

Call for project proposals 2023

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> Bio-based Industries Consortium



Co-funded by the European Union



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CBE JU specifics

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Circular Bio-based Europe Joint Undertaking (CBE JU) and its Objectives





Circular Bio-based Europe Joint Undertaking

€2 billion public-private initiative

European Union Represented by the European Commission

Bio-based Industries Consortium

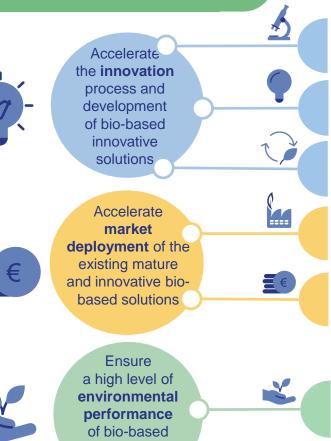
Launched in 2021, operates until 2031

> Part of Horizon Europe programme

> > Contributing to the European Green Deal

Building on the success of its predecessor BBI JU





industrial systems

General and Specific CBE JU Objectives

Increase cross-disciplinary **research and innovation** activities, reaping its benefits for the development and demonstration of **sustainable bio-based solutions.**

Increase and integrate the research and innovation **capacity of stakeholders** across the EU to unlock **bioeconomy potential** even in regions with underdeveloped capacity.

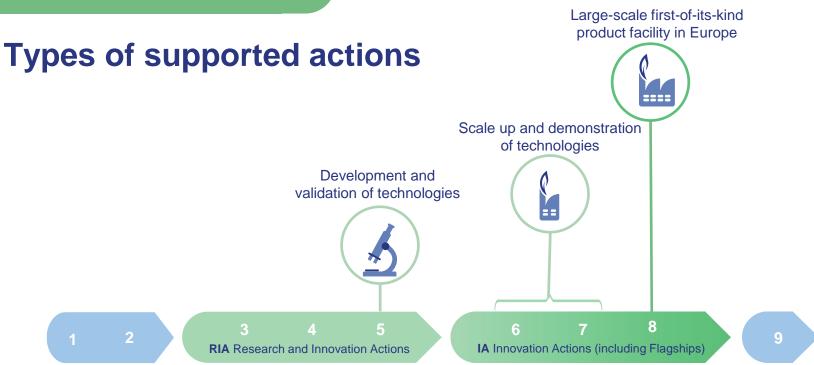
Increase the **research and innovation** capacity and development of sustainable bio-based innovations, by ensuring that sustainability issues and environmental performance are integrated throughout the whole **innovation chain**.

Reinforce the integration of **bio-based research** and innovation in EU biobased industries and increase the involvement of R&I actors, including feedstock providers, in the **bio-based value chains**.

Reduce the risk for research and innovation investment in bio-based companies and projects.

Ensure that **circularity** and environmental considerations, including contributions to **climate neutrality** and **zero pollution** objectives, are considered in the development and implementation of R&I bio-based projects and facilitate **societal acceptance**.





Technology Readiness Level (TRL)

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

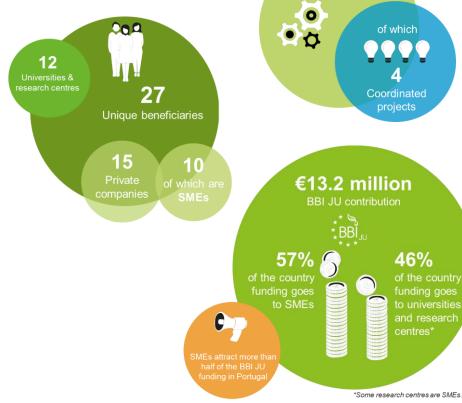
Circular Bio-based Europe Joint Undertaking

A competitive bioeconomy for a sustainable future

26 projects



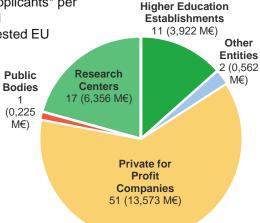
BBI JU Participation in graphics



CBE JU Call 2022 Application in graphics

Number of Portuguese applicants* per Type of Organisation and corresponding total requested EU contribution

