

Challenges and opportunities in scaling up biobased polymers production at European level

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Head of Programme

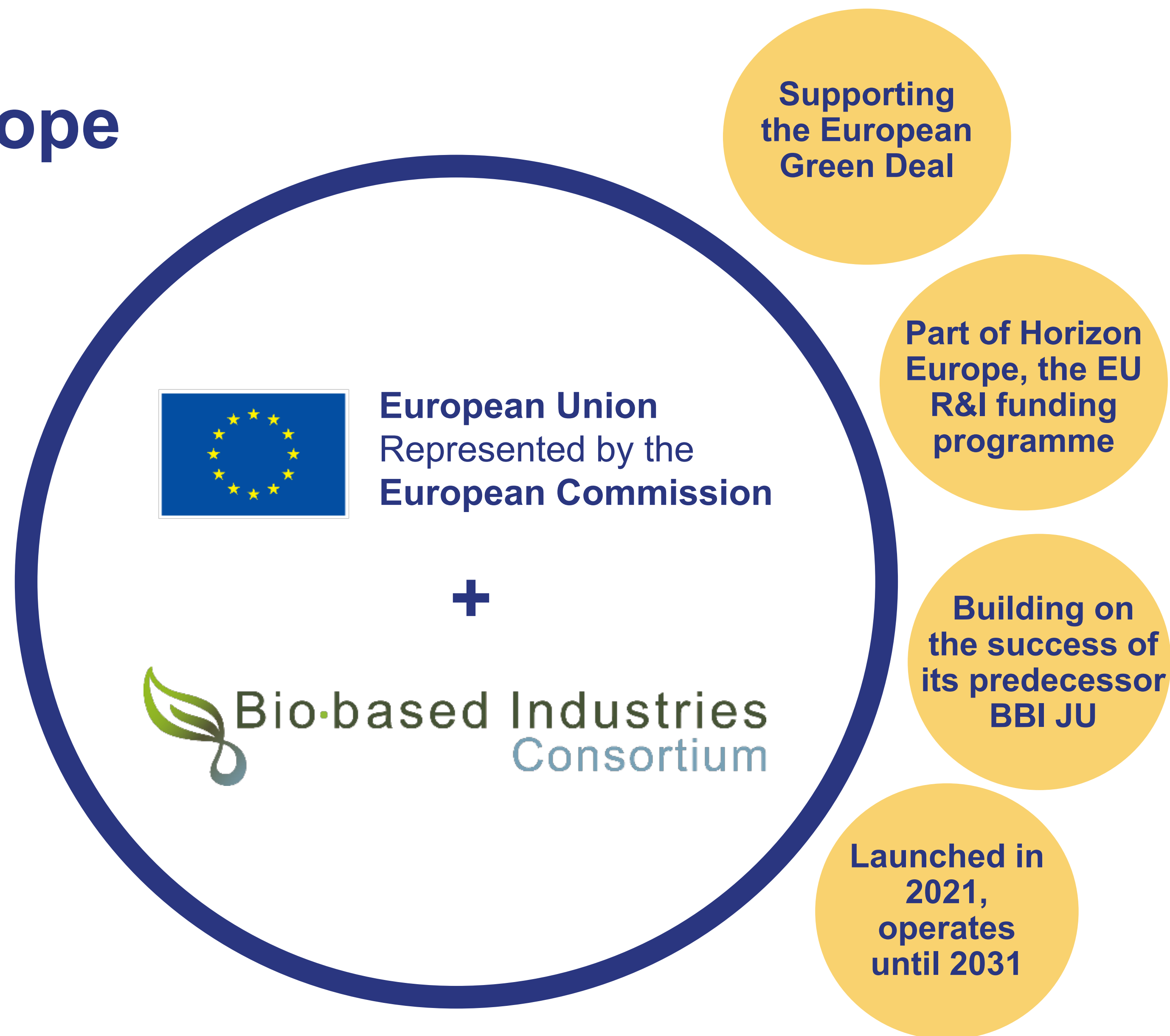
Go Circular, 04/03/2025



Circular Bio-based Europe Joint Undertaking

€2 billion public-private initiative

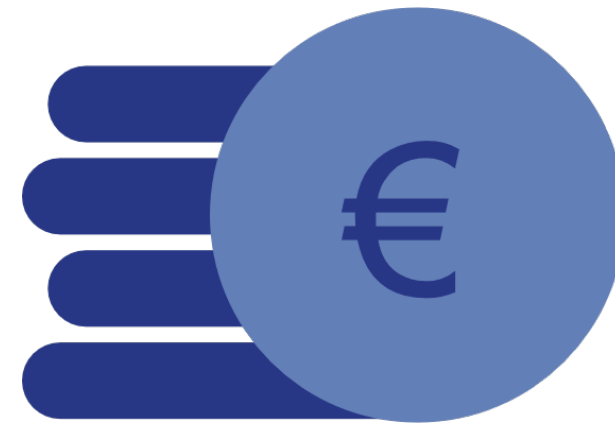
CBE JU is funding projects that deliver bio-based solutions - materials and products made from waste and biomass - in an innovative, sustainable and circular way



CBE JU three key objectives



Accelerate the **innovation** process and development of bio-based innovative solutions



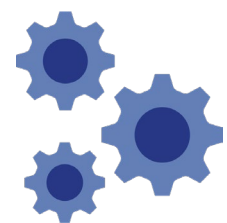
Accelerate **market deployment** of the existing mature bio-based innovative solutions



Ensure a high level of **environmental performance** of bio-based industrial systems

