



VII CICLO DE
**ECONOMÍA
CIRCULAR**

**BIOECONOMÍA SOSTENIBLE
Y COMPETITIVA**

23 de SEPTIEMBRE 2026

BIOECONOMÍA: MOTOR DE INNOVACIÓN Y EMPLEO

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Circular
Bio-based
Europe
Joint Undertaking

A competitive bioeconomy for a sustainable future



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 general objectives



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



Accelerate **market deployment** of the existing mature and innovative biobased solutions



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

CBE JU specific objectives



Increase the intensity of **cross-disciplinary** research and innovation activities for the development and demonstration of sustainable bio-based solutions



Increase and integrate the **R&I capacity of stakeholders across the European Union** to exploit the local bioeconomy potential



Increase the R&I capacity for addressing **environmental challenges** and **developing more sustainable bio-based innovations**



Reinforce the **integration** of bio-based R&I processes in EU industrial value chains



Reduce R&I investment risk in bio-based companies and projects



Ensure that **environmental considerations** are taken into account in the development & implementation of R&I bio-based projects

From call to project



Call for proposals



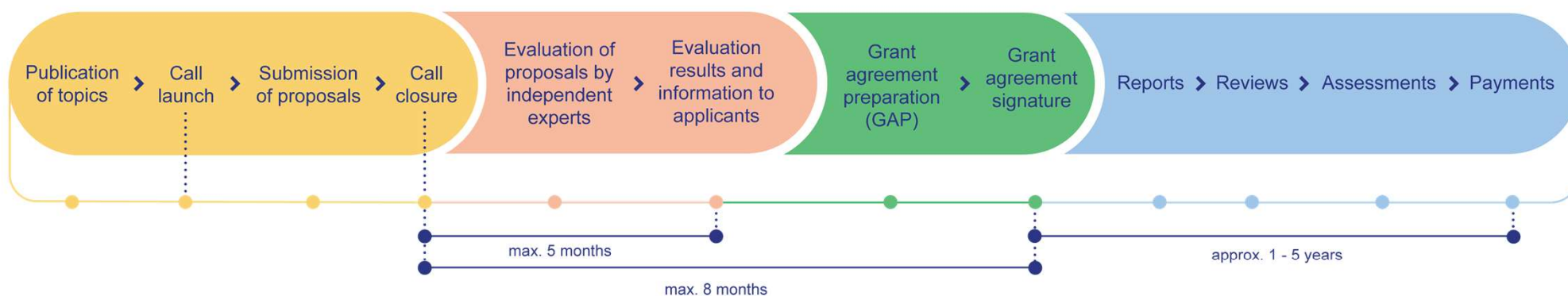
Evaluation



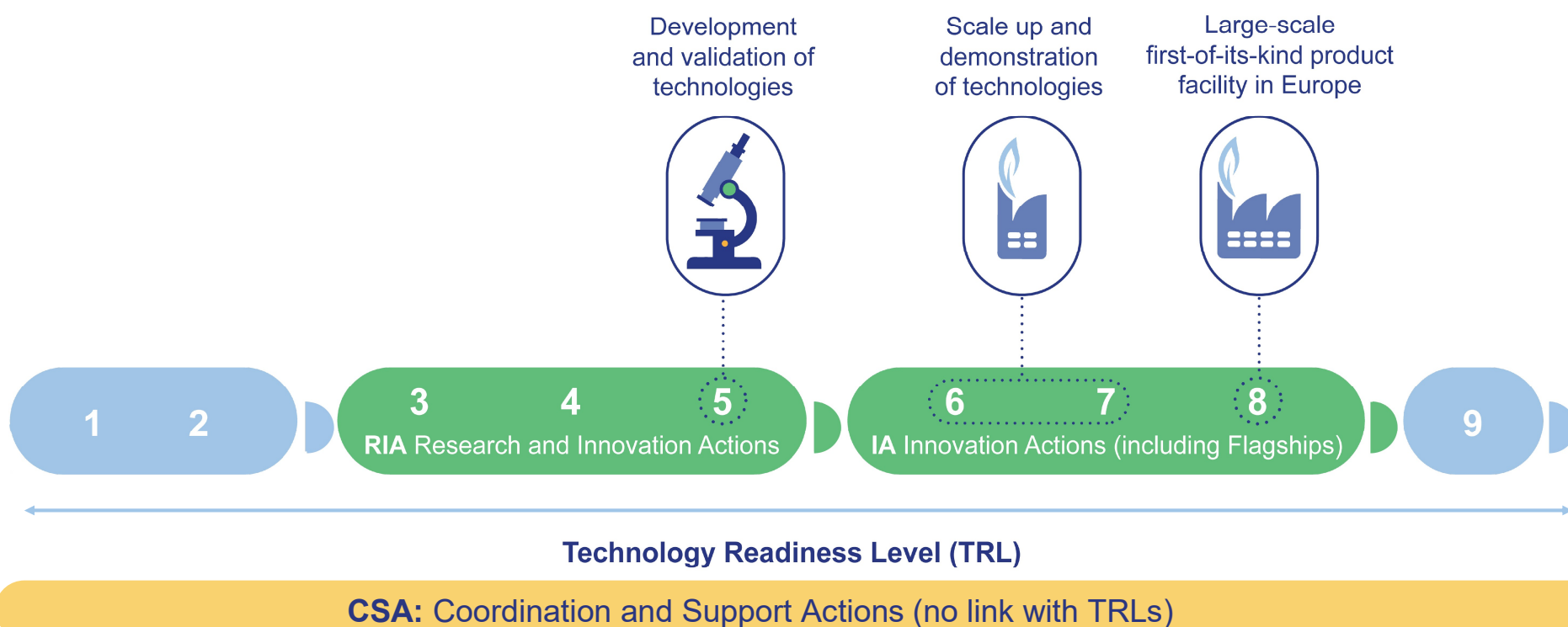
Grant agreement



Project management



Types of supported actions



CBE JU-funded projects in numbers

2014-2026

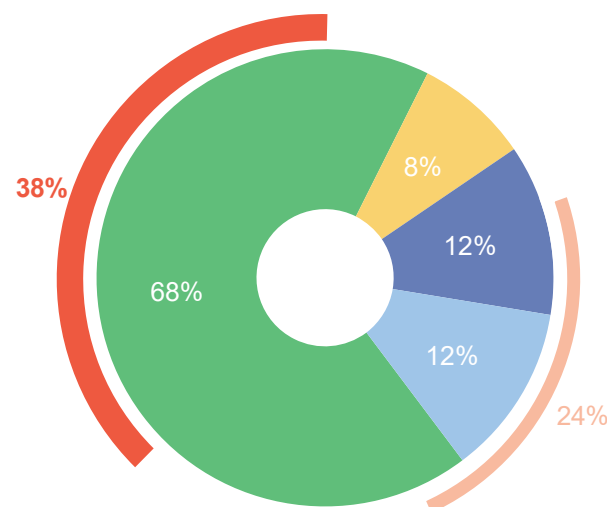
 **243**
projects

 **1,860**
participants

 **1.44 billion**
invested in projects

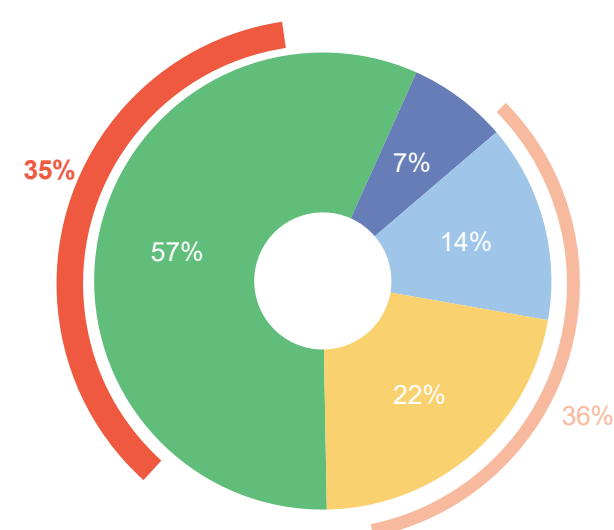
 **46**
countries

Participants



● Higher education establishments
 ● Private companies
 ● Research centres
 ● Other

