

Circular Bio-Based Europe JU: supporting innovation of sustainable bio-based materials and products

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Project Officer

Brussels, 24/04/2024



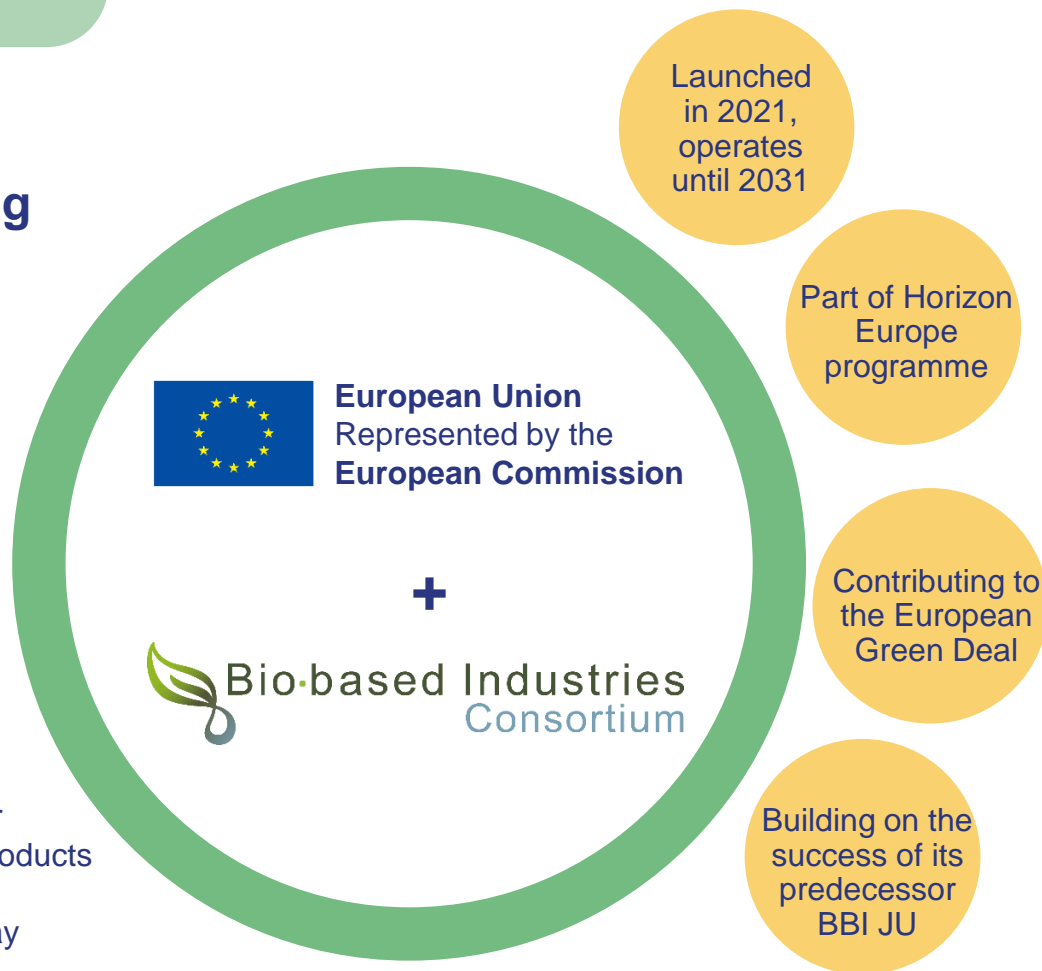
Introduction to CBE JU

01

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 general objectives



