



Circular
Bio-based
Europe

Joint Undertaking

Driving innovation in the EU Bioeconomy and the Biotechnology Sector

Ana RUIZ

Programme Officer

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What is CBE JU?

- CBE JU drives innovation in the Bioeconomy and Biotech sectors
- CBE JU funds projects that deliver bio-based solutions – materials and products made from renewable resources (e.g. waste and biomass) – in an innovative, sustainable, and circular way

cbe.europa.eu



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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

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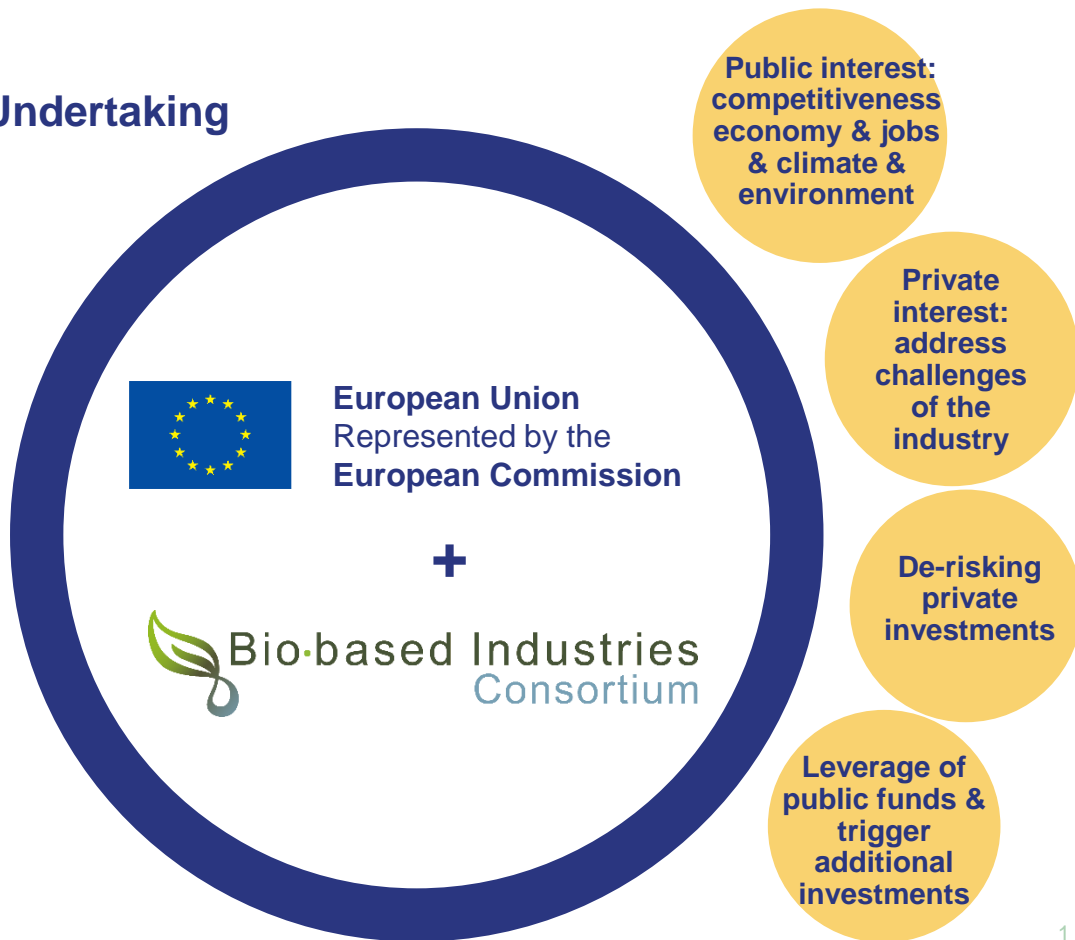


Co-funded by the European Union

Launched in 2021, operates until 2031

Successor of BBI JU (2014-2021)