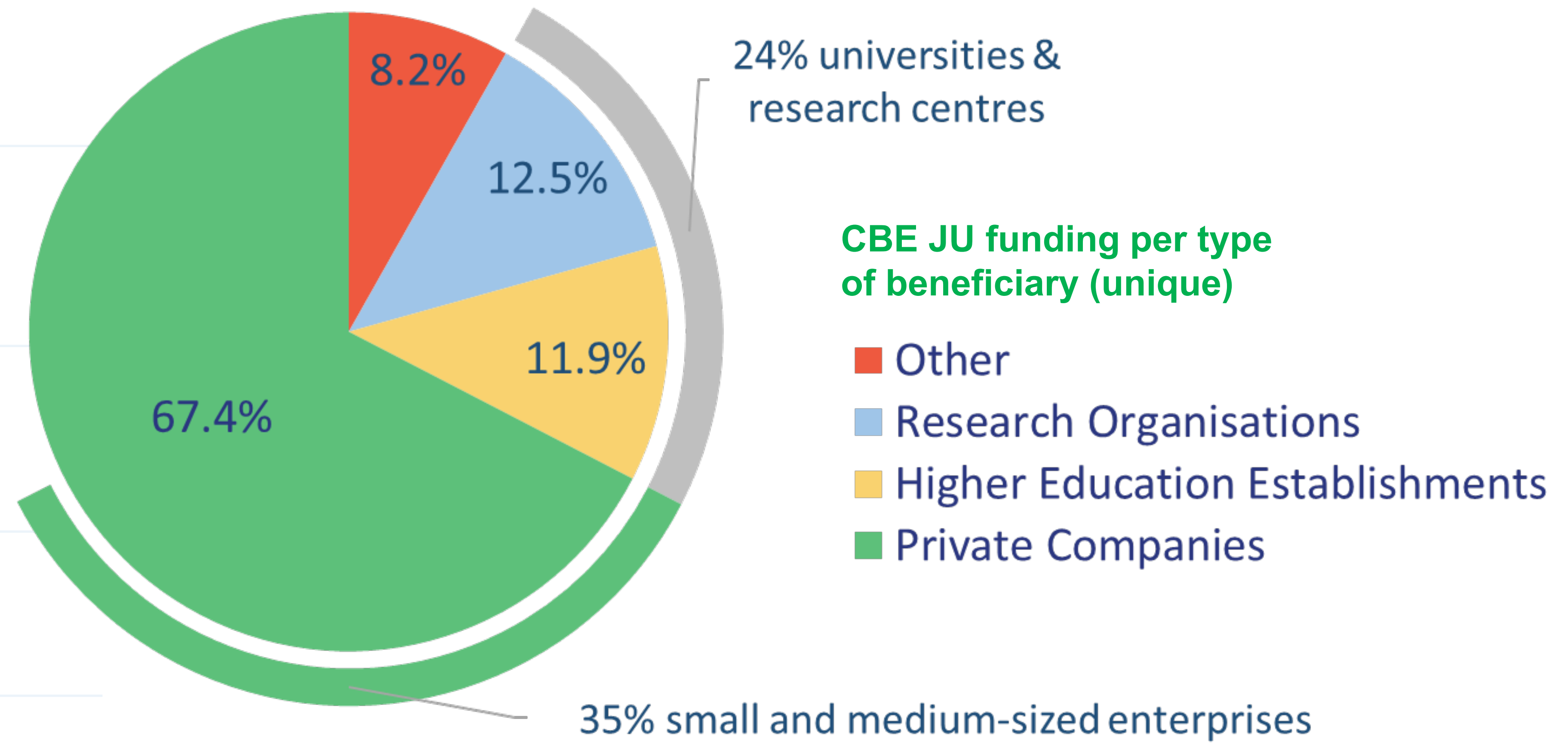
CBE JU portfolio 2014-2023

 **192**
projects

 **1,552**
beneficiaries

 **€1,117** million
CBE JU funding

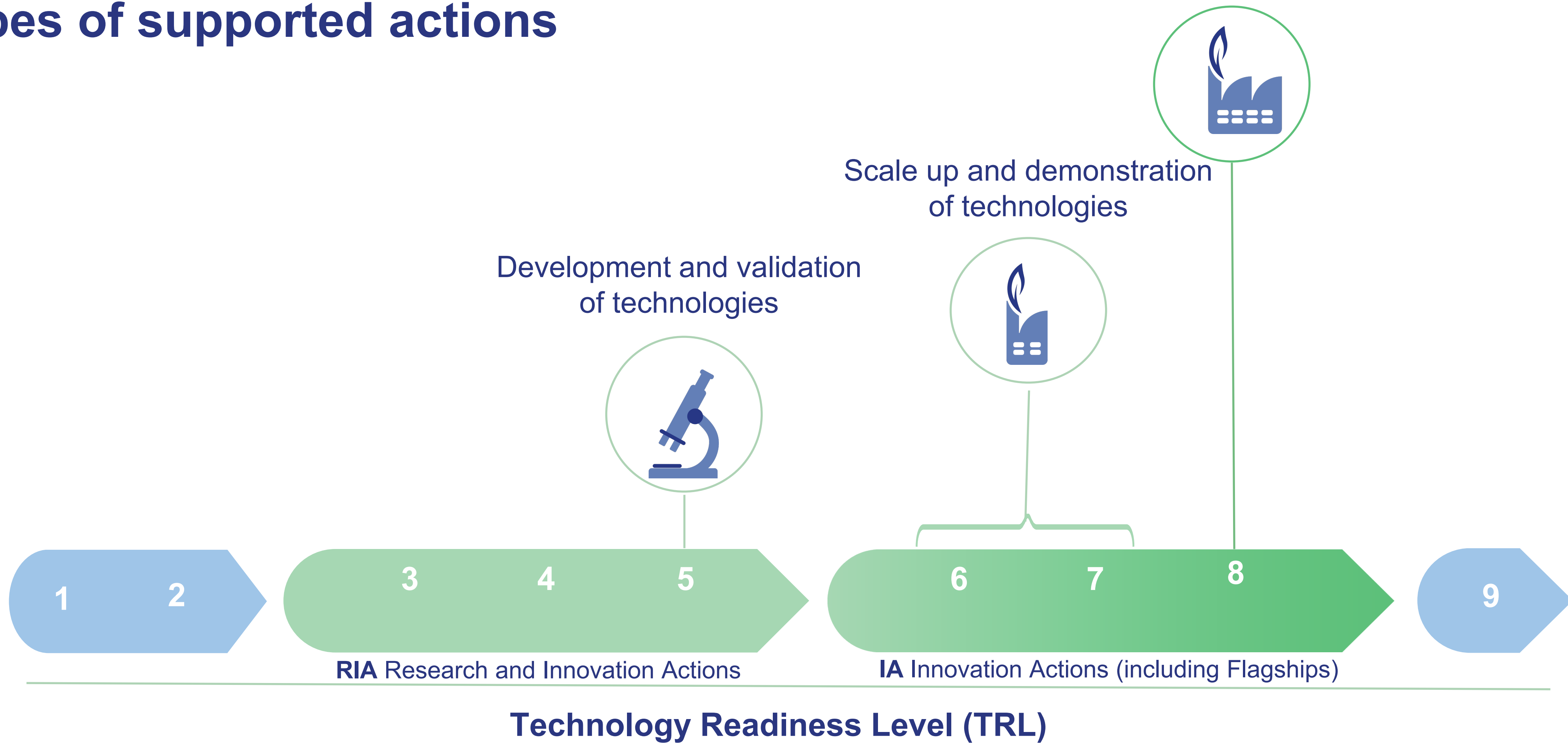
