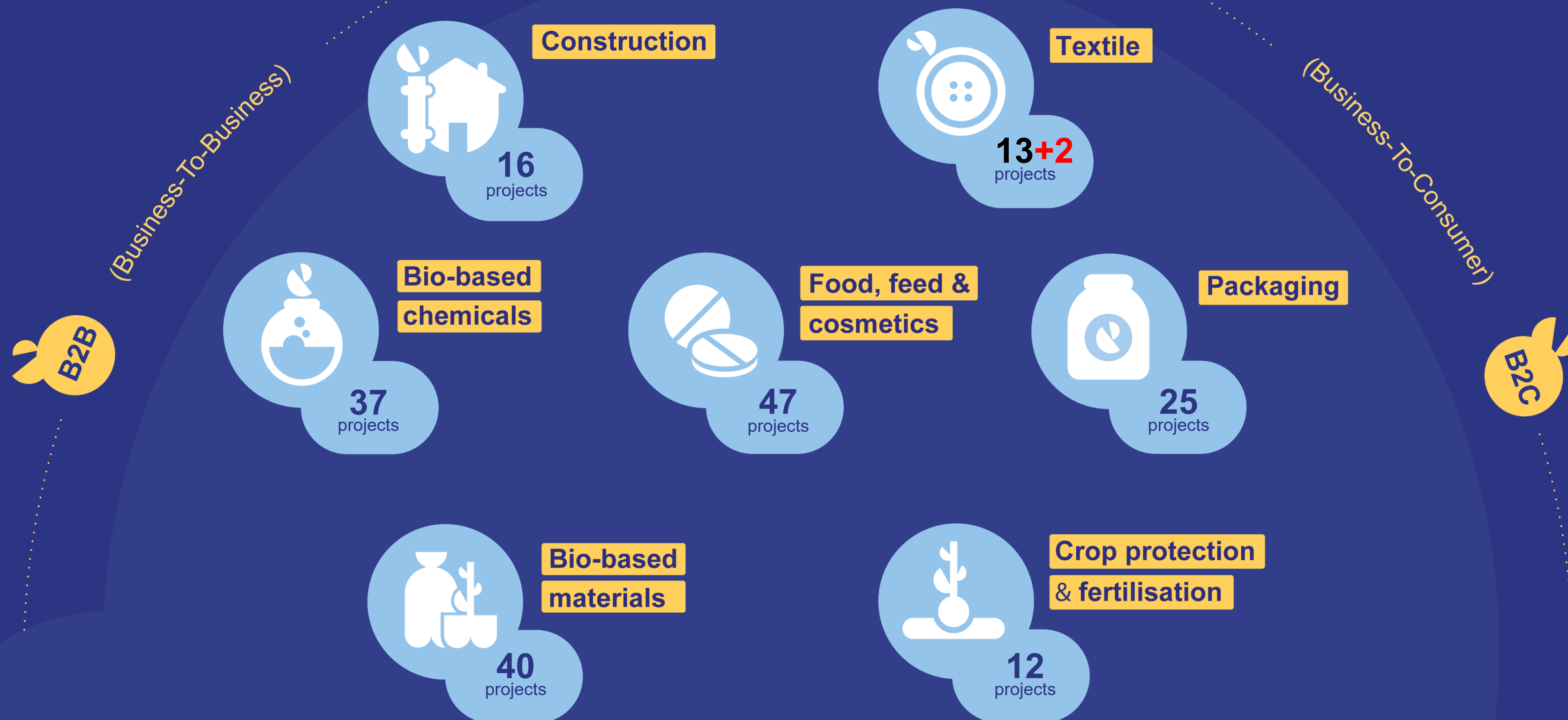
Data: CORDA, May 2026

Main feedstock used

CBE JU projects promote the efficient use of resources through cascading use of sustainably-sourced biological feedstock like waste, residues and sidestreams.



Areas of application



CBE JU projects on textile application

Sustainable Sourcing & Refining

Alternative Fiber Sources



 Assessing feedstock suitability, availability, and long-term environmental sustainability for textile production.

Biorefinery Innovation

Exploiting side streams and processing post-consumer biowaste to extract valuable cellulose.



**The textile portfolio: a
diverse range of projects
across the value chain**

Performance & Circularity

Bio-based Additives & Coatings



Bio-based Additives & Coatings

Developing sustainable finishings and coatings to improve textile performance without fossil-based chemicals.