€2 billion public-private initiative



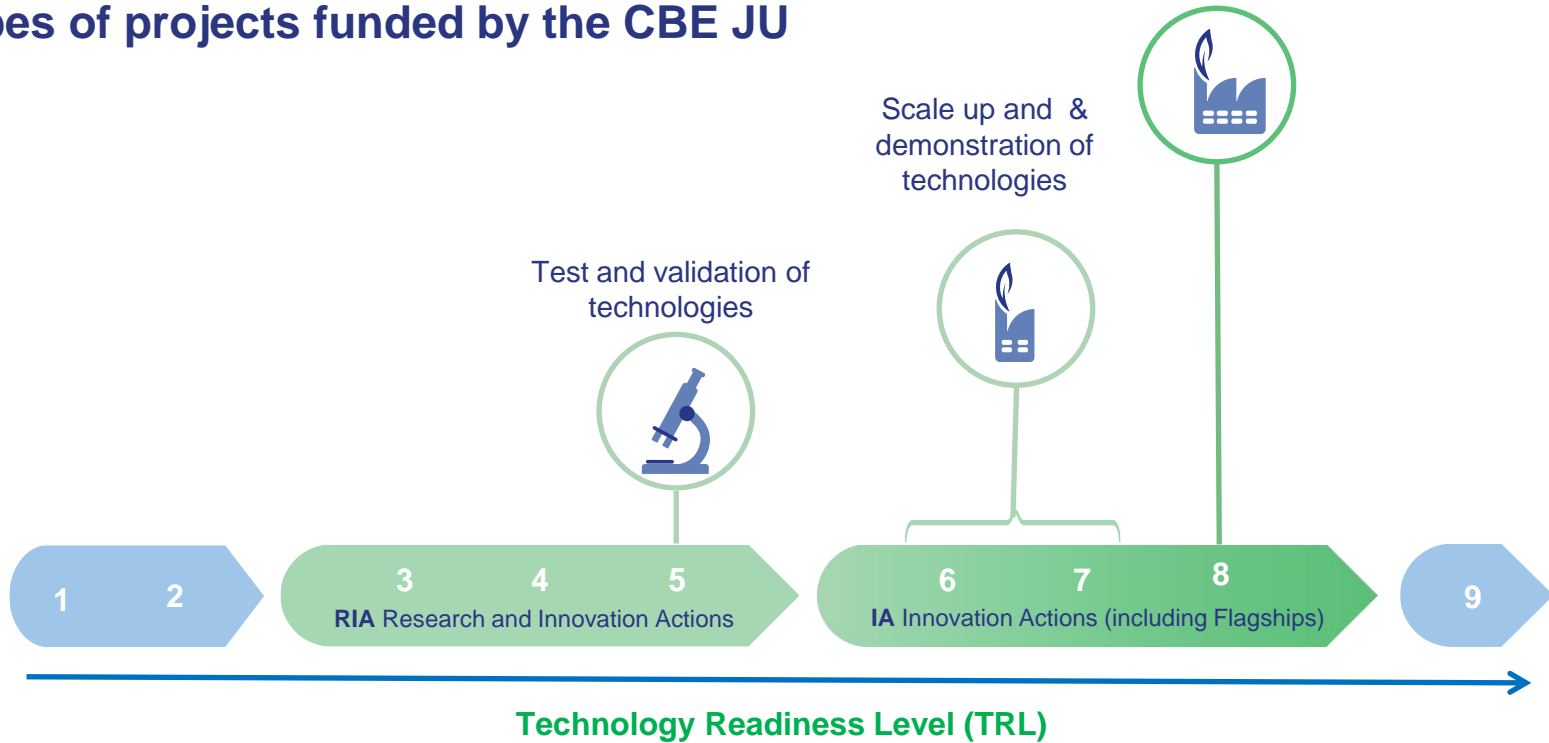
CBE JU Strategic Research & Innovation Agenda

- Identifies the main **technological & innovation challenges** to be addressed in the circular bio-based economy
- Outlines the **research, demonstration & deployment activities** that CBE JU should support in the 2021-2031 period
- Co-drafted by the founding partners of CBE JU
- Basis for the multi-annual work plan of CBE JU → **Calls for proposals**



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

Types of projects funded by the CBE JU



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

CBE JU is a central pillar in establishing Europe's bio-based sector as a global leader