Funding



— Small and medium-sized enterprises
 — Universities & research centres

Data: CORDA, May 2026

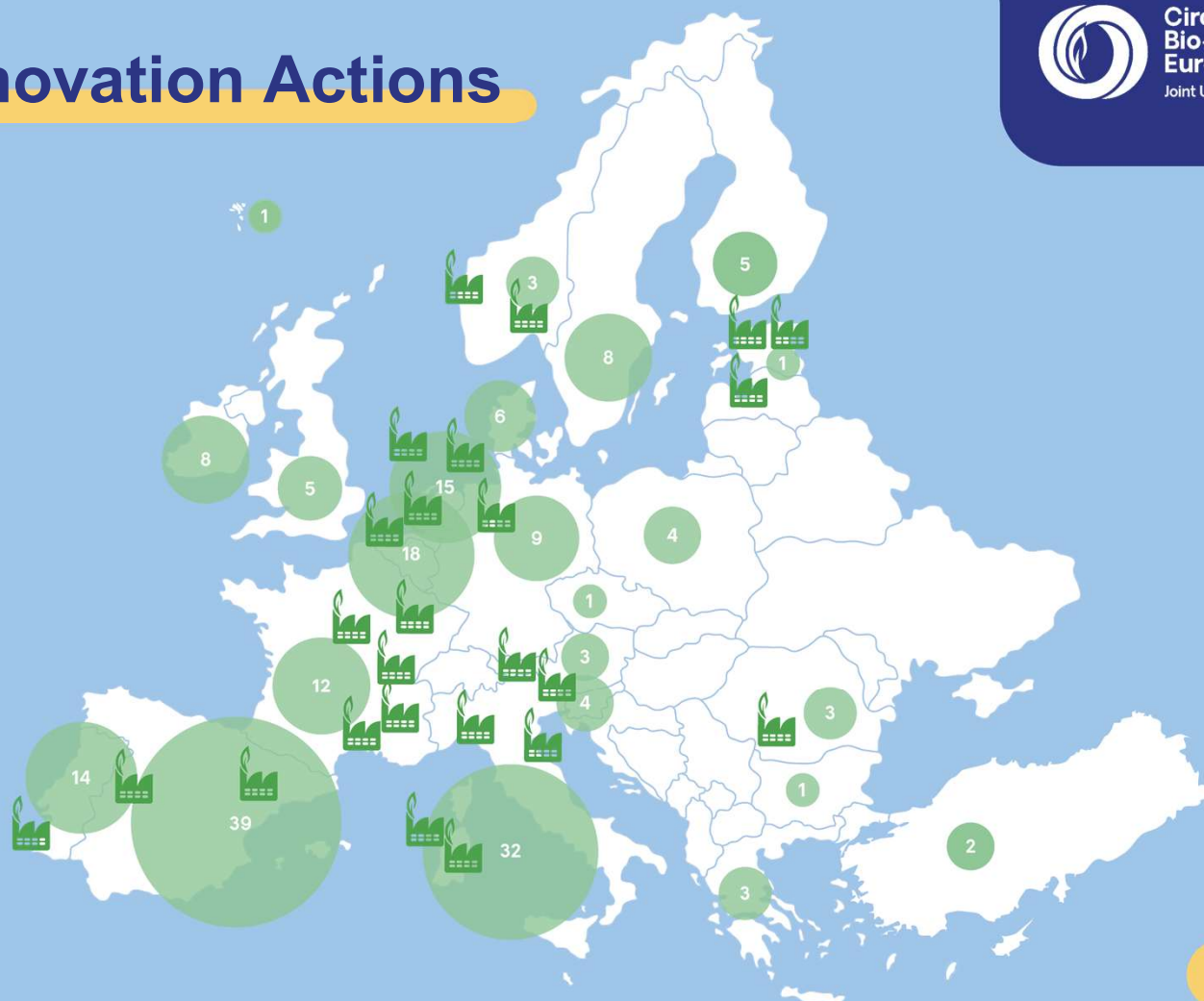
CBE JU-funded Innovation Actions

2014-2026

-  Flagship biorefinery
-  Demonstration plants



Number of projects per country

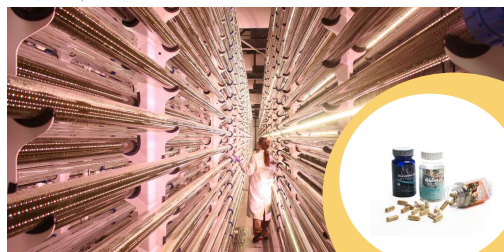


Empowering small businesses across Europe

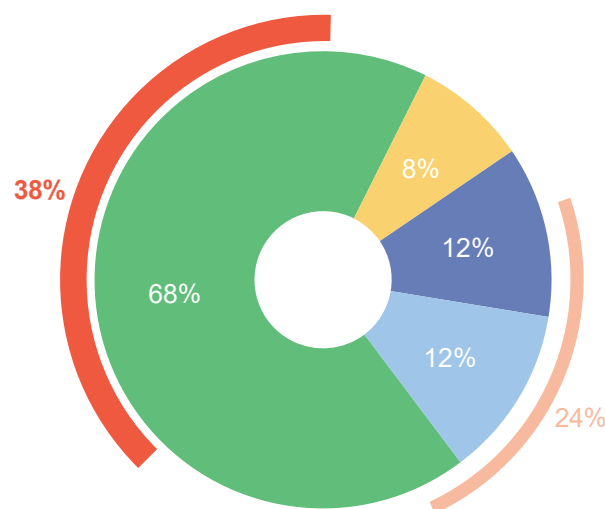
SustainNext



scale



Participants

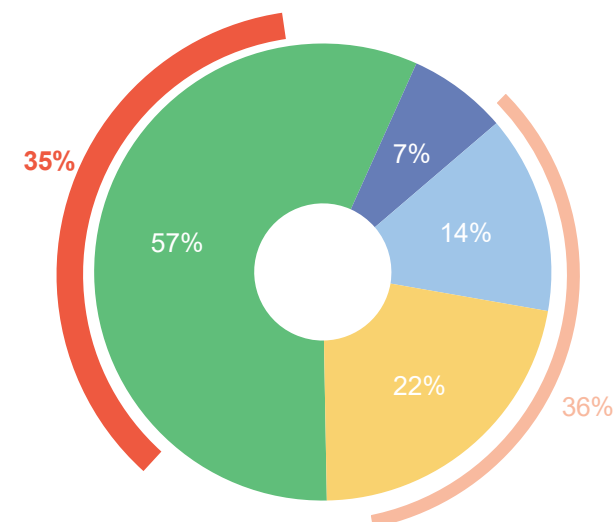


Higher education establishments
Research centres

Private companies
Other

Data: CORDA, May 2026

Funding



Small and medium-sized enterprises
Universities & research centres

Driving investments in bio-based innovation

2014-2025



243
projects

€1 EU funding



1.44 billion
invested in projects

€3.5 private
investments



Bio-based Industries
Consortium

350+

associated members

400+

industry members



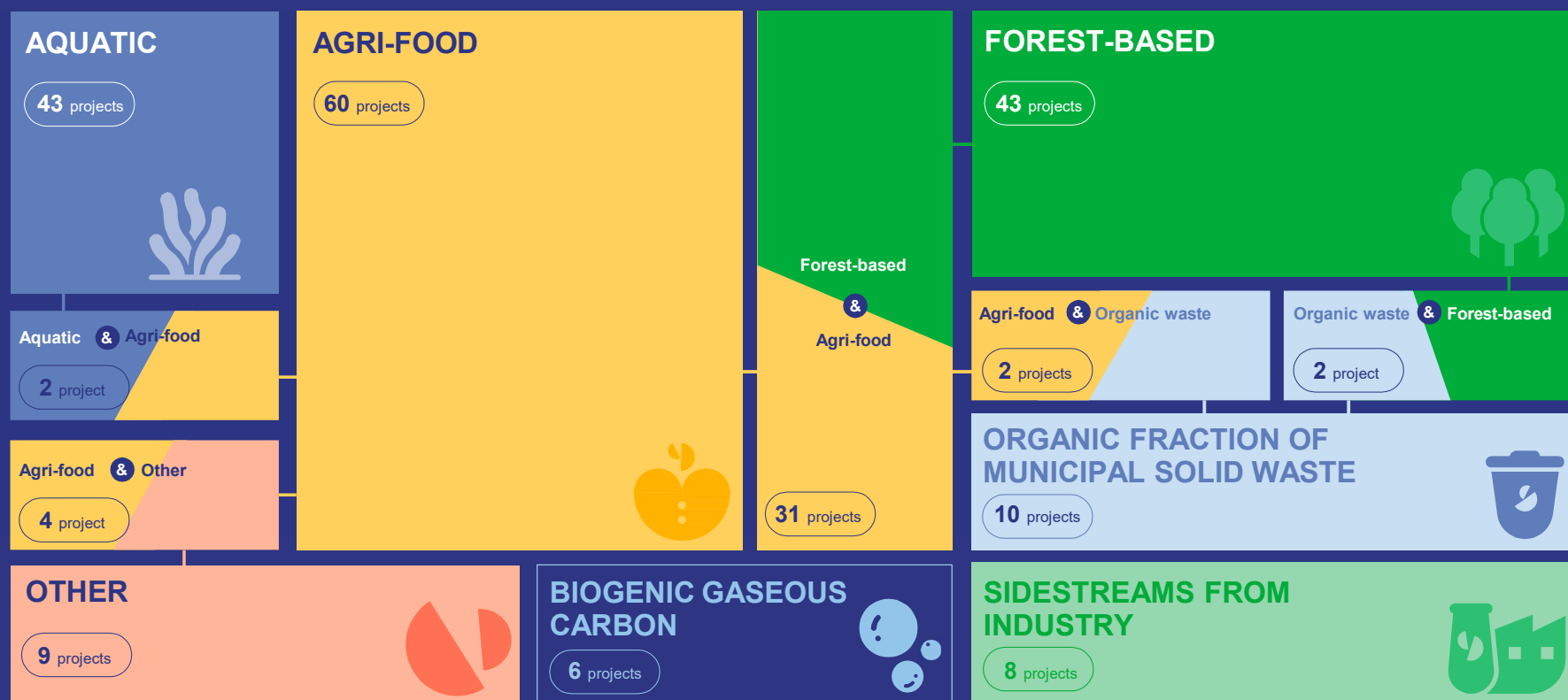
€109 million

Italian government investment

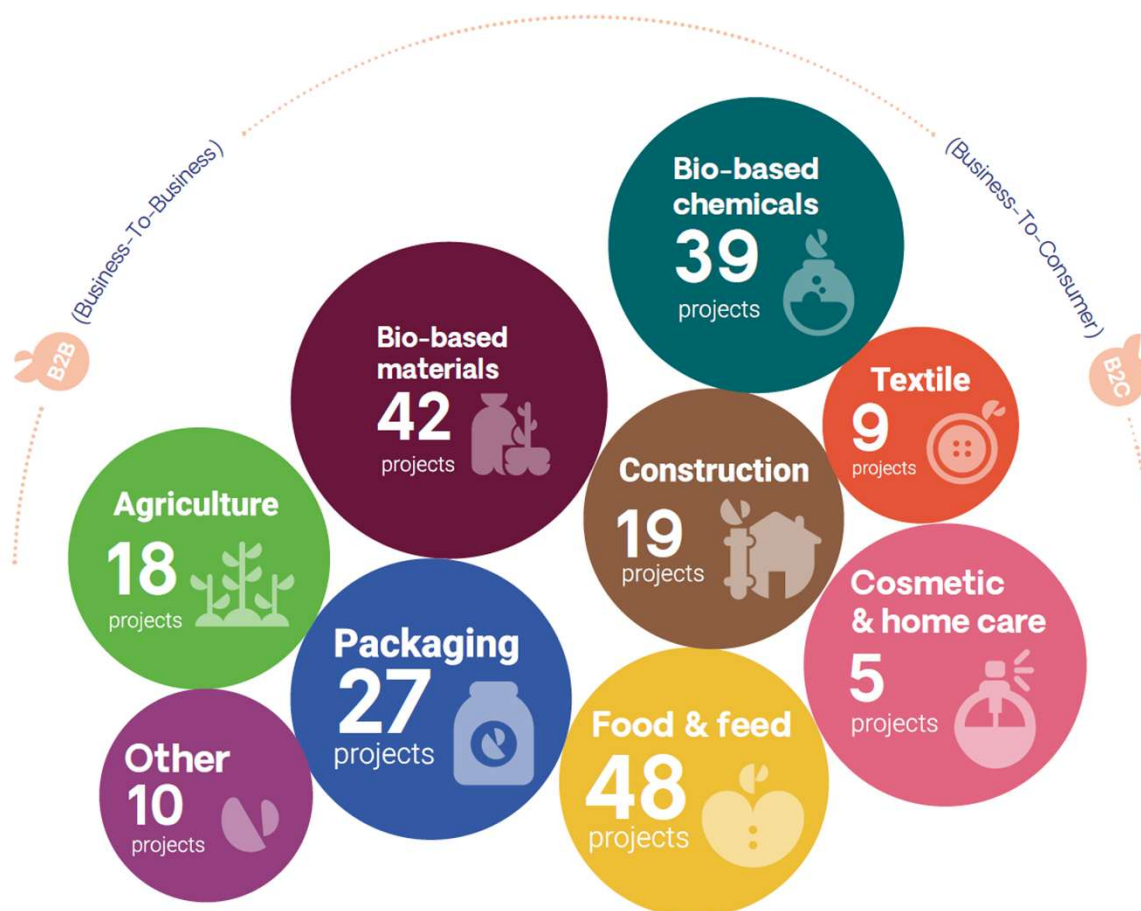
11 plants
across the country



Main feedstock types