 **43**
countries



Data: CORDA, May 2024

Large-scale first-of-its-kind product facility in Europe

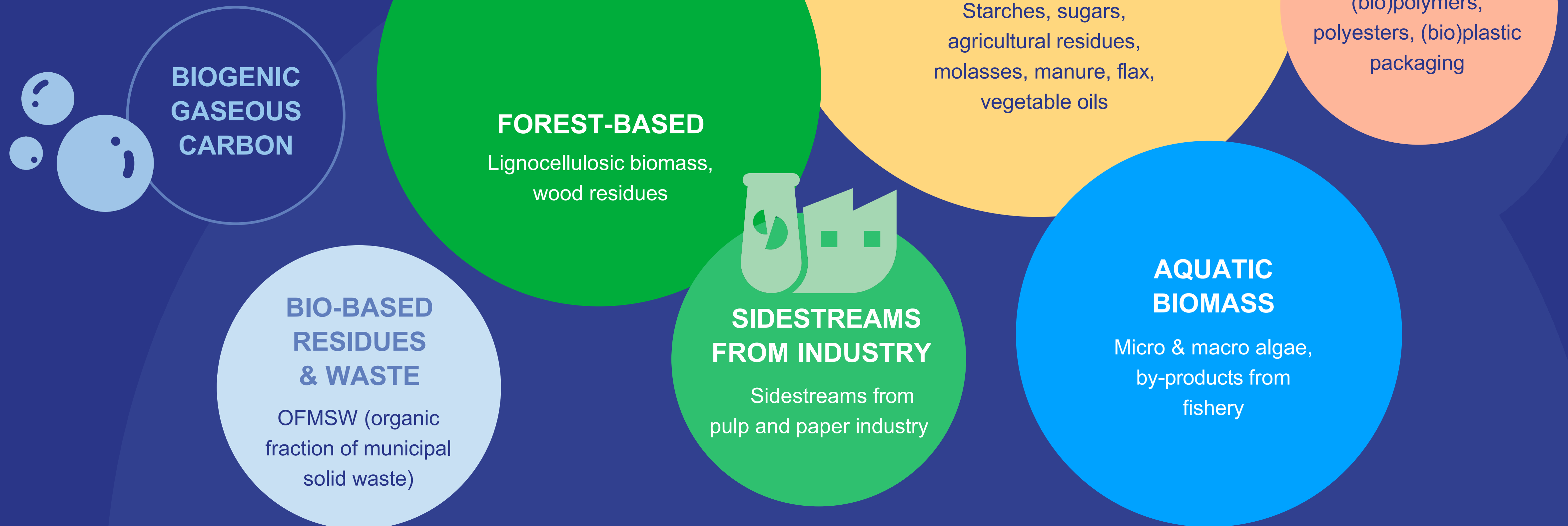
Types of supported actions



