A competitive bioeconomy for a sustainable future

Virginia Puzzolo
Head of Programme
21 May 2024
Table of contents

• The Circular Biobased Europe Joint Undertaking
• CBE JU vs. Horizon Europe: similarities & differences
  • Call 2024 topic overview & structure
  • CBE specific requirements (incl. IKOP)
• Proposal preparation
  • Call 2024 timing
  • Lessons learnt from past calls
  • Tips & tricks on how to write a good proposal
  • Networking opportunities
The Circular Biobased Europe Joint Undertaking
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.

- Launched in 2021, operates until 2031
- Part of Horizon Europe programme
- Contributing to the European Green Deal
- Building on the success of its predecessor BBI JU
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

- Scale up and demonstration of technologies
- Development and validation of technologies
- Large-scale first-of-its-kind product facility in Europe

Technology Readiness Level (TRL)

[Diagram showing TRL levels with RIA (Research and Innovation Actions) and IA (Innovation Actions including Flagships) categories]

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

**Opportunities for the bioeconomy**

- Socio-economic benefits
- REINDUSTRIALISATION
- RURAL DEVELOPMENT
- JOB CREATION

**Main resources in CBE JU projects**

- Forestry residues
- Agro residues
- Municipal waste

---

**FIRST2RUN**

**Biorefinery location**
Porto Torres, Sardinia

**Company**
Novamont

**Resource**
Cardoons grown on marginal lands

**Products**
Bio-based compostable coffee pods.

**Benefit**
This Italian-led company developed bio-based solutions by collaborating with local farmers in Sardinia. Together, they turned cardoon plant oil into bio-based materials and products in this industrial biorefinery showing Italy’s leadership in the bio-based sector.

---

**CBE JU funding in Italy**

- **€93 million**
- **54 SME participants**
- **€67M**
- **€23M**
- **€3M**
- **21 million SME funding**
- **83 beneficiaries**
- **10 coordinated projects**
- **127 beneficiaries**
- **29 Private companies**
- **20 Universities & research centres**
- **15 Other**

---

**Opportunities for the bioeconomy**

- REINDUSTRIALISATION
- RURAL DEVELOPMENT
- JOB CREATION

---

**First of its kind industrial biorefinery**

**Demonstration plant**

---

**Universities & research centres**

**Check all the projects in the country**
A competitive bioeconomy for a sustainable future

From strategy to implementation

CBE JU is established by the Council Regulation (EU) 2021/2085 of 19 November 2021

Objectives

Strategy

Strategic Research and Innovation Agenda (SRIA)

Developed by

Adopted by

Programming

Annual Work Programmes

Implementation

Calls for proposals
Table of contents

• The Circular Biobased Europe Joint Undertaking
• CBE JU vs. Horizon Europe: similarities & differences
  • Call 2024 topic overview & structure
  • CBE specific requirements (incl. IKOP)
• Proposal preparation
  • Call 2024 timing
  • Lessons learnt from past calls
  • Tips & tricks on how to write a good proposal
  • Networking opportunities
CBE JU vs. Horizon Europe: similarities & differences
# 18 topics and their budget

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

**Total** 213
**Call topic structure**

<table>
<thead>
<tr>
<th>HORIZON-JU-CBE-2024-XX-NN</th>
<th>Topic title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of action</strong></td>
<td>Research and Innovation Action</td>
</tr>
<tr>
<td><strong>Indicative budget</strong></td>
<td>The total indicative budget for the topic is EUR 10 million</td>
</tr>
<tr>
<td><strong>Expected EU contribution per project</strong></td>
<td>It is estimated that a contribution of EUR 5 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts</td>
</tr>
<tr>
<td><strong>TRL</strong></td>
<td>TRL 4-5 at the end of the project</td>
</tr>
<tr>
<td><strong>Link to CBE JU Specific Objectives</strong></td>
<td>1.1: Increase the intensity of cross-disciplinary research and innovation activities</td>
</tr>
<tr>
<td><strong>Link to CBE JU SRIA Strategic Priorities</strong></td>
<td>1.1.2: Develop innovative production systems in the bio-based industry&lt;br&gt;1.1.3: Develop innovative bio-based products</td>
</tr>
<tr>
<td><strong>CBE JU KPIs</strong></td>
<td>4.5 Number of products with improved life cycle environmental performance&lt;br&gt;5.1 Number of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular-by-design)&lt;br&gt;5.2 Number of projects developing circular production practices (incl. industrial &amp; industrial urban symbiosis)&lt;br&gt;6 Increase innovative bio-based outputs and products</td>
</tr>
</tbody>
</table>
The ‘change’ to be achieved