CBE JU projects: Main areas of application



Reviving rural economies

- New income streams for farmers, foresters & fishers
- New skilled jobs in rural, coastal and de-industrialised regions
- Strong local value chains & generational renewal

AFTER | BIOCHEM

- Works with **sugar beet farmers** in northern France to convert sugar beet residues into **7 bio-based organic acids** for food, fragrances, hygiene products and polymers
- **80 direct & 200 indirect local jobs**
- Estimated annual **CO₂ reduction: 30,000 tonnes**

Rural BioReFarmeries

- Supports **European grassland farmers** by helping them establish small-scale, decentralised green biorefineries
- **Extract proteins** and other high-value compounds from grass and other non-food crops

Boosting EU's strategic autonomy



CBE JU helps building European supply chains for materials and chemicals to reduce strategic vulnerabilities.



**DEEP
PURPLE**



Self-healing concrete derived from sewage and waste

PLENITUDE



Mycoprotein from European agricultural residues, using fermentation, for meat, fish & dairy alternatives

Innovation that reaches the market



Commercial products



Operating plants



Market entries



- Ecover cleaning products from food waste



- Bio-based solutions for packaging (Dior)
- Beer, juice, wine bottles (Carlsberg, Hoogesteger)
- Spacer fabric (Auping mattresses)





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.

Supporting EU objectives



CBE JU:

- ✓ Advances the European bio-based sector
- ✓ Decarbonises European industries
- ✓ Creates new European industrial value chains
- ✓ Reduces imports by developing European alternative proteins
- ✓ Enables SMEs to scale with access to infrastructure and funding
- ✓ Pioneers industrial-scale solutions for algae and aquaculture
- ✓ Offers new revenue streams for farmers, provides solutions for sustainable agriculture
- ✓ Strengthens EU biomanufacturing capacity

- ▶ EU Bioeconomy Strategy
- ▶ Clean Industrial Deal
- ▶ EU Competitiveness Compass
- ▶ EU Protein Strategy
- ▶ EU Startup & Scaleup Strategy
- ▶ European Ocean Pact
- ▶ Vision for Agriculture and Food
- ▶ Life Sciences Strategy

Next: addressing the sector's challenges

CBE JU stakeholders' view:

- Scaling is the main challenge
- Regulation must enable markets
- Access to finance across all stages is critical
- Strong value chains and collaboration are key
- Market creation and competitiveness need urgent attention
- Accelerating the transition from demonstration to market deployment



Participate to the open public consultation! (by Oct. 16)

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/16413-Horizon-Europe-European-Partnerships-to-be-implemented-as-joint-undertakings/public-consultation_en



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Joint Undertaking

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Consortium**



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the European Union



AFTER | BIOCHEM

CBE JU funding

€20 million

Biorefinery location

📍 Saint-Avold, France

Coordinator

AFYREN NEOXY, France

Project focus

🌱 Bio-based chemicals

The EU is the world's largest producer of sugar beet. The sector currently supports 140,000 sugar beet growers and around 27,000 direct jobs in sugar beet processing.