* Total of 82 applicants corresponds to 55 unique entities



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CBE JU Annual Work Programme (AWP) 2023:

Topics



18 topics and their budget

Type of action		Topics HORIZON-JU-CBE-2023	Million EUR
	IAFlag-01 Optimised and integrated wood-based value chains		17
IA-	IAFlag-02	Expansion and/or retro-fitting of biorefineries towards higher-value bio-based chemicals and intermediates	17
flagship	IAFlag-03	Bio-based packaging materials with improved properties: barrier, food contact, forming, printability, safety, recyclability /circularity-by-design	17
	IAFlag-04	Valorisation of aquatic biomass waste and residues	10
	IA-01	Small scale biorefining in rural areas	15
	IA-02	Production of safe, sustainable, and efficient bio-based fertilisers to improve soil health and quality	15
	IA-03	Improve fermentation processes (including downstream purification) to final bio-based products	15
	IA-04	Recycling bio-based plastics increasing sorting and recycled content (upcycling).	15
	IA-05	Development of scalable, safe bio-based surfactants, with an improved sustainability profile	15
	IA-06	Selective, sustainable production routes towards bio-based alternatives to fossil-based chemical building blocks	15
	IA-07	High performance, circular-by design, bio-based composites	15
	R-01	Phyto-management; curing soil with industrial crops, utilising contaminated and saline land for industrial crop production	10
	R-02	Optimised forest-based value chains for high value applications and improved forest management	10
RIA	R-03	Robust and optimised industrial biotech and chemical/industrial biotech processes	10
	R-04	Development of novel, high-performance bio-based polymers and co-polymers	10
	R-05	Pre-normative research to develop standards for biodegradability of bio-based products in controlled and in open environments	5
	S-01	EU-wide network of pilot plants and testing facilities, improving SMEs and start-ups' access to scale-up	1.5
CSA	S-02	Supporting the capacity of regions in environmental sustainability assessment for the bio-based sectors	3



Call topic structure

		HORIZON-JU-CBE	-2023-XX-NN Topic title					
Topic		Type of action	Research and Innovation Action					
iop		Indicative budget	The total indicative budget for the topic is EUR 10 million					
		Expected EU contribution per project	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					
		TRL	TRL 4-5 at the end of the project					
AWP 2023	Торіс	Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities					
2023		Link to CBE JU SRIA Strategic Priorities	1.1.2: Develop innovative production systems in the bio-based industry 1.1.3: Develop innovative bio-based products					
Тор	ic	CBE JU KPIs	 4.5 Number of products with improved life cycle environmental performance 5.1 Number of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular-by-design) 5.2 Number of projects developing circular production practices (incl. industrial & industrial urban symbiosis) 6 Increase innovative bio-based outputs and products 					



