



LES WEBINAIRES

InnovAlliance  
La Mutualité au cœur de notre développement



# Partenariats européens d'innovation dans la bioéconomie : les appels à projet du CBE JU

Mercredi 14 mai de 11h à 12h30



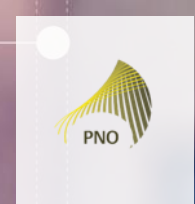


## Circular Bio-based Europe (CBE)

**Presentation based on CBE documentation**

[Documents | Circular Bio-based Europe Joint Undertaking \(CBE JU\)](#)  
[europa.eu](http://europa.eu)

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## ► Agenda (from 11:05 to 11:50)

### General presentation

- CBE in a nutshell
- Timing and deadlines
- Eligibility and admissibility conditions, overview of types of participation
- Differences between RIA, IA, Flagship, CSA

### Topics of interest identified for members of the clusters

- Full list of 2025 Call topics
- Focus on specific calls that may be of interest for the audience

### How to write a good proposal

- 2024 results
- Tips & tricks
- Top 5 shortcomings & weaknesses highlighted by the CBE

### PNO presentation and CBE-related track record



# General presentation



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## ► CBE in a nutshell

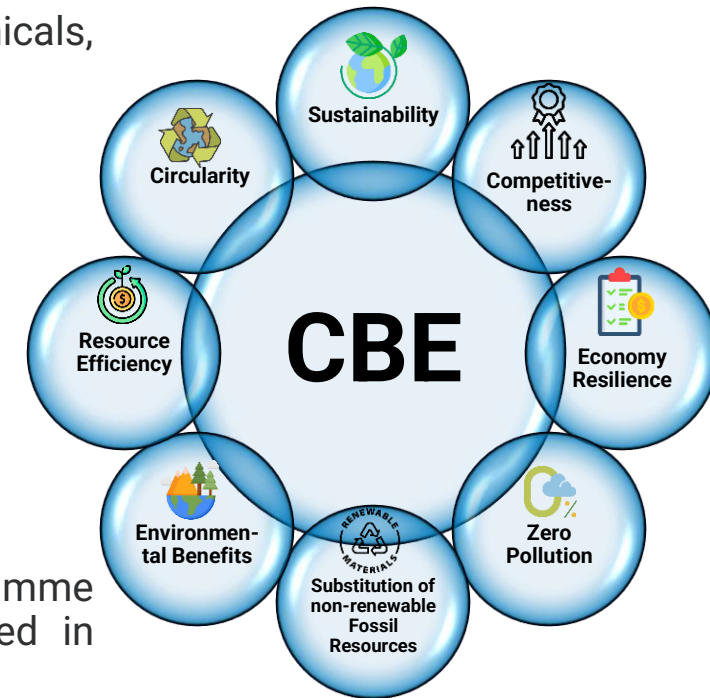
The CBE Joint Undertaking (JU) is a € 2 billion public-private partnership between the EC, and the Bio-based Industries Consortium (BIC):

- ✓ Established under Horizon Europe, spanning the period 2021-2031.
- ✓ Strategic priorities and essential research and innovation actions required to achieve the objectives of the CBE JU are defined in the SRIA (Strategic Research and Innovation Agenda).
- ✓ The CBE JU will support initiatives targeting the development of bio-based chemicals, materials, food and feed ingredients, and soil nutrients.

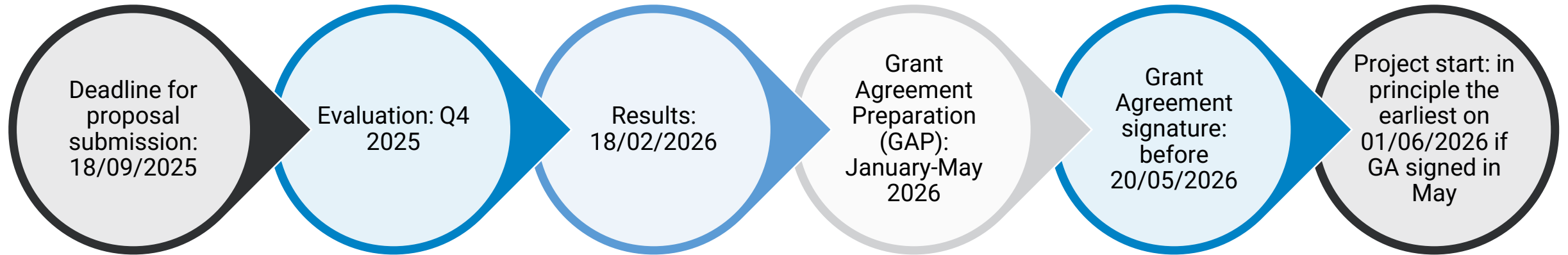
CBE JU's achievements since 2014:

- ✓ Total Investment: €1,117 million CBE JU funding
- ✓ Private Investment: More than triple (> 3€ for each 1€ invested)
- ✓ Countries Reached: 43
- ✓ Beneficiaries Engaged: 1,552 with 35% SMEs and 24% universities & research centers

The call will adhere to the General Annexes A to F of the Horizon Europe Main Work Programme 2023-2025, with some necessary adjustments/additional specifications to be discussed in subsequent sections.