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

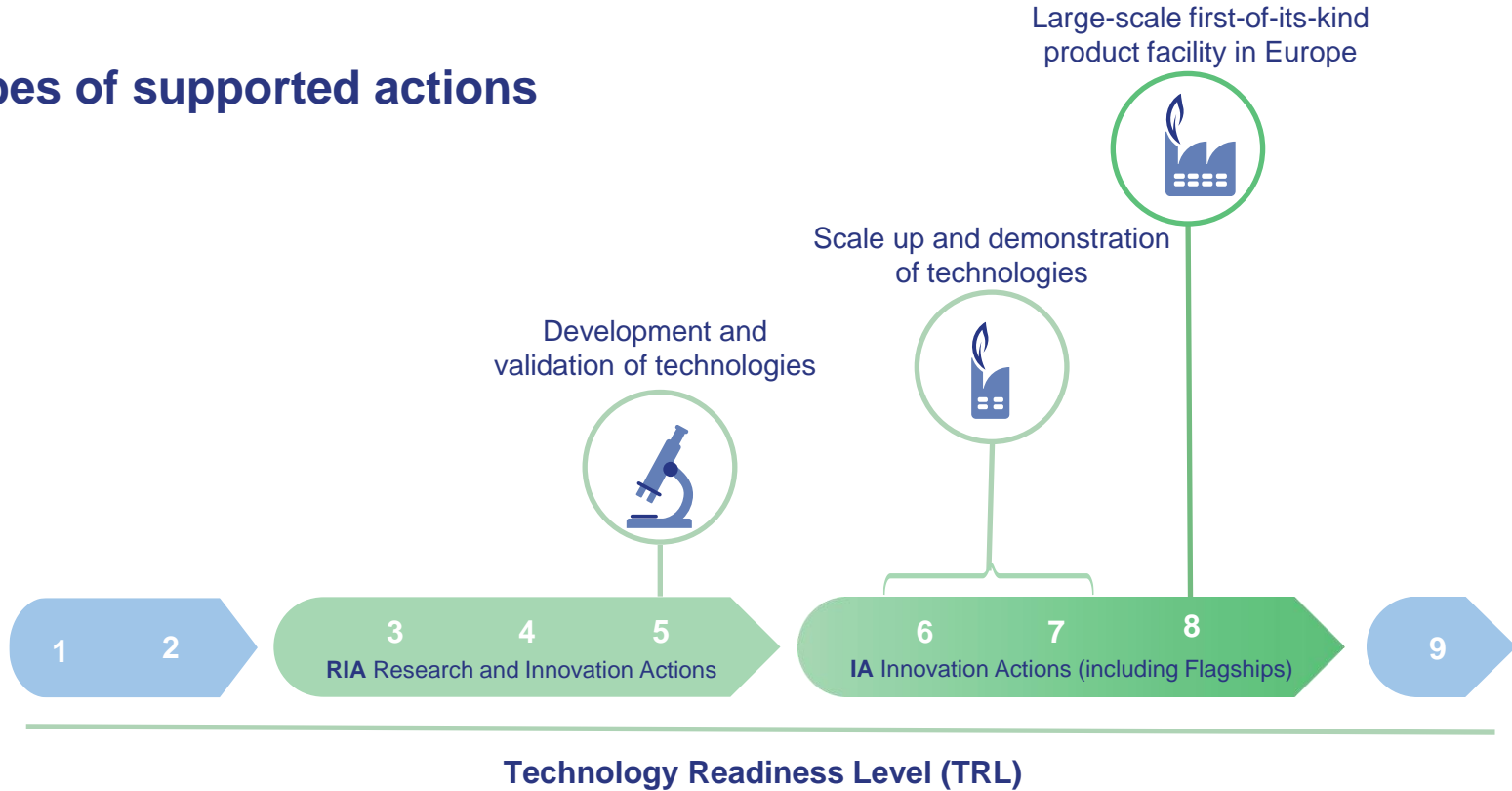


Accelerate **market deployment** of the existing mature bio-based innovative solutions



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

Types of supported actions



2014-2022 (excl. 30 Call 2023 projects)