192 projects

35% SMEs

1,550 beneficiaries

25% universities & research centres

For every euro of CBE JU funding the programme attracts €3.23 in private investment

from 43 countries

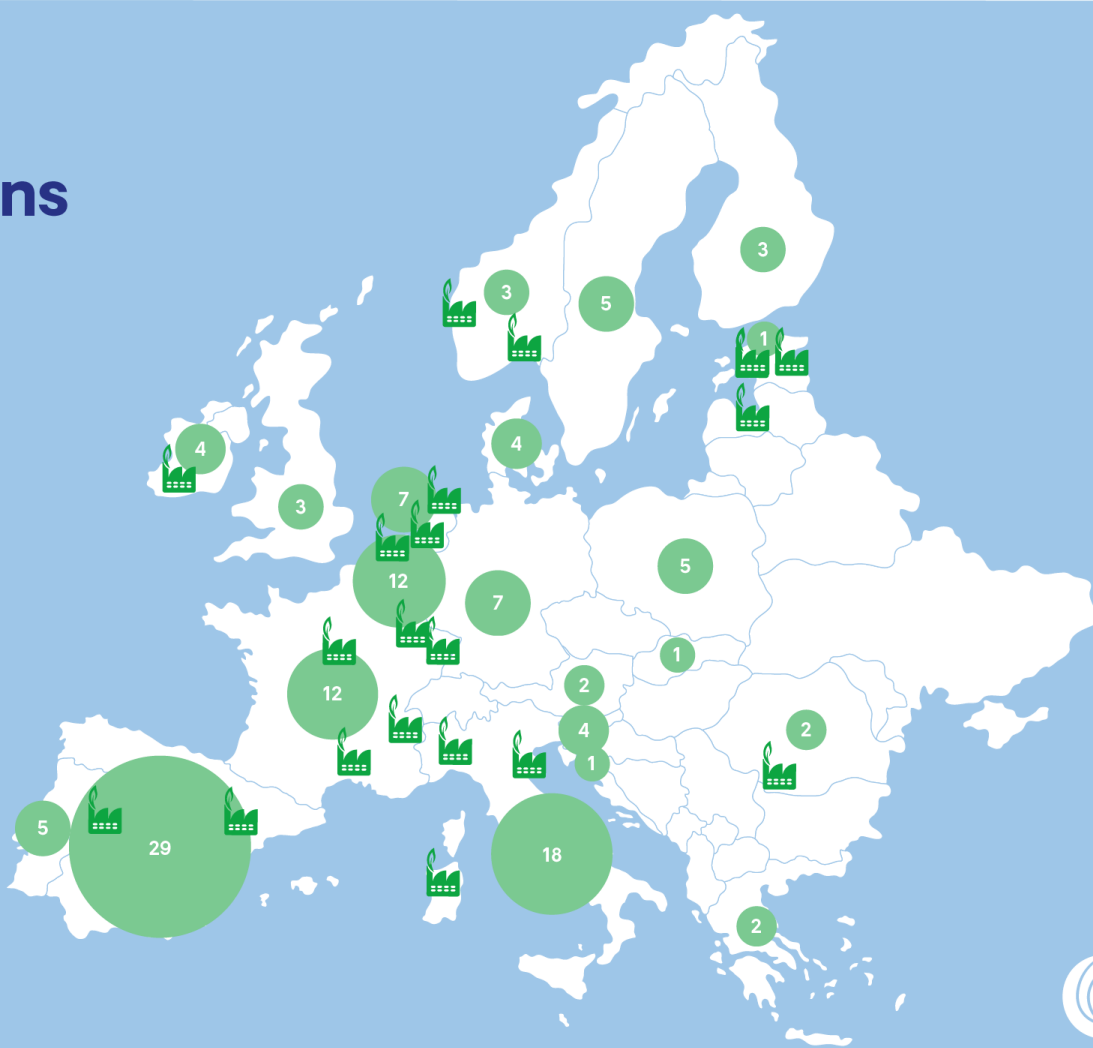


CBE JU's key highlights (May, 2024)