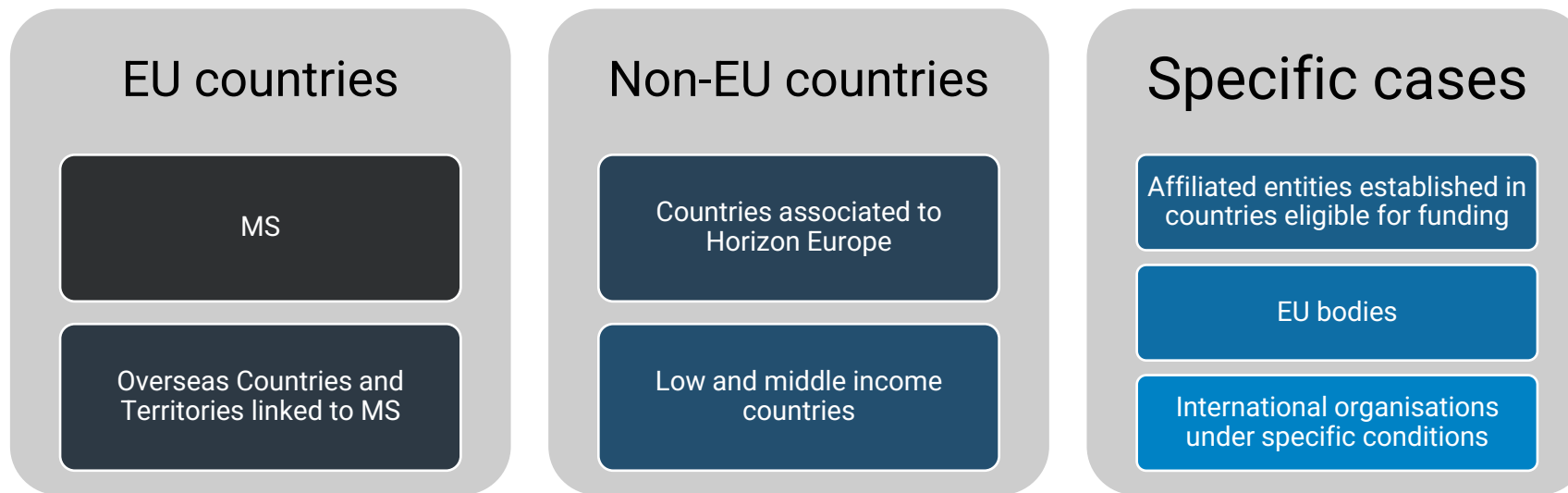
## ► Timing and deadlines



Project start date is important to consider when preparing the planning of your project and must be shared with your consortium, especially if there are particular constraints in terms of seasonality for the biomass you are working with.

## ► Eligibility conditions

- Consortium composed of at least 3 legal entities independent from each other and established in different countries:
  - At least 1 in a Member State (MS)
  - At least 2 in different MS or an Associated Country



- Public bodies, research organisations or higher education establishments must have a gender equality plan.

**Last year 9 proposals out of 298 submitted did not pass this step!**

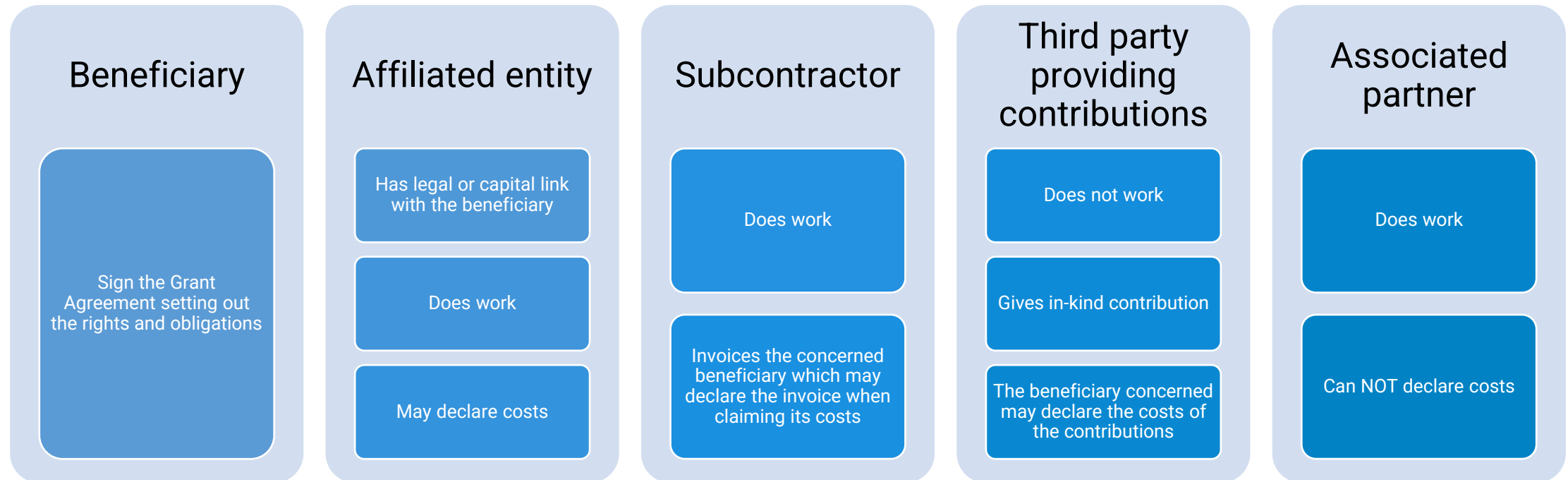
## ► Admissibility conditions

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- Submission before the call deadline, electronically on the EU Funding & Tenders Portal.
- Proposals must be complete, readable, accessible and printable.
- Proposals must include a plan for exploitation and dissemination of results, including communication activities.
- Page limits apply to parts of the application and will be detailed in subsequent sections.