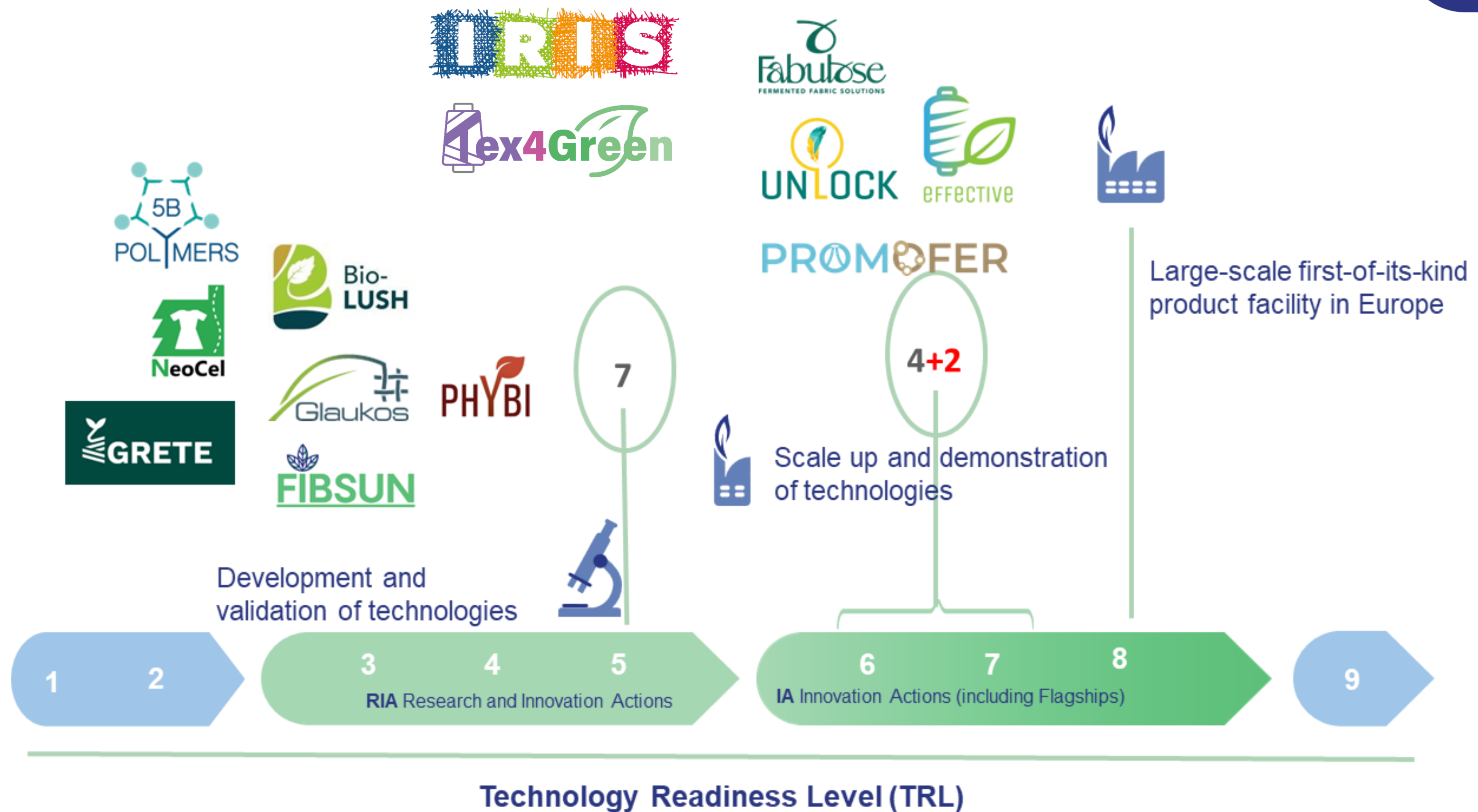
End-of-Life (EoL) Management



End-of-Life (EoL) Management

Establishing effective waste management strategies specifically designed for bio-based textile products.

CBE JU projects on textile application



CBE JU projects on textile application

Sustainable Feedstock Innovation

Cultivating on Degraded and Marginal Lands

Projects like pHYBI and FIBSUN grow hemp and thistle on polluted soils to avoid food competition.