- Provides a broad description of what is the **impact** to be achieved by the project
- The **dissemination and exploitation** of future research results are vital for the impact

The ‘problem’

- Identifies the aspects of the **challenge** that needs to be tackled
- Specifies a **perimeter** to the problem described
- Does not specify the expected solutions to the problem, nor the approach to be taken
A competitive bioeconomy for a sustainable future

CBE JU Call 2024: Requirements

Horizon Europe (HE) rules
- Eligibility
- Admissibility
- General annexes

HE evaluation criteria
- Excellence
- Impact
- Implementation

CBE Annual Work Programme 2024
- Topics
- Specific requirements
- Budget

Proposal structure

Part A

Part B

HE Programme Guide
HE Online Manual
HE General Annexes
HE Annotated Model Grant Agreement
HE Evaluation criteria (HE + CBE)
HE Evaluation of CBE JU Call 2024
HE Budget
HE Eligibility
HE Admissibility
HE General annexes

Horizon Europe + CBE requirements
<table>
<thead>
<tr>
<th>Specific CBE JU requirement</th>
<th>Type of action</th>
<th>Where to include it in Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedstock sourcing (eligibility condition)</td>
<td>RIA and IA, incl. FLAG</td>
<td>Part B – (Y/N) question</td>
</tr>
<tr>
<td>Feedstock sustainability requirements</td>
<td>RIA and IA, incl. FLAG</td>
<td>Part B – (Y/N) question</td>
</tr>
<tr>
<td>Description of feedstock</td>
<td>RIA and IA, incl. FLAG</td>
<td>Part B – 1.2 Methodology</td>
</tr>
<tr>
<td>Environmental performance - Ex-ante assessment</td>
<td>RIA and IA, incl. FLAG</td>
<td>Part B – 1.2 Methodology</td>
</tr>
<tr>
<td>• Identification of environmental issues</td>
<td>RIA and IA, incl. FLAG</td>
<td></td>
</tr>
<tr>
<td>• Estimation of environmental sustainability performance,</td>
<td>RIA and IA, incl. FLAG</td>
<td></td>
</tr>
<tr>
<td>• Estimation of carbon removal potential</td>
<td>RIA and IA, incl. FLAG</td>
<td></td>
</tr>
<tr>
<td>Environmental sustainability and circularity - Ex-post assessment</td>
<td>RIA, IA- non FLAG, FLAG</td>
<td>Part B – 3.1 Workplan and resources</td>
</tr>
<tr>
<td>• Dedicated task for RIA</td>
<td>RIA</td>
<td></td>
</tr>
<tr>
<td>• Dedicated task or WP (LCA) for IA non-FLAG</td>
<td>IA- non FLAG</td>
<td></td>
</tr>
<tr>
<td>• Dedicated task or WP (LCSA) for FLAG</td>
<td>FLAG</td>
<td></td>
</tr>
<tr>
<td>Specific CBE JU requirement</td>
<td>Type of action</td>
<td>Where to include it in Part B</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Multi-actor approach (MAA)</td>
<td>IA, incl. FLAG</td>
<td>Part B – 1.2 Methodology</td>
</tr>
<tr>
<td></td>
<td>RIA and CSA, when specified</td>
<td></td>
</tr>
<tr>
<td>Economic aspects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Economic viability</td>
<td>RIA</td>
<td>Part B – 2.2 Measures to maximise impact – D&amp; E&amp;C</td>
</tr>
<tr>
<td>• Business case and business model</td>
<td>IA, incl. FLAG</td>
<td>FLAG: Annex (Business plan)</td>
</tr>
<tr>
<td>• Business plan</td>
<td>FLAG</td>
<td></td>
</tr>
<tr>
<td>Digital technologies</td>
<td>RIA and IA, incl. FLAG</td>
<td>Part B – 1.2 Methodology</td>
</tr>
<tr>
<td>Cross-disciplinary aspects and Social Sciences and Humanities (SSH)</td>
<td>All types of actions</td>
<td>Part B – 1.2 Methodology</td>
</tr>
<tr>
<td>Recommendations to stakeholders</td>
<td>IA, incl. FLAG</td>
<td>Part B – 3.1 Workplan and resources</td>
</tr>
</tbody>
</table>
## Similarities and differences with Horizon Europe

### Funding rate
- **RIA**: 100%
- **IA**: 60% (100% non-profit)
- **CSA**: 100%

### Award criteria
- **RIA, IA & CSA**: Excellence, Impact, Implementation
- **IA**: + Impact (Ability to ensure 15% (IA) or 20% (IAFlag) of in-kind contribution to operational activities (IKOP) = minimum IKOP percentage)

### Page limit
- **RIA**: 50 p.
- **IA**: 70 p.
- **CSA**: 30 p.

### Scoring thresholds
- **Excellence**: 3/5
- **Impact**: 4/5
- **Implementation**: 3/5
- **Total**: 11/15
In-kind contribution to operational activities (IKOP)

IKOP = Total eligible costs – Requested EU contribution (of private members)

In CBE JU, the only private member is the Bio-based Industries Consortium (BIC).