## ► Overview of types of participation



- Important to ensure proper representation of relevant actors of the **full project value chain** (feedstock – processing – products, etc.) inside the consortium or via other appropriate forms of engagement for the project to be viable (**multi-actor approach**).
- Possibility to include Letters of Intent, Memorandum of Understanding, Letters of Support, etc. from key stakeholders that cannot be involved under one of the above types of participation.
- Advisory Board can also be set up.

## ► Differences between RIA, IA, Flagships, CSA - **Type of activities**

### Research and Innovation Actions (RIA)

Activities of '**testing**', '**demonstrating**' and '**piloting**' to establish **new knowledge** or to **explore the feasibility** of a new or improved technology, product, process, service, or solution.

These may include basic and applied research, technology development and integration, testing, demonstration, and validation on a **small-scale prototype**, in a **laboratory or simulated environment**.

### Innovation Actions (IA)

Activities of 'testing', 'demonstrating' and 'piloting' and also aim at **scaling up** activities **from prototype**, in a (near to) **operational environment, industrial** or otherwise, to **large-scale product validation and market replication**.

### Flagships

#### Important and specific type of Innovation Action.

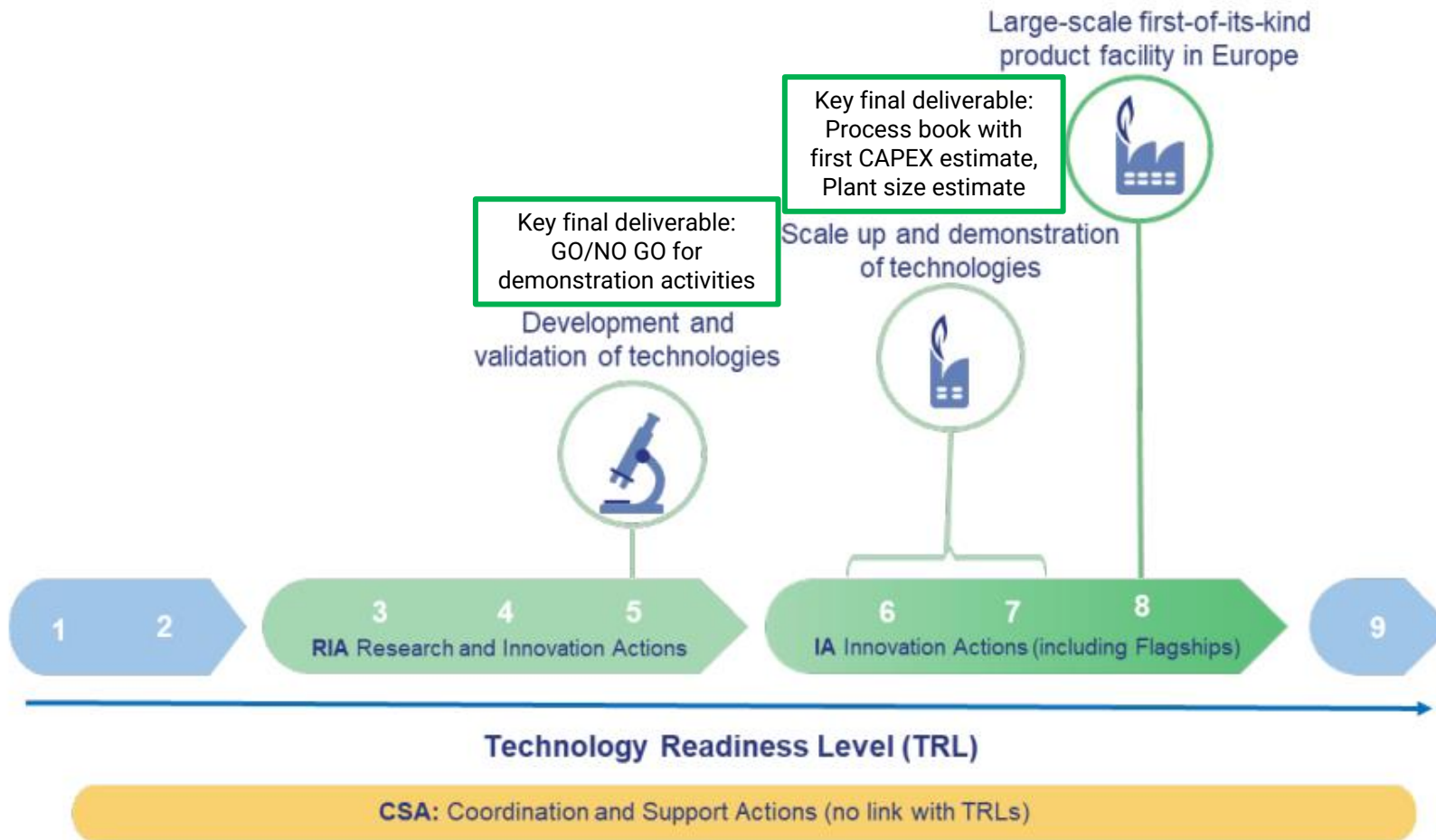
Support the **first application/deployment in the EU market of an innovation** that has **already been demonstrated** but not yet applied/deployed in the EU market (**first-of-its-kind** innovation).