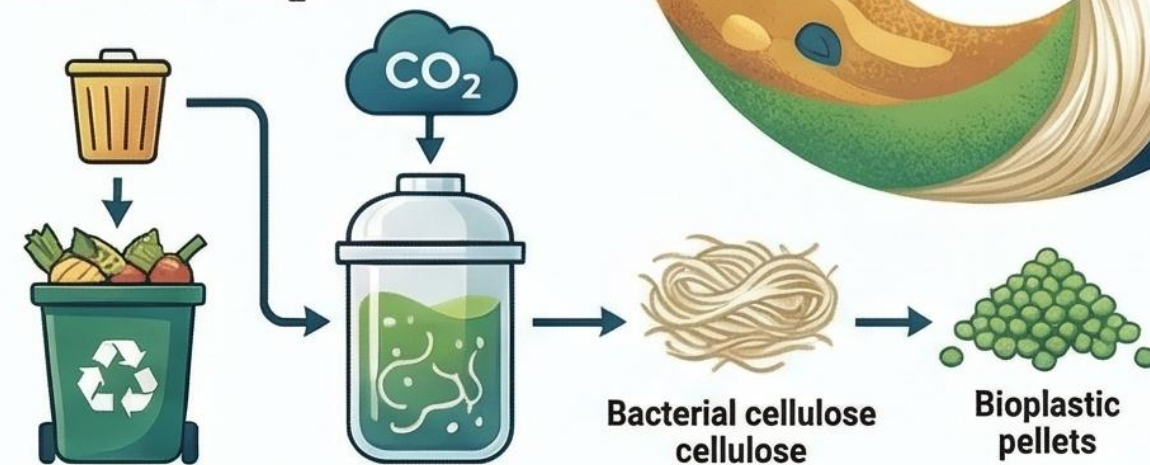


Tapping Underexploited Plant Resources

Bio-LUSH extracts high-quality fibers from seagrass, nettles, and forestry residues for antibacterial textile applications.



Valorising Industrial Waste and CO₂



Fabulose and PROMOFER convert food waste and industrial CO₂ off-gas into bacterial cellulose and bioplastics.

Advanced Materials & Circularity

First-of-their-Kind Bio-based Polymers

The EFFECTIVE project successfully demonstrated large-scale production of bio-based nylons and polyesters for garments and carpets.



Eliminating Hazardous Production Chemicals

New SSbD (Safe-and-Sustainable-by-Design) initiatives focus on replacing toxic PFAS, heavy-metal dyes, and harmful surfactants.



Circular End-of-Life Solutions

Innovation focuses on materials that are fully recyclable, biodegradable, or compostable to keep fibers within sustainable loops.

CBE JU new projects for the textile sector



CBE JU contribution: €7 million

Duration: June 2026 – May 2030

Coordinator: Catalyxx Procesos Catalíticos S.L. (Spain)

Objective: Demonstrating SSbD bio-based textile chemicals PFAS-free lignin coatings, bio-based surfactants, and algae-derived dyes in industrial textile and footwear applications across Europe (Spain, Italy, UK, Belgium)



CBE JU contribution: €7 million

Duration: September 2026 – August 2030

Coordinator: RISE - RESEARCH INSTITUTES OF SWEDEN

Objective: Demonstrating 4 drop-in technologies to be integrated into existing facilities to produce a palette of bio-based colourants and sustainable textile colouration solutions from forestry and agriculture waste side-streams and captured CO₂





FABRICATING VEGAN AND CIRCULAR LEATHER ALTERNATIVES FROM BIO-TECH DERIVED CELLULOSE



The project is supported by the Circular Bio-based Europe Joint Undertaking and its members. Funded by the European Union (grant agreement No 101214009). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CBE JU. Neither the European Union nor the CBE JU can be held responsible for them