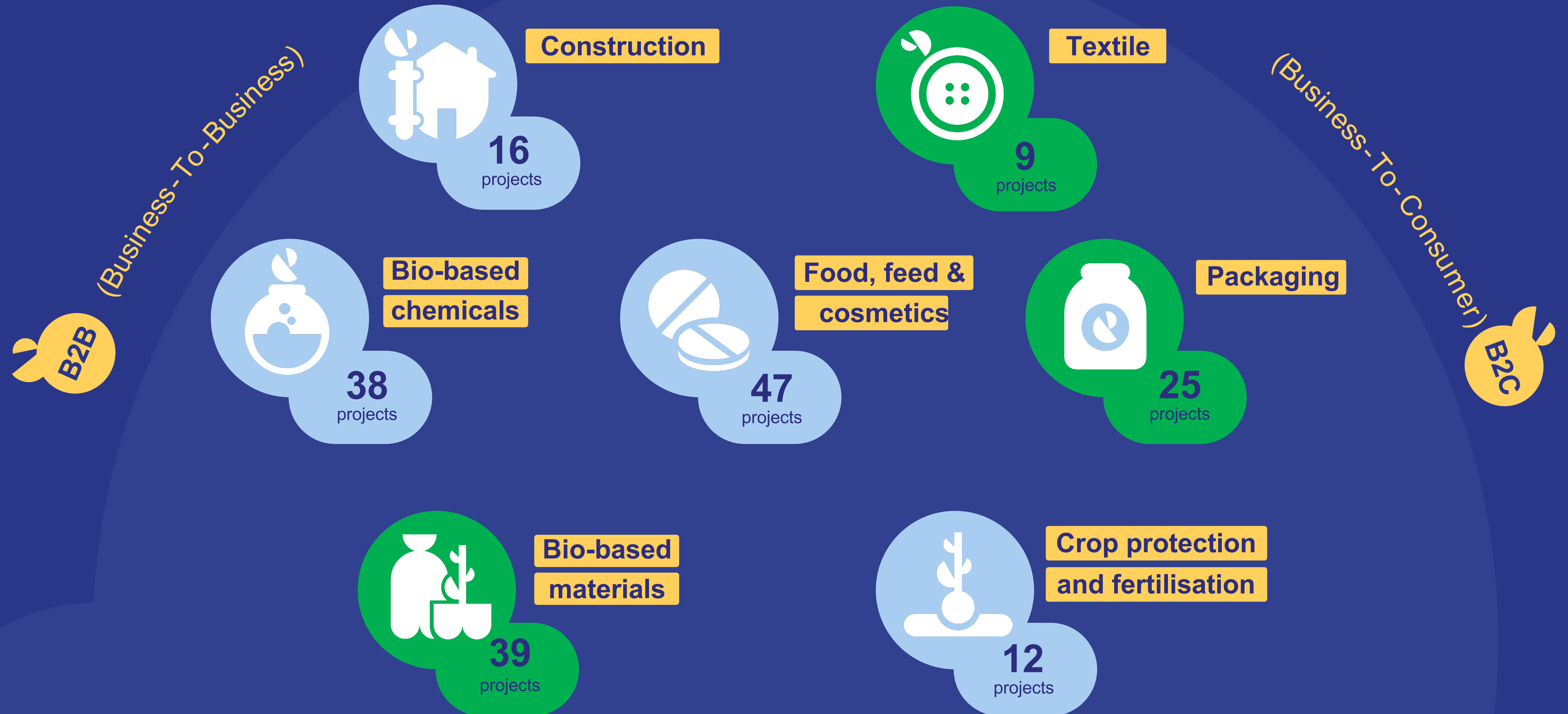
CSA: Coordination and Support Actions (no link with TRLs)

Main feedstock types

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



Areas of applications



Biobased polymers

(polyesters, polyamides, composites,..)

(Business-To-Business)



Food packaging



Non-food packaging



(Business-To-Consumer)