### Coordination and Support Actions (CSA)

Address needs to:

- i) structure stakeholder communities
- ii) support dissemination and exploitation of RIAs and IAs
- iii) exploit synergies of scale among projects
- iv) raise awareness in specific areas
- v) support technological visions (e.g. road-mapping, user cases) and outreach (e.g. events, publications)
- vi) promote international cooperation with specific regions and/or technological areas

# ► Differences between RIA, IA, Flagships, CSA - TRL conditions



Importance to verify that you are in the good topic  
→ check the TRL targets!

- TRL 1 – basic principles observed
- TRL 2 – technology concept formulated
- TRL 3 – experimental proof of concept
- TRL 4 – technology validated in lab
- TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 – system prototype demonstration in operational environment
- TRL 8 – system complete and qualified
- TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

## ► Differences between RIA, IA, Flagships, CSA - Funding rate

Type of action	Funding rate
RIA	100%
IA including Flagships	Up to <b>60%</b> of the eligible costs (except for non-profit legal entities, where the funding rate is up to 100% of the total eligible costs)
CSA	100%

- For IAs, especially Flagships, applying to a national French scheme is an interesting way to optimize the funding of your project (the cost bases must be strictly distinct, no double funding!).
- French call for proposals “1ère usine” coordinated by BPI supports industrialisation of SMEs in France.



# ► Differences between RIA, IA, Flagships, CSA - IKOP

- Special IKOP sub-criteria:
  - IKOP = In-Kind Contribution to Operational Activities
  - IKOP is brought by members of the BIC only. Certificates of BIC membership must be annexed to the proposal.
  - IKOP must be at least 5% for RIAs (**new**), 15% for IA Demos, and 20% for Flagships.
- How to become a BIC member ? (Mandatory before call deadline)
  - An open and fast procedure to become an industry member, either as “full member”, or as temporary “project member” until the evaluation has been performed.
  - <https://biconsortium.eu/membership>
  - Annual membership fees (to be paid only if proposal is accepted for temporary members): 30.000€ for large industry, 5.000€ for SMEs, between 1.000 and 5.000€ for other categories.



CALL MANAGEMENT RULES AND CONDITIONS  
IKOP examples

## EXAMPLE INNOVATION ACTION – FLAGSHIPS

TRESHOLD EVALUATION SUB-CRITERIA 20% IKOP

Requesting less CBE JU contribution will increase the IKOP

Example 1 (IA-FLAGSHIP)	JU member	industry/ academia	Total eligible costs	Funding rate	CBE JU contribution	IKOP
Coordinator (BIC member)	Y	industry	€ 7,000,000.00	60%	€ 4,200,000.00	€ 2,800,000.00
Beneficiary 1	N	academia	€ 590,000.00	100%	€ 590,000.00	
Beneficiary 2 (BIC member)	Y	industry	€ 5,000,000.00	60%	€ 3,000,000.00	€ 2,000,000.00
Beneficiary 3	N	industry	€ 3,000,000.00	60%	€ 1,800,000.00	
Beneficiary 4	N	academia	€ 800,000.00	100%	€ 800,000.00	
TOTAL			€ 16,390,000.00		€ 10,390,000.00	€ 4,800,000.00
PERCENTAGE IKOP (eligible costs incurred by private members in implementing indirect actions less the contribution of CBE JU)						29.3%



## ► Differences between RIA, IA, Flagships, CSA - Others

### Scoring threshold:

Criteria	Threshold
Excellence	3/5
Impact	4/5
Implementation	3/5
TOTAL	11/15

### Priority order in case of identical scores:

- RIA and CSA: Excellence >>> Impact
- IA including Flagships: Impact >>> Excellence

### Environmental performance, sustainability and circularity – Ex-post assessment:

- RIA: Dedicated task in the work plan
- IA including Flagships: dedicated task or Work Package (WP) (LCSA)

### Proposal page limit:

- RIA: 50 pages
- IA: 70 pages
- CSA: 30 pages

### Economic aspects:

- RIA: Qualitative Business case
- IA: Quantified Business case and Business model
- Flagship: Business Plan (mandatory annex) (incl. the underlying Business Case and Business Model)

## ► Differences between RIA, IA, Flagships, CSA - **Others**

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- **Hearings** are part of the Flagships evaluation and allow to clarify Business Plan -> especially commercially sensitive data that applicants are usually hesitant to put in their proposals.
- Web conference during the evaluation phase -> should take place in November.
- Hearings' goal is to provide clarifications on the Business Plan, especially on sensitive / confidential information.
- This is not the occasion to provide new information -> the submitted Business Plan must already be fully developed, clear and complete.
- The Business Plan is about the main product being upscaled, so typically related to the project Coordinator owning the product. But other partners could also be part of it, if they are involved in the future further commercialization of this product.
- Template provided by the CBE for the Business Plan (**new**).