The AFTERBIOCHEM project is building the first all-in-one biorefinery for transforming the sugar industry's sidestreams – mainly pulp and non-food waste – into bio-based molecules of industrial interest.

This will increase the economic and environmental sustainability of the sugar beet industry. In addition, the process will be flexible enough to adapt to alternative feedstocks in the future.



CBE JU funding

€25 million

Biorefinery location

 Delfzijl, the Netherlands

Coordinator

Avantium Chemicals BV,
the Netherlands

Project focus

 Packaging

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
€14.3 million

Biorefinery location
📍 Baillargues, France

Coordinator
Microphyt, France

Project focus
🌱 Food & feed
🔍 Cosmetics & personal care

What if we could grow renewable resources in very reduced space to free soil for agriculture and forests? What if we could even capture CO₂ from the atmosphere to feed this resource?

The SCALE project strives to build and operate the world's first fully integrated microalgae biorefinery to produce natural active ingredients of high nutritional value for the food, food supplements, feed, and cosmetics sectors.

Led by a French small business, this project aims to **reduce the dependency on fossil-based resources**, replacing them with bio-based alternatives.



CBE JU funding

€14 million

Biorefinery location

 Hervás, Spain

Coordinator

Natac Biotech, Spain

Project focus

 Food & feed

How to put in practice a zero-waste and circular-by-design industrial process in a rural region in Europe?

SUSTAINEXT is up to the challenge in Extremadura, Spain. The project is turning an existing production plant into a digitalised circular biorefinery to produce healthy plant-based ingredients from local medicinal and aromatic plants, and agricultural sidestreams.

This will generate value and new jobs for the region, showing **the positive impact of pursuing the European Green Deal** objectives. The project's model is easily adaptable and replicable and can run on renewable energy.



CBE JU funding

€20 million

Biorefinery location

📍 Péage de Roussillon,
France

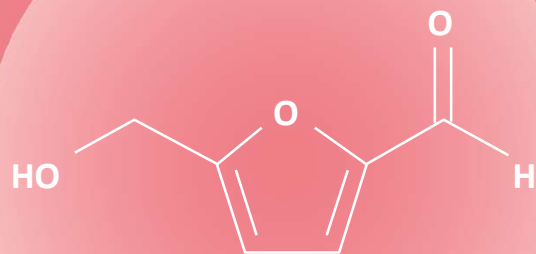
Coordinator

Michelin Engineered
Polymers, Clermont-Ferrand,
France

Project focus



Bio-based
chemicals



5-HMF

Fructose from food sidestreams has often been overlooked as a valuable resource. Traditionally, such by-products have had limited applications, contributing little to sustainable industry.

The CERISEA project offers a breakthrough by developing the first industrial-scale process to produce **5-HMF**, a key bio-based chemical platform. Derived from fructose and advanced fructose from non-food sidestreams, 5-HMF has the potential to replace various conventional petrochemical building blocks, providing versatile applications across biopolymers, crop science, functionalised resins, and plasticisers, and offering a sustainable alternative to harmful petrochemical derivatives.



SWEETWOODS

CBE JU funding

€21 million

Biorefinery location

Imavere, Estonia

Coordinator

Fibinol OU, Estonia

Project focus



Bio-based
chemicals



Construction
materials and
products

Lubricants, adhesives, and plastics are extremely useful materials, but they are made of fossil-based raw materials, contributing to global warming and pollution.

SWEETWOODS is building a first-of-its-kind, highly efficient, reduced environmental impact industrial biorefinery to obtain high-value compounds using hardwood waste as a raw material.

The biorefinery is spurring the creation of a **new industry and innovation hub** in Estonia focused on forestry-based chemicals and materials.



Circular
Bio-based
Europe
Joint Undertaking