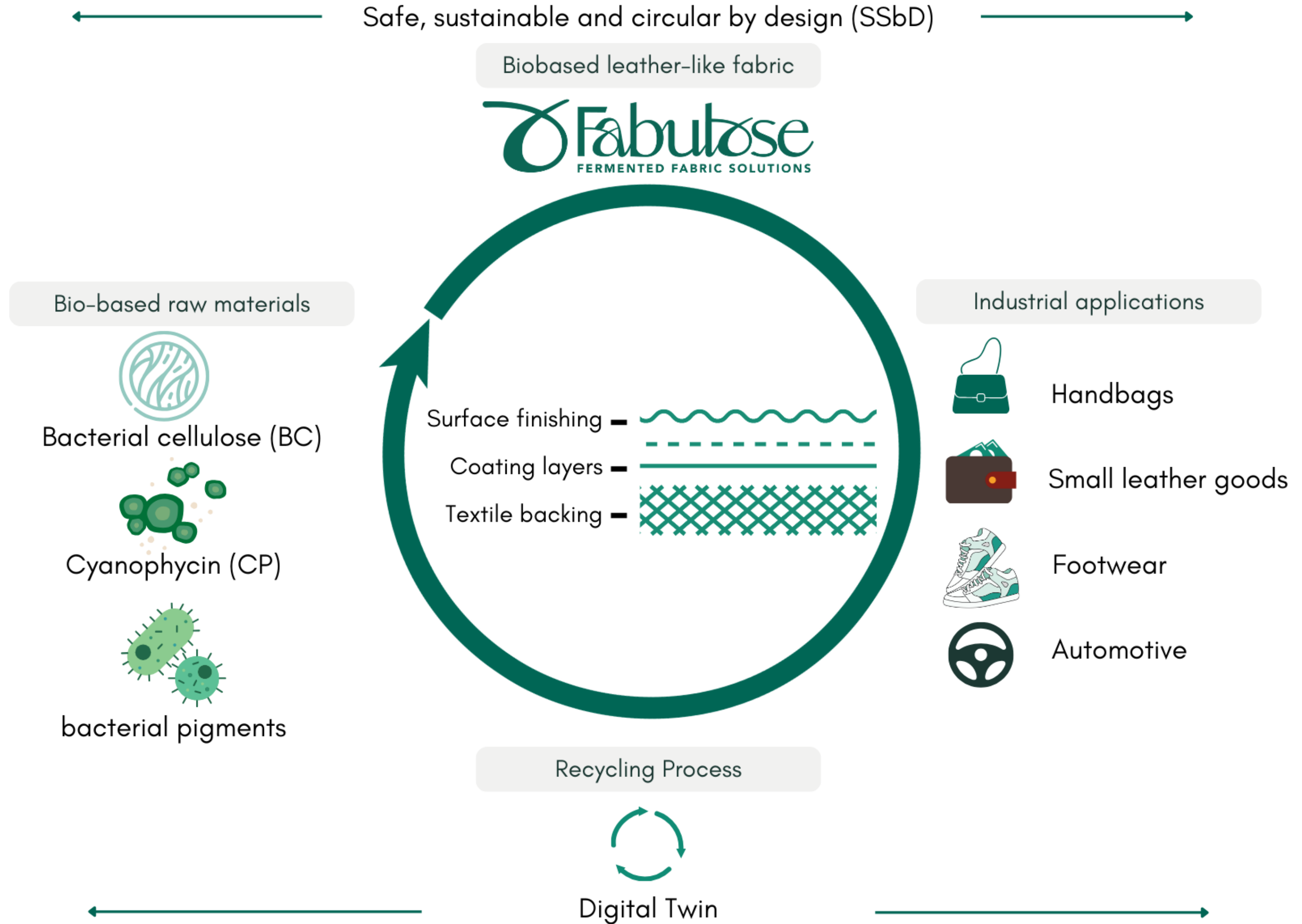
The objective:

Fabulose aims to deliver materials and prototype products which are:

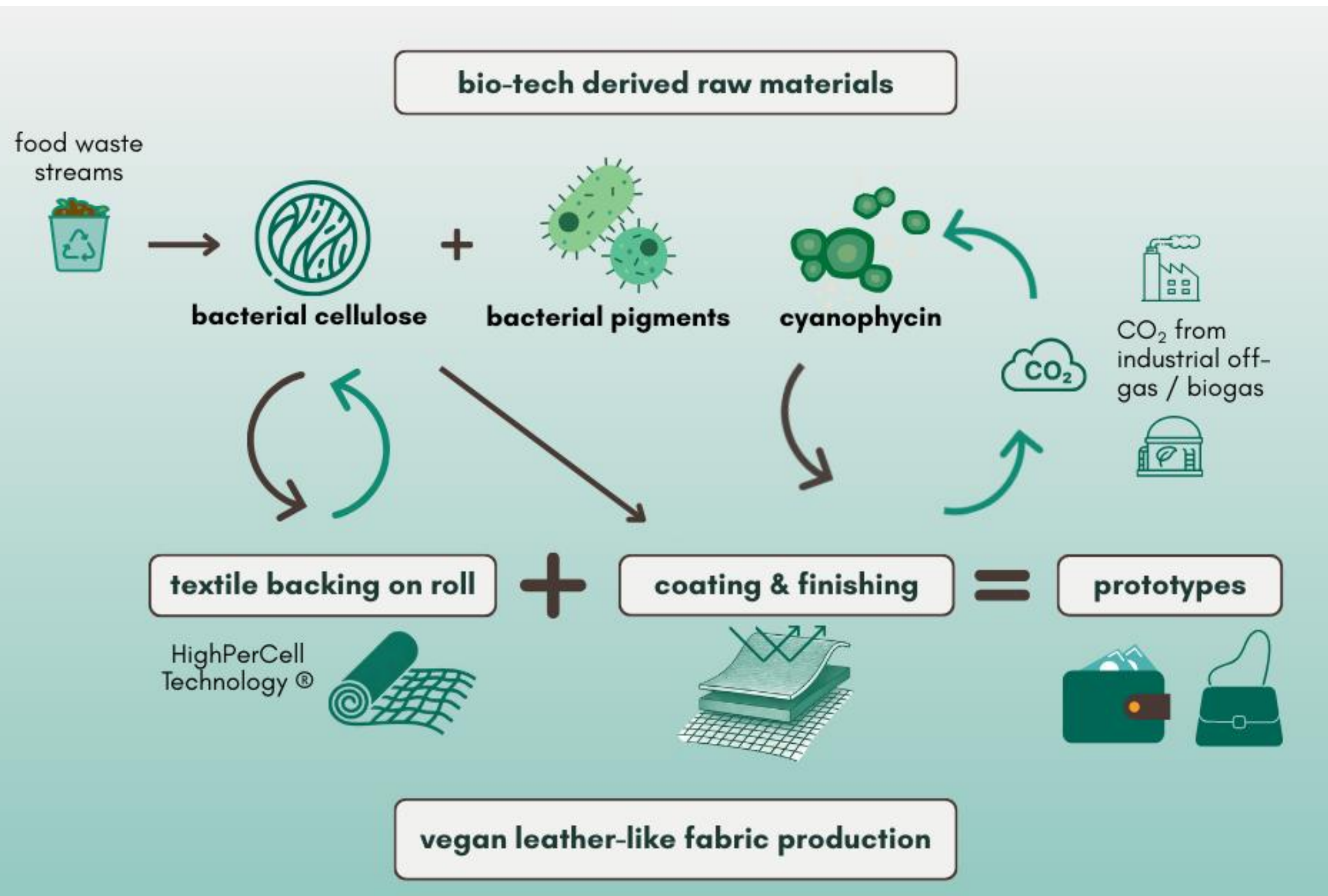
- Free of toxic chemicals and petrol-based plastics
- Bio-based, recyclable and biodegradable
- Comparable in look, texture, and performance to traditional leather
- Scalable to mass production with roll-to-roll process
- Competitive in pricing



The Fabulose Approach:



Key Innovations:



1. Using **fermentation products** to enable fast and cost-effective production of raw materials
2. Grow micro-organisms on **waste feedstocks & CO₂** to reduce production costs and environmental impact
3. **Re-spinning bacterial cellulose to filaments** to create recyclable, consistent and high-quality fabrics
4. Enabling **production of cyanophycin** to create durable coatings & finishing
5. Implementing **roll-to-roll production process** to simplify future scale-up

SAFE & SUSTAINABLE COLORATION FOR CELLULOSICS



Location: Scale-up and pilots at relevant partner locations at multiple locations in Europe

CBE JU contribution: € 6.99 million

Duration: September 2026 – September 2030

Coordinator: RISE Research Institutes of Sweden



Consortium: 18 partners (8 RTO, 8 SME, 2 Large Companies)



Feedstock: industrial waste wood, agricultural side-streams, non-edible crop residues, waste glucose and glycerol



Products: substitute hazardous synthetic colorants and auxiliaries; dyeing and printing processes fully compatible with existing textile manufacturing



Impacts: biobased colorants and dyeing processes for cellulose coloring; substitute harmful chemicals at TRL 6-7.