→ Minimum percentage of IKOP must be reflected in the budget of partners that are BIC members.

<table>
<thead>
<tr>
<th>Example 1: IA Flagship Criterion: ≥ 20% IKOP</th>
<th>BIC member</th>
<th>Industry / Academia</th>
<th>Total eligible costs</th>
<th>Funding rate</th>
<th>Requested EU contribution</th>
<th>IKOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinator (BIC member)</td>
<td>Y</td>
<td>industry</td>
<td>€ 7,000,000</td>
<td>60%</td>
<td>€ 4,200,000</td>
<td>€ 2,800,000</td>
</tr>
<tr>
<td>Beneficiary 1</td>
<td>N</td>
<td>academia</td>
<td>€ 590,000</td>
<td>100%</td>
<td>€ 590,000</td>
<td>€ 590,000</td>
</tr>
<tr>
<td>Beneficiary 2 (BIC member)</td>
<td>Y</td>
<td>industry</td>
<td>€ 5,000,000</td>
<td>60%</td>
<td>€ 3,000,000</td>
<td>€ 2,000,000</td>
</tr>
<tr>
<td>Beneficiary 3</td>
<td>N</td>
<td>industry</td>
<td>€ 3,000,000</td>
<td>60%</td>
<td>€ 1,800,000</td>
<td>€ 1,800,000</td>
</tr>
<tr>
<td>Beneficiary 4</td>
<td>N</td>
<td>academia</td>
<td>€ 800,000</td>
<td>100%</td>
<td>€ 800,000</td>
<td>€ 800,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>€ 16,390,000</td>
<td></td>
<td>€ 10,390,000</td>
<td>€ 4,800,000</td>
</tr>
</tbody>
</table>

Percentage IKOP = \( \frac{€ 4,800,000}{€ 16,390,000} \) = 29.3% > 20%
In-kind contribution to operational activities (IKOP)

IKOP = Total eligible costs – Requested EU contribution (of private members)

In CBE JU, the only private member is the Bio-based Industries Consortium (BIC).

→ Minimum percentage of IKOP must be reflected in the budget of partners that are BIC members.

<table>
<thead>
<tr>
<th>Example 2: IA Criterion: ≥ 15% IKOP</th>
<th>BIC member</th>
<th>Industry / Academia</th>
<th>Total eligible costs</th>
<th>Funding rate</th>
<th>Requested EU contribution</th>
<th>IKOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinator (BIC member)</td>
<td>Y</td>
<td>Industry</td>
<td>€ 3,200,000</td>
<td>60%</td>
<td>€ 1,920,000</td>
<td>€ 1,280,000</td>
</tr>
<tr>
<td>Beneficiary 1</td>
<td>N</td>
<td>academia</td>
<td>€ 590,000</td>
<td>100%</td>
<td>€ 590,000</td>
<td></td>
</tr>
<tr>
<td>Beneficiary 2</td>
<td>N</td>
<td>industry</td>
<td>€ 1,500,000</td>
<td>60%</td>
<td>€ 900,000</td>
<td></td>
</tr>
<tr>
<td>Beneficiary 3</td>
<td>N</td>
<td>industry</td>
<td>€ 3,000,000</td>
<td>60%</td>
<td>€ 1,800,000</td>
<td></td>
</tr>
<tr>
<td>Beneficiary 4</td>
<td>N</td>
<td>academia</td>
<td>€ 800,000</td>
<td>100%</td>
<td>€ 800,000</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>€ 9,090,000</td>
<td></td>
<td>€ 6,010,000</td>
<td>€ 1,280,000</td>
</tr>
</tbody>
</table>

Percentage IKOP $= \frac{\text{€1,280,000}}{\text{€9,090,000}} = 14.1\% < 15\%$
IKOP vs BIC membership

BIC membership

• CBE JU will check BIC membership during evaluation…
• …via an Annex to the proposal: 1 pdf file with all ‘BIC membership certificates’ or BIC members involved in the consortium
• BIC membership certificates to be requested to BIC via https://bic.elisca.app/membership/certificate/registration
• When building your consortium, you might encounter organisations interested in becoming a BIC member (and who could ‘boost’ your IKOP)
• ‘Project membership’: temporary membership option, (only’) relevant for CBE JU Calls: the organisation will become a BIC member if their proposal is successful
Table of contents