Topics of interest  
identified for  
cluster members

▶ and

How to write a  
good proposal



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# Full list of 2025 Call topics

Different types of projects:

- **Feedstock-oriented**
- **Market oriented**
- **Re-industrialization & technologies**

**No competition between topics!**

Type	Topic	Budget (million €)	Number of proposals to be selected
FLAG	HORIZON-JU-CBE-2025-IAFlag-01 Urban-industrial symbiosis for <b>bio-waste</b> valorisation	20	1
FLAG	HORIZON-JU-CBE-2025-IAFlag-02 Bio-based <b>drop-ins/smart drop-in platform chemicals</b> , via cost-effective, sustainable and resource-efficient conversion of biomass	20	1
FLAG	HORIZON-JU-CBE-2025-IAFlag-03 Circular-by-design <b>fibre-based packaging</b> with improved properties	20	1
FLAG	HORIZON-JU-CBE-2025-IAFlag-04 <b>Retrofitting of (bio)refineries industrial plants</b> towards higher-value bio-based products	20	1
IA	HORIZON-JU-CBE-2025-IA-01 Sustainable <b>macroalgae</b> systems for innovative, added-value applications: cultivation and optimised production systems	14	2
IA	HORIZON-JU-CBE-2025-IA-02 SSbD bio-based solutions to replace hazardous conventional chemicals for <b>textiles production</b>	14	2
IA	HORIZON-JU-CBE-2025-IA-03 Scaling-up <b>nutritional proteins</b> from alternative sources	14	2
IA	HORIZON-JU-CBE-2025-IA-04 Cost-effective and robust <b>continuous biotech</b> bio-based processes	14	2
IA	HORIZON-JU-CBE-2025-IA-05 SSbD bio-based <b>polymers/copolymers</b> unlocking new market applications	14	2
RIA	HORIZON-JU-CBE-2025-RIA-01 <b>Valorisation of untapped forest biomass</b>	7	2
RIA	HORIZON-JU-CBE-2025-RIA-02 Bio-based and biodegradable <b>delivery systems for fertilising products</b> to reduce microplastics pollution & promote soil health	7	2
RIA	HORIZON-JU-CBE-2025-RIA-03 Alternative biomanufacturing routes for <b>natural and synthetic rubber</b>	7	2
CSA	HORIZON-JU-CBE-2025-CSA-01 Develop and deploy new curricula and knowledge exchange practices relevant to bio-based systems	1	1
Total		172	21

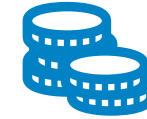
# ► HORIZON-JU-CBE-2025-RIA-01 Valorisation of untapped forest biomass



**Type of action:** RIA  
**TRL at project end:** TRL5



**Indicative budget:** 7 M€  
**Expected EU contribution per project:** 3.5 M€



**Funding rate:** 100%

## Expected outcomes:

- Climate change mitigation/adaptation, forest restoration/resilience, biodiversity, rural development
- Added value to the feedstock at the point of origin
- Informed decision-making by forest owners and managers; development of new value chains, innovative business models and technologies; engagement and innovation capacity; positive social impact in rural areas

## Scope:

- Develop **innovative planning tools and technologies for harvesting, storage, pre-treatment** of residual and/or low value, unused or underutilized forest biomass or lower volume or/and less homogeneous biomass. Adopt **decentralised approaches** (including small-scale, mobile, containerised units) considering challenges across different European regions and among large, medium-sized, and small companies.
- Develop and test **the feasibility of conversion routes** to bio-based chemicals and compounds, materials, products, assessing the viability of new business models around these concepts.
- Test the **local value chain** by optimising logistics, improving cost efficiency, and collaborating with central hubs for further processing and refining. Actively involve local forest owners, managers, and other primary sector operators (e.g., farmers, horticulturists) to develop and test novel value chains in pilot areas.
- Address feasibility for different ownership types and cooperative structures

In addition to CBE specific requirements:

- Provide recommendations for the development of EU carbon farming certification methodologies
- Actively prevent soil degradation and biodiversity and carbon loss



# ► HORIZON-JU-CBE-2025-RIA-02 Bio-based and biodegradable delivery systems for fertilising products to reduce microplastics pollution & promote soil health



**Type of action:** RIA  
**TRL at project end:** TRL5



**Indicative budget:** 7 M€  
**Expected EU contribution per project:** 3.5 M€



**Funding rate:** 100%

## Expected outcomes:

- Scalable, SSbD biodegradable delivery systems of fertilising products, with potential spillover effect on other additional inputs (such as pesticides and seeds) applicable to agriculture
- Enhanced understanding of the biodegradation process, control factors of biodegradable delivery systems of fertilising products and their impact on plant development, on soil health (including soil microbiome) and water.
- Creation of new value chains with increased synergies between farmers and bio-based industries.

## Scope:

- Develop circular and sustainable production processes for **novel bio-based and biodegradable delivery system(s) for fertilising products**. In addition, assess the applicability/adaptability of the delivery system(s) to **additional possible agricultural inputs such as pesticides and seeds**.
- Validate the delivery system(s) at **lab-scale and/or small-scale field trials**, ensuring agronomic efficiency, safety, scalability and sustainability with similar or improved properties compared to conventional systems.
- Assess the **long-term effect and biodegradability** of delivery system(s) when applied in natural soil conditions, applying standard tests, methods and protocols. Considering also dispersion in water

In addition to specific CBE requirements:

- In applying the **SSbD framework** consider the **delivery systems and their decomposition products (including microplastics)** and take into account **different farming systems** (incl. organic agriculture).
- As part of MAA, **engage with farmers** to develop and test the newly established delivery systems **on demo/pilot farms**, and analyse the effects on plant development, soil health and water.