CBE JU-funded Innovation Actions

 Flagship biorefinery

 Demonstration plants



Number of plants per country

CBE JU flagship projects



Flagship
biorefinery

PROTEUS

1

Avaldsnes
Norway



2

Sarpsborg
Norway



3

Imavere
Estonia

WOODCELL

4

Imavere
Estonia



VIOBOND

5

Riga
Latvia



6

Co. Tipperary
Ireland

PLENITUDE

7

Sas van Gent
The Netherlands

CIRCLE

8

Amsterdam
The Netherlands



9

Delfzijl
The Netherlands



10

Amiens
France



11

Saint-Avoid
France



12

Saint-Avoid
France



13

Hervás
Spain



14

Zaragoza & Sesto
San Giovanni
Spain & Italy



15

Baillargues
France



16

Le Péage-de-Roussillon
France



17

Porto Torres
Italy



18

Bottrighe
Italy



19

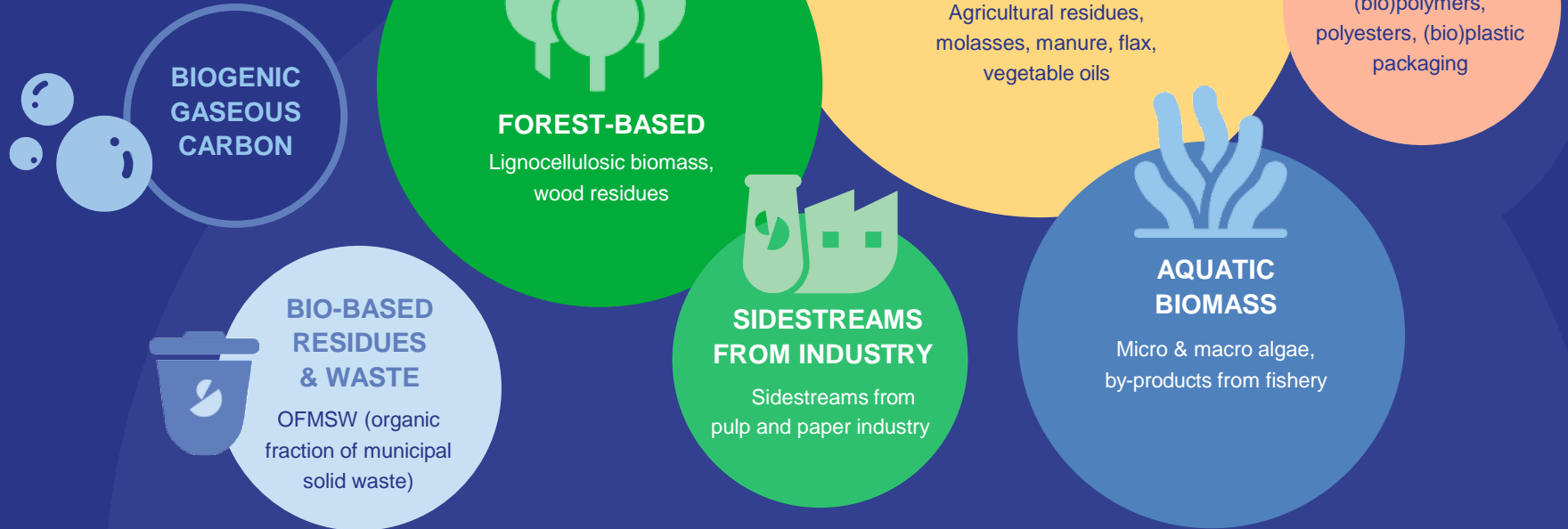
Podari
Romania



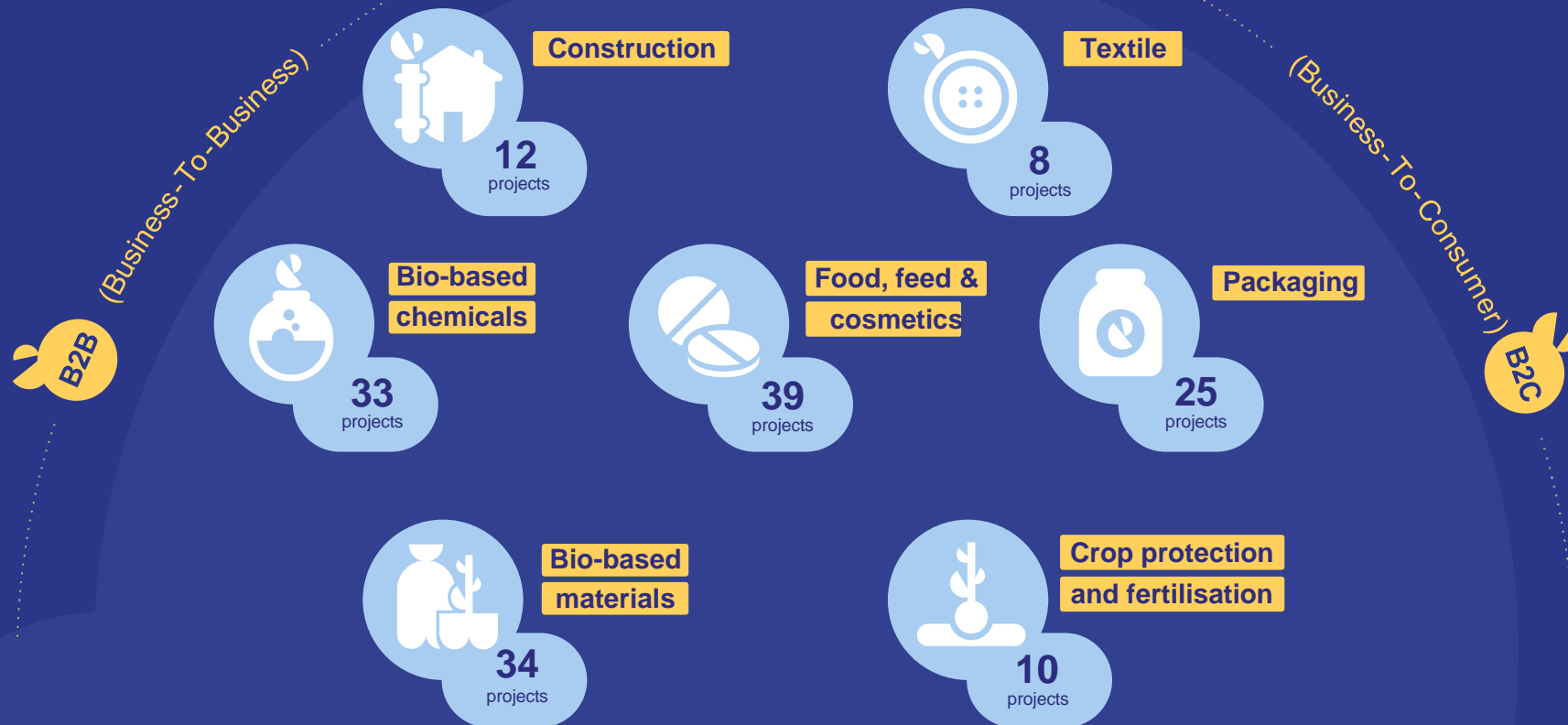
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Main feedstock types

Cascading transformation of sustainably-sourced biological feedstock like waste, residues and sidestreams.



Areas of applications



Biotechnology at the core of CBE JU projects

Enzymatic hydrolysis, anaerobic digestion, microbial fermentation, microbial biomass production, metabolic engineering, bioprocess engineering, synthetic biology, etc.





Industrial biotech



Agricultural biotech



Marine biotech



Environmental biotech

- Microorganisms, bacteria, insects, etc. used to convert biomass, in sugars and other intermediate products into chemicals
 - PHAs, bio-based plastics production
 - Optimization of microbial consortia for enhanced biomass degradation and conversion efficiency
 - Engineering of enzymes to improve specificity and activity.
-
- Bio-based fertilisers encapsulated with microbial biostimulants
 - Bio-control agents, plant elicitors for crop protection
-
- ✓ Microalgae/aquatic bacteria to produce high-value products (bioactive for feed, food, cosmetics, etc.) and valorise co-products
-
- Biogenic CO₂ capture and used as feedstock
 - Plastic degradation and recycling

Independent study confirms CBE JU's strategic role in green economic growth

The recently published evaluation report commissioned by the European Commission on the CBE JU highlights the partnership's pivotal role in advancing Europe's green transition under the Horizon Europe framework.

[Read more](#) ▶



Circular Bio-based Europe Joint Undertaking

CBE JU is a €2 billion partnership between the **European Union** and the **Bio-based Industries Consortium (BIC)** that funds projects advancing competitive circular bio-based industries under Horizon Europe, the EU's research and innovation programme. CBE JU is the legal and universal successor of BBI JU.

Thank you very much
for your attention





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Contact us

info@cbe.europa.eu
www.cbe.europa.eu

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