163
projects



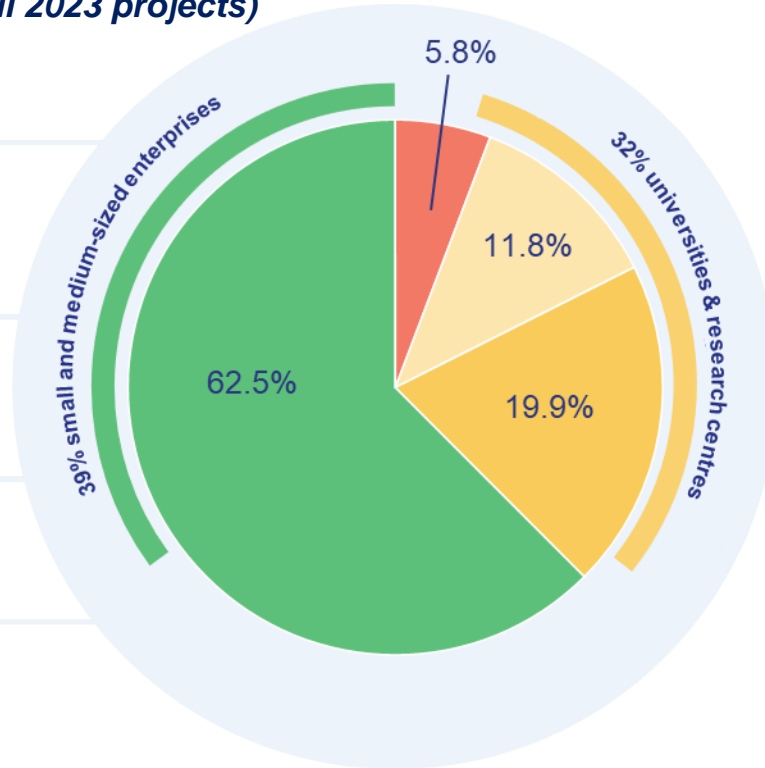
1,198
beneficiaries



€937 million
CBE JU
funding



39
countries



CBE JU funding per type of beneficiary (unique)

- Private companies
- Research organizations
- Higher education establishments
- Other

Data: CORDA, May 2023

CBE JU flagship projects



PLENITUDE, the Netherlands



EXILVA, Norway



SWEETWOODS, Estonia



FARMYNG, France



AFTERBIOCHEM, France



LIGNOFLAG, Romania



CIRCULAR-BIOCARBON, Spain & Italy



FIRST2RUN, Italy



CBE JU supporting
innovation of new bio-
based materials and
products

02

CBE JU specific KPIs

- 1 Strategic participation and integration of feedstock producers and suppliers towards large-scale valorisation of sustainable biomass
- 2 Unlock sustainable and circular bio-based feedstock for the industry
- 3 Ensure environmental sustainability of feedstock
- 4 Improve environmental sustainability of bio-based production processes and value chains
- 5 Expand circularity in bio-based value chains
- 6 Increase innovative bio-based outputs and products
- 7 Improve the market uptake of bio-based products
- 8 Attract investment on the bio-based sector
- 9 Increase resilience and capacity in the bio-based sector
- 10 Improve participation of regions and countries with high unexploited potential and strategic interest to develop it