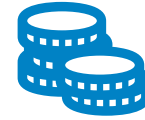
# ► HORIZON-JU-CBE-2025-IA-03 Scaling-up nutritional proteins from alternative sources



**Type of action:** IA  
**TRL at project end:** TRL7



**Indicative budget:** 14 M€  
**Expected EU contribution per project:** 7 M€



**Funding rate:** 60% except for non-profit legal entities (100%)

## Expected outcomes:

- Increased availability of sustainably sourced nutritional proteins.
- Increased resilience of food systems via diversification of protein sources.
- Contribution to the sustainability of food systems (land & water use, energy consumption, N cycle, nutrients).
- Improved consumers' awareness and acceptance of proteins from alternative sources

## Scope:

- Demonstrate innovative processes for the **extraction/production of proteins for application as nutritional food** starting from alternative sources: **plants, invertebrates, microorganisms, fungi, aquatic biomass, fermentation of bio-based feedstock (including biogenic gaseous carbon).**
- **Target nutritional proteins for food**; cascading co-production of proteins for feed is also in scope. **Pure proteins, protein-rich mixtures and protein-enriched ingredients are in scope**
- **Address DSP** (when applicable), to meet the targeted quality and stability for final applications.
- Demonstrate **nutritional adequacy** of the proteins and their effect on food formulations. Additional properties are also in scope depending on the application

In addition to CBE specific requirements:

- Test the safety of developed proteins and formulations in line with EU regulatory requirements and EFSA guidelines. Identify potential regulatory gaps and provide recommendations to overcome potential bottlenecks.
- Include a task on consumer awareness and acceptance: **involve end-users (including consumers)** to assess market acceptance of the novel proteins and incorporate insights in product development.

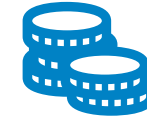
# ► HORIZON-JU-CBE-2025-IA-05 SSbD bio-based polymers/copolymers unlocking new market applications



**Type of action:** IA  
**TRL at project end:** TRL6-7



**Indicative budget:** 14 M€  
**Expected EU contribution per project:** 7 M€



**Funding rate:** 60% except for non-profit legal entities (100%)

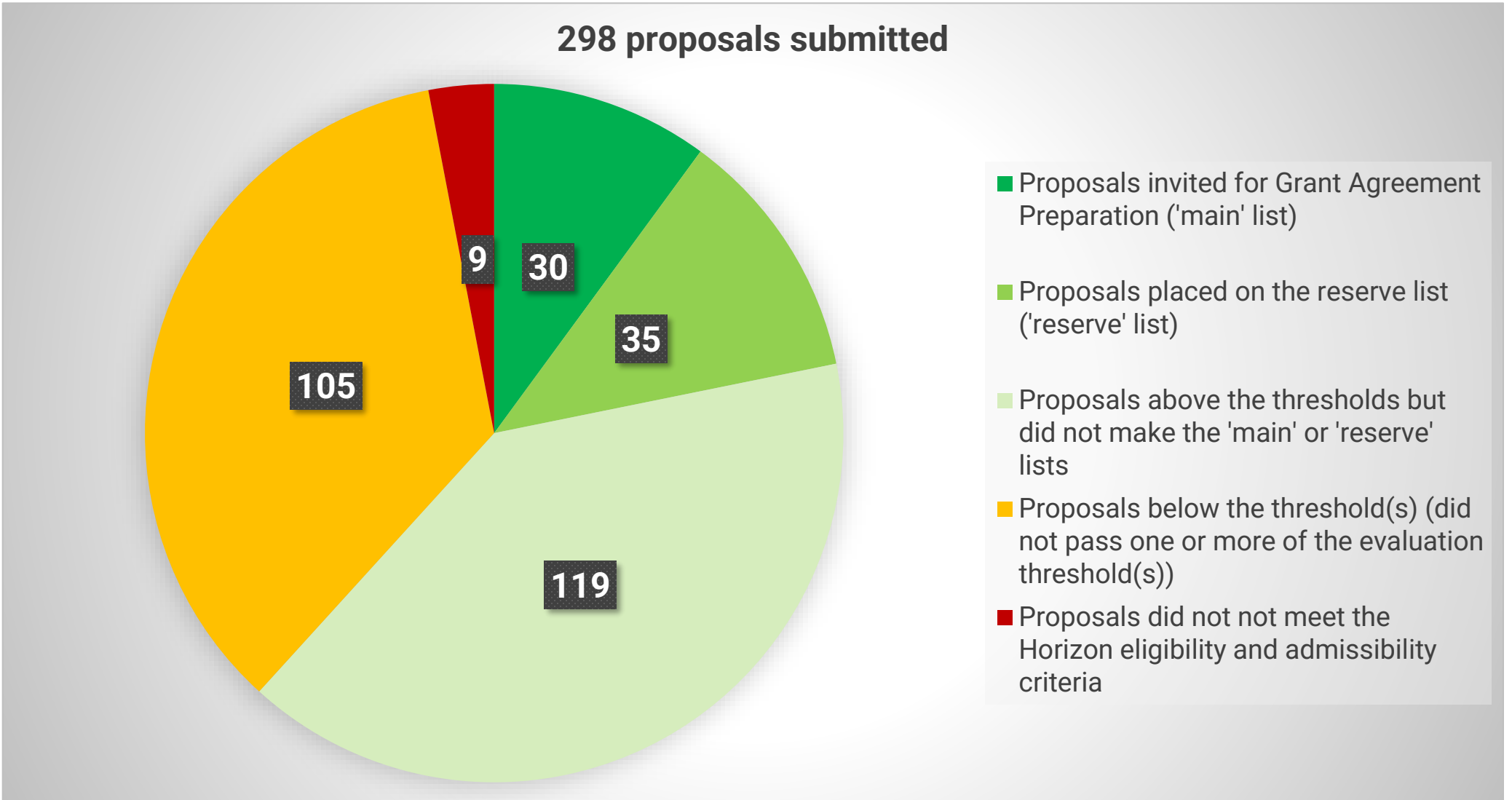
## Expected outcomes:

- Availability of broader range of SSbD bio-based (co-)polymers meeting market requirements.
- Improved or novel properties unlocking novel applications and/or market sectors.
- Improved sustainability, safety and circularity when compared to selected benchmarks.
- Improved social acceptance of bio-based products in the transition to sustainable materials.