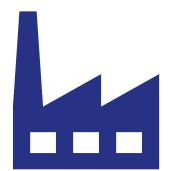
- Project coordinator: RISE (Sweden)



8 RTOs



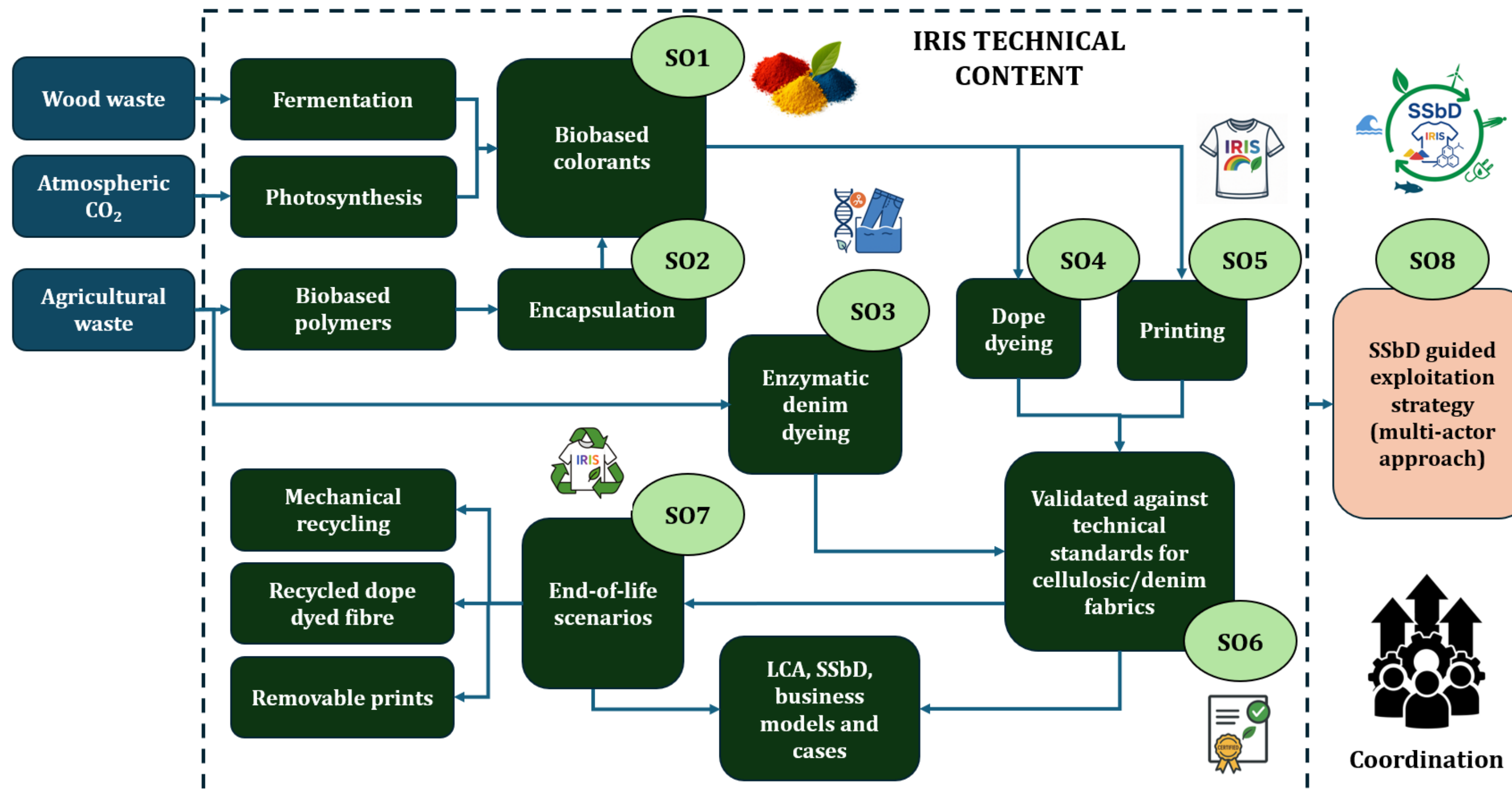
8 SMEs



2 Large
companies



The IRIS concept



CBE JU Call 2026: still more room for textile

HORIZON-JU-CBE-2026-RIA-03-Develop breakthrough and sustainable bio-based textile fibres

Type of action	Research and Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 6.5 million
Expected EU contribution per project	It is estimated that a contribution of EUR 3.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts

- Develop breakthrough processes to yield bio-based textile fibres from sustainably sourced biomass feedstock.
 - Bio-based textile waste
 - Bio-based man made fibres
 - Refinement/functionalization of natural fibres
- Design the bio-based fibre(s) to improve specific technical requirements against state-of-the-art benchmarks
- Design the bio-based textile fibres for sustainable end of life.





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Thank you !