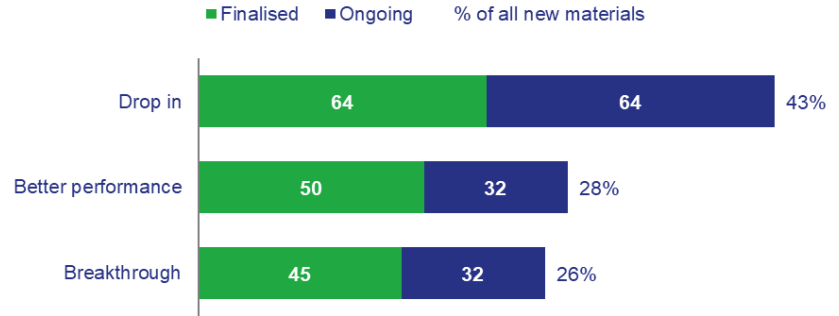
CBE JU specific KPIs

| | |
|--|---|
| <p>5 Expand circularity in bio-based value chains</p> | <p>5.1 - N of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design) 100 5.2 - N projects developing circular production practices (incl. industrial & industrial-urban symbiosis) 40</p> |
| <p>6 Increase innovative bio-based outputs and products</p> | <p>6.1 - N of innovative bio-based dedicated outputs, with novel or significantly improved properties vs relevant alternatives 100 6.2 - N of innovative bio-based drop-in outputs meeting applications requirements 30</p> |
| <p>7 Improve the market uptake of bio-based products</p> | <p>7 - N of brand owners involved as project partners and/or engaged with other mechanisms 50</p> |
| <p>8 Attract investment on the bio-based sector</p> | <p>8 - N of actions implemented at project level to attract investment and/or to create awareness in the investment/funding community 30</p> |
| <p>9 Increase resilience and capacity in the bio-based sector</p> | <p>9 - N of projects contributing to develop the skills and capacity needed by the EU bio-based sector 50</p> |
| <p>10 Improve participation of regions and countries with high unexploited potential and strategic interest to develop it</p> | <p>10.1 - N of participants from the underrepresented EU countries and region 150 10.2 - N of regional hubs established and operated to process bio-based feedstocks and other cooperation aspects 15 10.3 - N of projects with synergies with other funding programmes at EU, national or regional level 60</p> |

Contribution to bio-based innovation*



Innovation Intensity of the Bio-based Materials **KPI5**



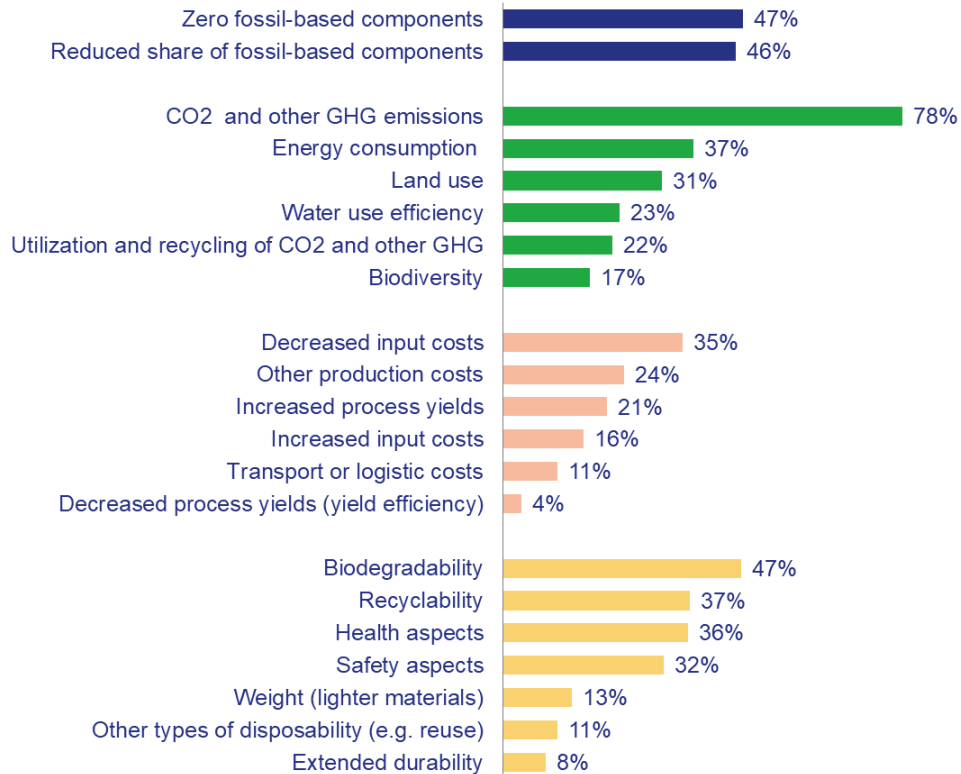
BBI KPI 4 # of new bio-based building blocks