Composites for transportation and aerospace

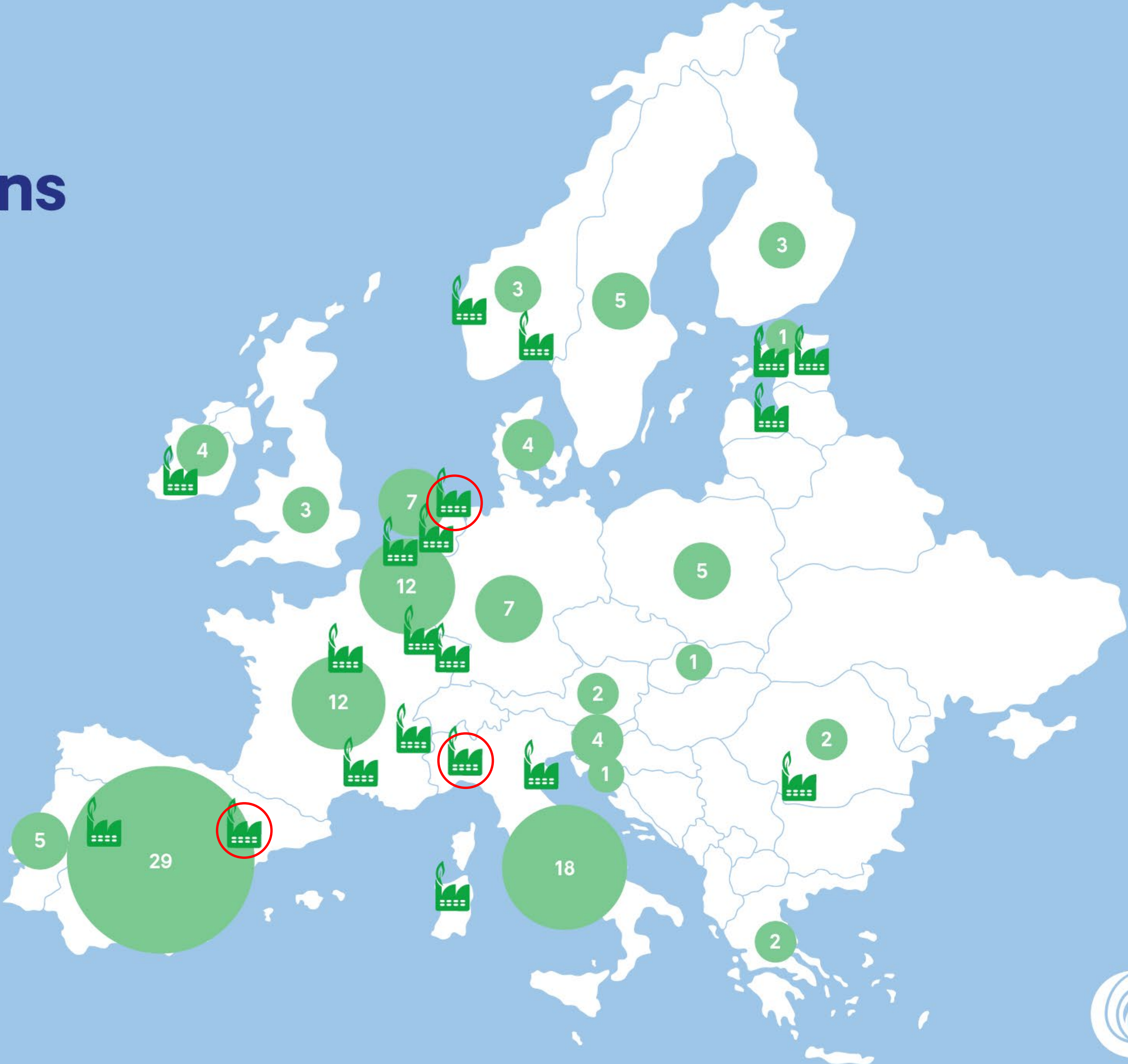
Geotextiles

Textile fibers

CBE JU-funded Innovation Actions

 Flagship biorefinery

 Demonstration plants



Number of plants per country

CBE JU funding

€25 million

Biorefinery location

 Delfzijl, the Netherlands

Coordinator

Avantium Chemicals BV,
the Netherlands

Project focus

 Packaging

 Textile

Modern human societies need plastic for a wide range of uses, calling for innovative solutions to cut the environmental pollution.

The PEference flagship project is establishing the first industrial-scale, cost-effective biorefinery producing FDCA, a bio-based chemical, to make high-value products.

The goal is to **replace a significant share of fossil-based plastics with 100% bio-based polyesters.** These can compete with traditional packaging products in price and performance when produced at scale. The resulting bio-based material is sustainable and completely recyclable.



CBE JU funding

€15 million

Biorefinery location

📍 Zaragoza, Spain & Sesto San Giovanni, Italy

Coordinator

Urbaser, Spain

Project focus

🌱 Bio-based polymers & plastics

Despite gigantic advances in waste recycling in recent decades, the organic fraction of municipal solid waste and sewage sludge are not recovered efficiently enough.

The CIRCULAR BIOCARBON flagship project is building two first-of-their-kind biorefineries converting waste into four value-added products and a range of other intermediate products.

The project's goal is to **open new business frameworks based on an innovative circular approach to urban waste treatment.** By doing so, the organic waste that currently goes to landfill and incineration will be reduced, it will also cut greenhouse gas emissions, notably methane and carbon dioxide.

Webpage: <https://circularbiocarbon.eu/>

CBE JU Info Day 2025



3 April, Brussels

Register now!

#CBEInfoDay



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Bio-based
Europe**
Joint Undertaking

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