• The Circular Biobased Europe Joint Undertaking
• CBE JU vs. Horizon Europe: similarities & differences
  • Call 2024 topic overview & structure
  • CBE specific requirements (incl. IKOP)

• Proposal preparation
  • Call 2024 timing
  • Lessons learnt from past calls
  • Tips & tricks on how to write a good proposal
  • Networking opportunities
CBE JU Call 2024: Proposal preparation
A competitive bioeconomy for a sustainable future

CBE JU call 2024

Proposal preparation

Call for proposals
- Publication of topics
- Call launch
- Submission of proposals
- Call closure

Evaluation
- Evaluation of proposals by independent experts
- Evaluation results and information to applicants

Grant agreement
- Grant agreement preparation (GAP)
- Grant agreement signature

Project management
- Reports
- Reviews
- Assessments
- Payments

24 April 2024
Call Opening

18 Sept. 2024
Call Closing

~ Feb 2025

~ May 2025

Earliest project start = Apr or May 2025
Call 2023 submission statistics (2/3)

- **Green** = 30 ‘main list’ proposals
- **Red** = submitted but unsuccessful

Positive *correlation* between early proposal creation and success rate

-> *starting to work in the Portal asap!*
Horizon Europe scoring principles

0. The proposal **fails to address the criterion** or cannot be assessed due to missing or incomplete information.

1. **Poor.** The criterion is inadequately addressed, or there are **serious inherent weaknesses.**

2. **Fair.** The proposal broadly addresses the criterion, but there are **significant weaknesses.**

3. **Good.** The proposal addresses the criterion well, but a number of **shortcomings** are present.

4. **Very Good.** The proposal addresses the criterion very well, but a **small number of shortcomings** are present.

5. **Excellent.** The proposal successfully addresses all relevant aspects of the criterion. Any **shortcomings** are **minor.**
Top 5+1 most common shortcomings ordered by frequency

1. Impact – expected outcomes (= bullet points in topic text)
2. Implementation – work plan (incl. Tasks, deliverables,...)
3. Excellence – ambition level, (going beyond) SOTA, TRLs
4. Implementation – risk & mitigation measures
5. Excellence – scope (bullet points in topic text)
6. (For RIAs: Impact – economic viability check)

The 3 ‘biggest’ evaluation elements
Evaluation results analysis (2/2)

Top 5 most common weaknesses ordered by frequency

1. Excellence – methodology
2. Excellence – ambition level, (going beyond) SOTA, TRLs
3. Excellence – scope (bullet points in topic text)
4. Impact – expected outcomes (= bullet points in topic text)
5. Implementation – work plan

You can’t hide a bad idea...
A competitive bioeconomy for a sustainable future
CBE JU call 2024

Aim for total “Topic eclipse”

Topic+ = Topic text + HE requirements + CBE specific requirements

every single word in topic text counts!
every specific requirement element counts!
A good and convincing CBE JU proposal

- Ensure that the proposed work is within the **scope of the topic**
- Show clearly how the proposed work could contribute to the **outcomes and impacts** described in the work programme (the pathway to impact)
- Demonstrate that the idea is **ambitious** and goes beyond the **state of the art**
- Describe the planned measures to **maximise the impact** of the project (‘plan for dissemination & exploitation including communication activities’)
- Your **methodology** must take into account open science practices and interdisciplinarity (+ gender dimension, if applicable)
- Demonstrate the quality of the **implementation**, including work plan, resources and participants

Read carefully the **AWP2024** and the **Strategic Research and Innovation Agenda (SRIA)**, for a good understanding of the context and long-term objectives of CBE JU !!!
Networking opportunities

• Funding & tender Opportunities Portal (partner search announcements)
• BIC networking (https://biconsortium.eu/membership)
• CBE JU networking platform (https://www.cbe.europa.eu/networking-platform)

➢ Open since mid-February 2024, will remain open until (at least) call closure on 18 Sept 2024
➢ Different services: ‘Find & be found’
  ▪ Partner search & expressing interest in on or more topics;
  ▪ Presentation of project ideas
  ▪ Showcasing / offering your expertise
  ▪ Direct messaging & scheduling B2B meetings
  ▪ Registration for the CBE JU info days
Two main sources of information


https://www.cbe.europa.eu/open-calls-proposals
(Incl. FAQ for applicants, link to networking platform, …)