BBI KPI 6 # of new bio-based products

BBI KPI 5 # of new bio-based materials

*Data reported by BBI JU projects finalised by 30 September 2022

Aspects of novelty of the bio-based materials*

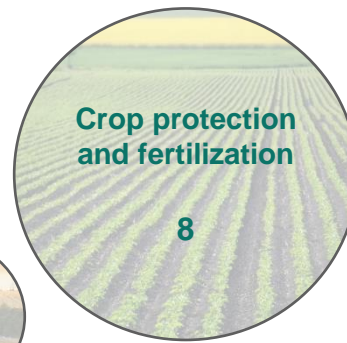
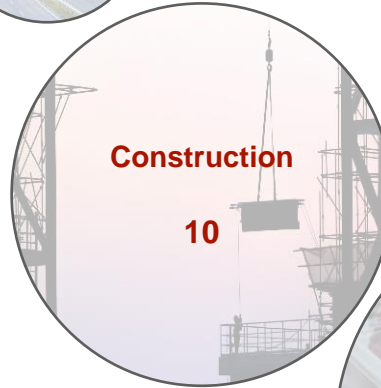
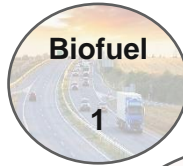
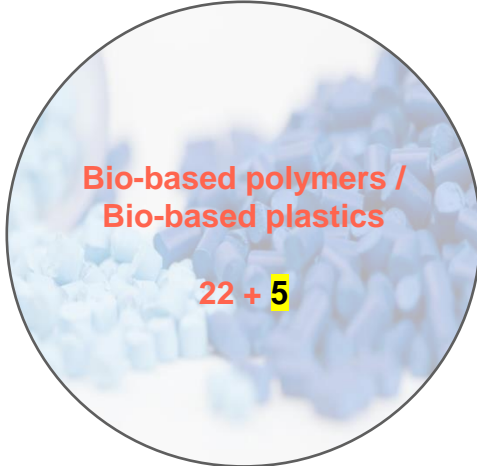
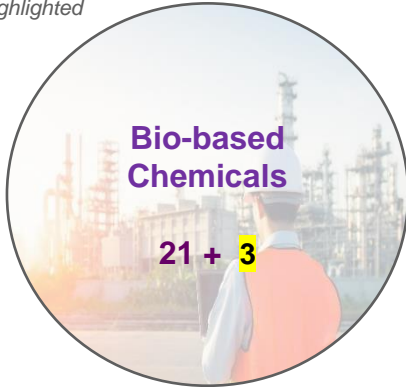


New bio-based building blocks, materials and products delivering:

- ✓ Reduced dependency on fossil-based resources
- ✓ Improved environmental performance
- ✓ Novel/improved functionalities

Application Clusters - number of projects

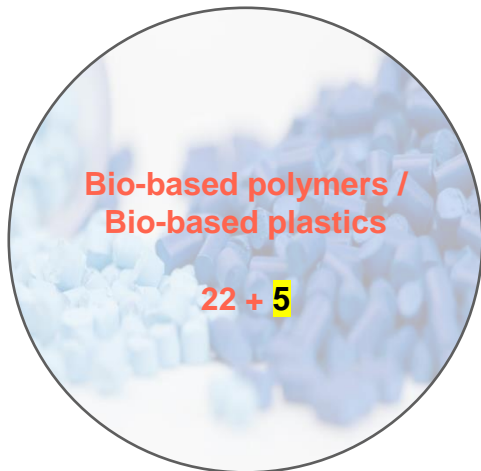
*CBE JU projects highlighted



Application Clusters - number of projects

*CBE JU projects highlighted

- ✓ coatings
- ✓ adhesives & binders
- ✓ Resins
- ✓ functional/high-performance polymers



EXILVA

Sarpsborg, Norway



CBE JU contribution: €27.43 million

Duration: May 2016 – April 2020



Objective: to establish the flagship plant to produce **more than 1000 tons Microfibrillated cellulose (MFC)** and scale it up to commercial levels

Feedstock: Forest-based (cellulose)

Applications: Cosmetics, personal and home care, pharmaceutical, adhesives and sealants, composites and resins, agricultural chemicals, oil field, fish, bait, concrete,..