## Scope:

- Demonstrate (TRL: 6-7) the production of **bio-based (co-)polymeric structure(s)** with functional properties at least on par with fossil-based counterparts (if any) and/or higher than bio-based benchmarks (if any). Adding new functionalities compared to benchmarks is also in scope.
- Address resource efficiency measures to achieve costs reduction and higher sustainability, as for example reduction of primary energy consumption, water recycling, (bio)-catalyst recycling, side-streams/by-products valorisation, etc.
- Include a task to **validate (at minimum at end TRL 5) the targeted (co-)polymeric structure(s) into end products** proving to meet market requirements. Ensure (co)polymer(s) processability and compatibility with downstream conversion route(s) into end products. The development of bio-based composites is not in scope. Proposals should target **at least two application sectors**.
- **Eco-design** the bio-based (co)polymeric structure and related end products to address sustainable EoL. Validate the selected EoL option(s) of the (co)-polymeric structure at minimum at TRL 5. Landfilling/incineration are not in scope as EoL options.

## ► 2024 results



# ► Top shortcomings & weaknesses highlighted by the CBE – all proposals

## Scoring principles:

<b>0/5</b>	Fails to address the criterion	<b>3/5</b>	Good (number of <b>shortcomings</b> )
<b>1/5</b>	Poor (serious inherent <b>weaknesses</b> )	<b>4/5</b>	Very good (small number of <b>shortcomings</b> )
<b>2/5</b>	Fair (significant <b>weaknesses</b> )	<b>5/5</b>	Excellent (any <b>shortcoming</b> is minor)

Top 5 most common <u>weaknesses</u> ordered by frequency	Top 5 most common <u>shortcomings</u> ordered by frequency
1. <b>Impact</b> – Expected outcomes in topic text	1. <b>Impact</b> – Expected outcomes on topic text
2. <b>Excellence</b> – Methodology	2. <b>Implementation</b> – Work Plan (overall structure, tasks, milestones, deliverables...)
3. <b>Excellence</b> – Ambition (going beyond state of the art) + appropriate TRLs	3. <b>Implementation</b> – Risk table including mitigation measures
4. <b>Excellence</b> – Is the proposal (fully or partially) in scope	4. <b>Excellence</b> – Methodology
5. <b>Implementation</b> – Work plan (overall structure, tasks, milestones, deliverables)	5. <b>Excellence</b> – Ambition (going beyond the state of the art) + appropriate TRLs



## ► Top shortcomings in proposals scoring between 13.5 and 14.5 / 15

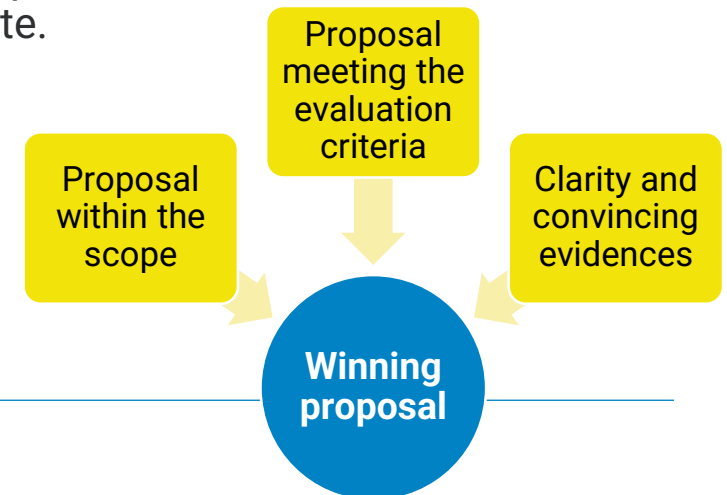
85 such proposals in 2024 call, very well written proposals

Top 5 most common <u>shortcomings</u> ordered by frequency	
1. Impact – Business model (only IAs including Flagships)	
2. Impact – Economic viability check (only in RIAs)	
3. Implementation – Work Plan (overall structure, tasks, milestones, deliverables...)	
4. Impact – Communication measures	
5. Excellence – Ambition (going beyond the state of the art) + appropriate TRLs	

CBE is an **impact-driven programme** and has very specific impact-related evaluation subcriteria: **business case, business model, business plan.**

## ► Tips and tricks

- ✓ **Familiarise yourself with all the CBE documentation** including “umbrella documents” to fully understand the CBE context, high-level strategic objectives and priorities to be able to explain how your project is not only matching the topic requirements, but will also provide valuable contribution to those objectives and priorities. ([CBE-JU-AWP-2025-second-amendment.pdf](#))
- ✓ Anticipate by starting to **prepare your proposal early**. The CBE has shown a correlation between early start-up and a high success rate
- ✓ Build and close as soon as possible a **solid consortium** covering all the requirements.
- ✓ The information needed by the evaluator should be easy to find in your proposal → have clear understanding of all the evaluation criteria and the structure of the template.
- ✓ Be ambitious but credible and realistic.
- ✓ Justify your claims. The proposal must be clear and convincing.