Webpage: [EXILVA | Circular Bio-based Europe Joint Undertaking \(CBE JU\)](#)

Video: <https://youtu.be/AmlJjdjR5qs>

● Flagship biorefinery ● Call 2022

VIOBOND Riga, Latvia



CBE JU contribution: €15.89 million

Duration: September 2021 – August 2027



Objective: to construct a novel commercially viable, first-of-its-kind **lignin phenol-formaldehyde (LPF) resin plant** on a large scale and operate it successfully

Feedstock: Forest-based

Applications: Construction and furniture

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

Video: <https://youtu.be/GZfuSS696bE>

● Flagship biorefinery ● Call 2022

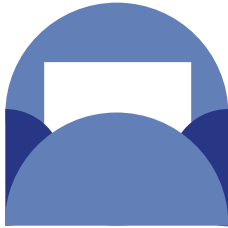


Call 2024

03

| Type of action | Topics HORIZON-JU-CBE-2024 | | Million EUR |
|-------------------------|----------------------------|---|-------------|
| IA- Flagship | IAFlag-01 | Bio-based value chains for valorisation of sustainable oil crops | 20 |
| | IAFlag-02 | Bio-based dedicated platform chemicals via cost-effective, sustainable and resource-efficient conversion of biomass | 20 |
| | IAFlag-03 | Bio-based value chains for valorisation of sustainable natural fibre feedstock | 20 |
| IA | IA-01 | Bio-based materials and products for biodegradable in soil applications | 15 |
| | IA-02 | Sustainable microalgae as feedstock for innovative, added-value applications | 15 |
| | IA-03 | Enlarging the portfolio of commercially produced “Safe and Sustainable by design” (SSbD) solvents | 15 |
| | IA-04 | Circular and SSbD bio-based construction & building materials with functional properties | 15 |
| | IA-05 | Selective and sustainable (co)-production of lignin-derived aromatics | 15 |
| | IA-06 | Innovative bio-based adhesives and binders for circular products meeting market requirements | 15 |
| | IA-07 | Innovative conversion of biogenic gaseous carbon into bio-based chemicals, ingredients, materials | 15 |
| RIA | R-01 | Valorisation of polluted/contaminated wood from industrial and post-consumer waste streams | 7 |
| | R-02 | Biotech routes to obtain bio-based chemicals/materials replacing animal-derived ones | 7 |
| | R-03 | Sustainable, bio-based alternatives for crop protection | 10 |
| | R-04 | SSbD bio-based coating materials for applications under demanding and/or extreme conditions | 7 |
| | R-05 | Innovative bio-based food/feed ingredients | 7 |
| CSA | S-01 | New forms of cooperation in agriculture and the forest-based sector | 4 |
| | S-02 | Mobilise inclusive participation in bio-based systems and supporting the CBE JU widening strategy and its action plan | 3 |
| | S-03 | Supporting the CBE JU Deployment Group on Primary Producers | 3 |

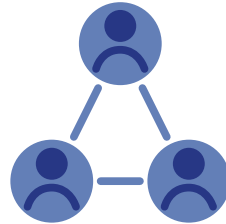
More information



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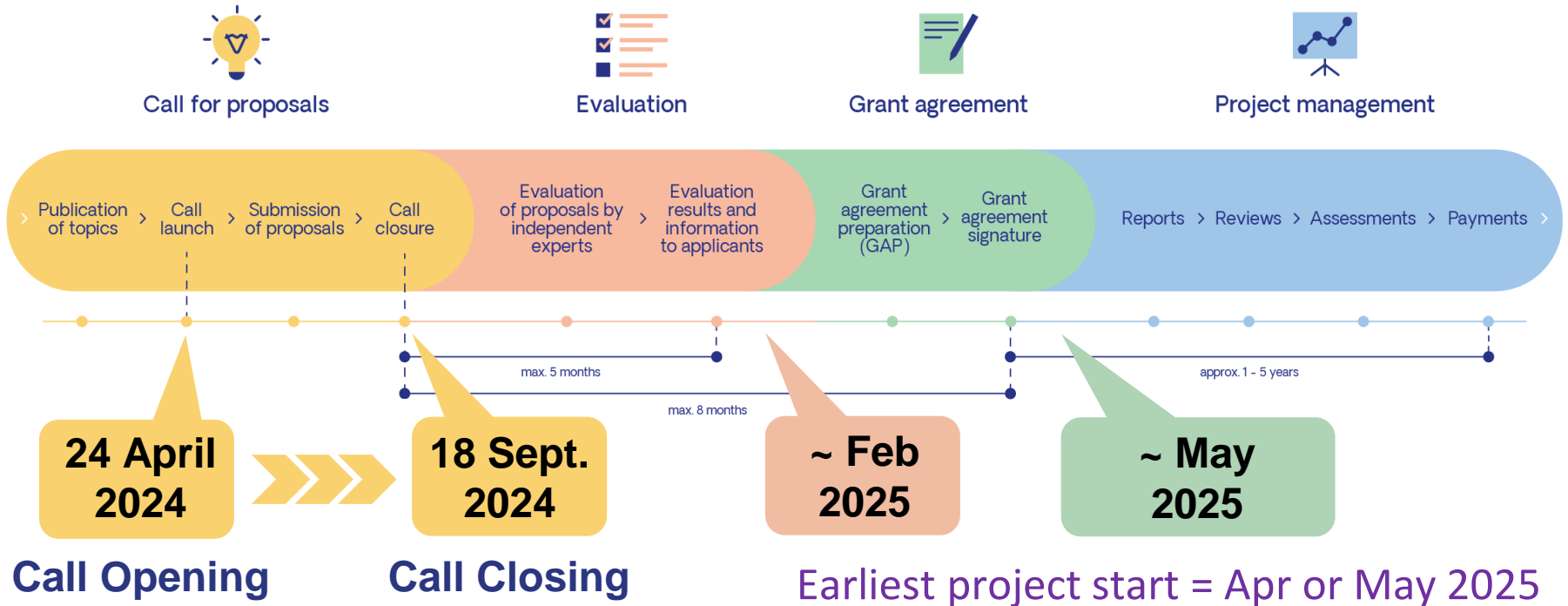
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 Bio-based Industries
Consortium

 Co-funded by
the European Union

Proposal preparation



Two main sources of information

The screenshot shows the 'F&T Portal Online Manual' website. On the left is a navigation menu with categories like 'Participant Register', 'Grants', 'Procurement', 'Prizes', 'Financial instruments', 'Working as an expert', and 'Help'. The main content area is titled 'Grants' and features a 'My Area — User account and roles' button. Below this, there are two main sections: 'Applying for funding' and 'Evaluation & Grant signature'. The 'Applying for funding' section contains a flowchart with steps: 'Find a call', 'Find partners', 'Register an organisation', and 'Submit a proposal'. The 'Evaluation & Grant signature' section contains a flowchart with steps: 'Admissibility and eligibility check', 'Evaluation of proposals', 'Grant preparation', and 'Grant signature'.

<https://webgate.ec.europa.eu/funding-tenders-opportunities/display/OM/Online+Manual>

The screenshot shows the CBE JU website. The top navigation bar includes the CBE JU logo, a search bar, and a user profile icon. The main navigation menu has items: 'About', 'Apply for funding', 'Projects', 'Achievements', and 'News & Events'. A dropdown menu is open under 'Apply for funding', listing: 'Open calls for proposals', 'How to apply for funding', 'Closed calls for proposals', 'Manage your project', and 'Networking platform'. The 'Open calls for proposals' option is highlighted with a red box. Below the navigation is a large green banner for the 'CBE JU photo competition 2023 for submission #CBEImpact'. The banner text says 'All projects are invited to submit their photos and videos by 20 April.' and includes a 'Discover rules & criteria' link. On the right side of the banner is a circular image of a camera.

<https://www.cbe.europa.eu/open-calls-proposals>