## PNO presentation and CBE-related track record



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# About PNO



**40+**

Years of  
experience



**10**

Countries



**2k+**

Funding  
applications  
per year



**4k+**

Research  
partners



**€ 1 bn**

Project total  
costs

## Partners PNO

- GIA Sweden, [www.giasweden.com](http://www.giasweden.com)
- BMGZ, USA, [www.bmgzstrategies.com](http://www.bmgzstrategies.com)
- Rödl & Partners, Central and Eastern Europe, [www.roedl.com](http://www.roedl.com)

# UNIQUE SUCCESS FOR PNO & ARTTIC IN CBE

## 9 FUNDED FLAGSHIPS AMONG 20!



Construction of a first-of-its-kind industrial unit of production of natural ingredients from microalgae cultivation.



Construction of the first industrial unit of production of Cyrene™.



Construction of the first biorefinery inside the chemical platform "CHEMESIS".



Flagship demonstration of industrial scale production of nutrient resources from mealworms to develop a bioeconomy new generation.



Large-scale plant producing a high-quality protein ingredient and innovative commercial products for the food, pet food and aquaculture sectors.



**AgriChemWhey**

An integrated biorefinery for the conversion of dairy side streams to high value bio-based chemicals.



Construction of the biggest 2G lignocellulosic biorefinery in Europe.



Circular Initiative for Recycling and waste Conversion into Lactate Extracts



Next generation circular biobased flagship packaging: a catalyst for the green transition

**+1 new Flagship 2024:  
Will be announced in May**



# UNIQUE SUCCESS FOR PNO & ARTTIC IN CBE

## 9 FUNDED IA DEMO, RIA AND CSA



Scaled-up production of next-generation carbohydrate-derived building blocks to enhance the competitiveness of a sustainable european chemicals industry

(IA Demo)



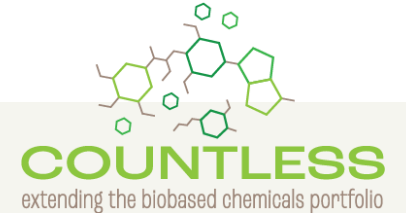
BIO-Based pESTicides production for sustainable agriculture management plan

(IA Demo)



Demonstrating more efficient enzyme production to increase biogas yields

(IA Demo)



Cost-effective production of lignin platform chemicals – Extending the biobased chemicals portfolio

(IA Demo)



Separation, fractionation and isolation of biologically active natural substances from corn oil and other side streams

(RIA)



Valuable Products from Algae Using New Magnetic Cultivation and Extraction Techniques

(RIA)



CO-creating the next generation platform of PILOT and demo infrastructures, unlocking faster innovation and EU bioeconomy growth

(CSA)



Supporting regional environmental sustainability assessment for the BIO-based sectors to improve INnovation, INdustries and INclusivity in SOUTH Europe

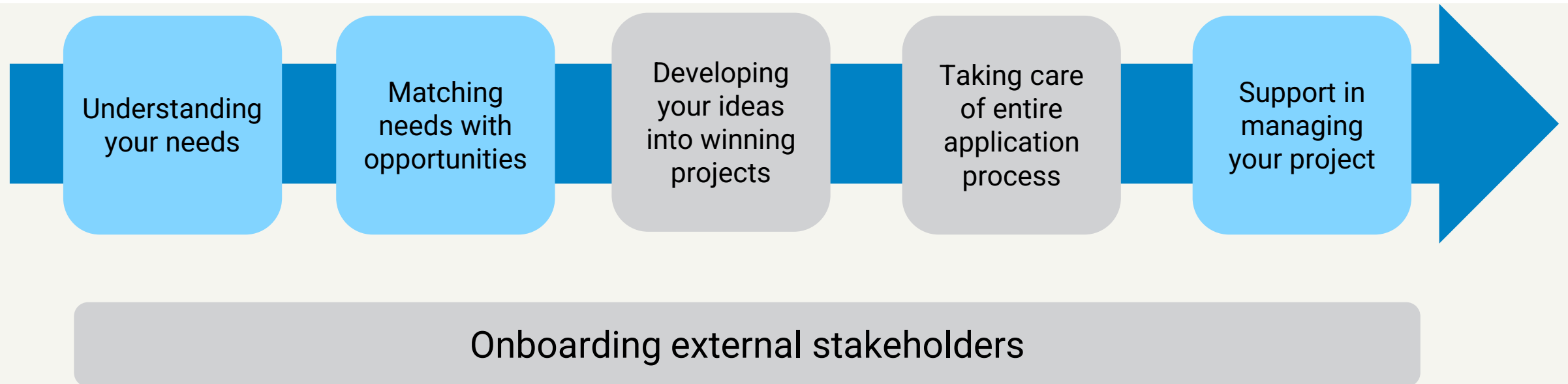
(CSA)



Drive a programme of collaboration and knowledge sharing within the bio-based industry to stimulate innovation partnerships for developing new products and markets in the sector

(CSA)

# CENTRALISED PROCESS MANAGEMENT



- For each project, a dedicated team with :
- 1 senior consultant
  - 1-2 technical consultants
  - 1 financial consultant



Thank you for your attention

Any question?

**Sources:**

[Documents | Circular Bio-based Europe Joint Undertaking \(CBE JU\) \(europa.eu\)](#)