Links to SRIA priorities

CBE JU TOPICS AWP2023

	Strategic	Research and Innovation (SRIA) priorities	Y	Trager I	12900 Frague	faglin	Flagson IP	01 IP	02 IP	63 IP	04 12	12 1B	A6 18	AI P	a1 / 4	2 R	22 A2	54 P.5	\$ 5	भे दुर्घ
FEEDSTOCK		Strategic priority 1.1.1 - Ensure the availability and quality of sustainable bio-based feedstock					х							х	х					х
		Strategic priority 1.3.1 - Protect and enhance biodiversity and ecosystem services in bio- based feedstock supply systems												х	х					х
		Strategic priority 2.1.1 - Demonstrate the sustainable supply of bio-based feedstock				Х	Х	х		х	х	Х		х						
		Strategic priority 1.1.2 - Develop innovative production systems in the bio-based industry					х									х	х			
	PROCESSING	Strategic priority 1.3.2 - Improve environmental performances of bio-based processes														х				
		Strategic priority 2.1.2 - Deploy innovative production technologies	х	х	Х	Х	Х	х	х	Х	х	Х	Х							
PRODUCTS		Strategic priority 1.1.3 - Develop innovative bio-based products															х	Х		
		Strategic priority 2.1.3 – Scale-up production and market uptake of innovative bio-based products	х	х	х	х		х			х	х	х						х	
		Strategic priority 1.2.1 - Stimulate research activities in countries and regions with underdeveloped R&I capacity for bio-based systems																	х	х
		Strategic priority 1.2.2 – Increase the aw areness and capacity of national and regional research support agencies for industrial bio-based systems																		х
ŊŊ	Communication	Strategic priority 1.2.3 - Facilitate the development of expertise in bio-based fields by improving higher education and skills development in the private sector																		
CROSS-CUTTING		Strategic priority 2.1.4 - Build policy makers' aw areness and acceptance of bio-based solutions																		
s S		Strategic priority 3.1.3 – Facilitate social acceptance of bio-based applications	х	х	Х	Х												Х		
Sos		Strategic priority 2.2.1 – Improve the risk profile of bio-based projects																		
Б	Finance	Strategic priority 2.2.2 - Develop investment tools and approaches that mitigate the investment risk in bio-based systems																	х	
	Environmental sustainability	Strategic priority 3.1.1 - Set effective and robust environmental sustainability and circularity criteria for bio-based systems																		
	framework	Strategic priority 3.1.2 - Incorporate the environmental sustainability and circularity criteria in bio-based systems	х	х	х	х			х	х	х	х	х							х



Links to CBE JU KPIs

CBE JU TOPICS AWP 2023

CBE KPIs: Objectives and Units of measurement Strategic participation and integration of feedstock producers and suppliers towards large-scale valorisation of sustainable biomass 1.1 N of primary producers, involved as project beneficiaries and/or engaged in value chains at project level 1.2 N of bio- waste management actors, involved as project beneficiaries and/or engaged in value chains at project level 2 Unlock sustainable and circular bio-based feedstock for the industry 2 N of innovative bio-based value chains created or enabled based on sustainably-sourced biomass х 3 Ensure environmental sustainability of feedstock 3.1 N of projects using feedstock generated with practices that contribute to enhance biodiversity х х х х х 3.2 N of projects using feedstock generated with practices aiming at zero-pollution (soil, water, air) and/or at reducing water consumption х х х х х х 3.3 N of projects using feedstock generated with practices contributing to climate change mitigation and/or adaptation х х х x х 4 Improve environmental sustainability of bio-based production processes and value chains 4.1 N of projects with innovative & sustainable processes that contribute to GHG emission reduction х х х х 4.2 N of projects developing innovative & sustainable processes that improve on resource efficiency and zero-waste х х х х х х х х 4.3 N of projects developing innovative & sustainable processes enabling to address zero pollution х х х х х х х 4.4 N of projects with innovative & sustainable processes with improved energy efficiency x х х х х х 4.5 N of products with improved life cycle environmental performance х х х х х 5 Expand circularity in bio-based value chains 5.1 N of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design) 5.2 N projects developing circular production practises (incl. industrial & industrial urban symbiosis) х x x х х 6 Increase innovative bio-based outputs and products 6.1 N of innovative bio-based dedicated outputs, with novel or significantly improved properties vs relevant alternatives х х 6.2 N of innovative bio-based drop in outputs meeting applications requirements Improve the market uptake of bio-based products 7 N of brand owners involved as project partners and/or engaged with other mechanisms х X 8 Attract investment on the bio-based sector 8 N of actions implemented at project level to attract investment and/or to create awareness in the investment/funding community 9 Increase resilience and capacity in the bio-based sector 9 N of projects contributing to develop the skills and capacity needed by the EU bio-based sector х 10 Improve participation of regions and countries with high unexploited potential and strategic interest to develop it 10.1 N of participants from the underrepresented EU countries and region х х х х 10.2 N of regional hubs established and operated to process bio-based feedstocks and other cooperation aspects х х 10.3 N of projects with synergies with other funding programmes at EU, national or regional level х



Topic

Topic

AWP

2023

Expected

outcomes

Scope

Topic



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

CBE JU Call 2023: Specific requirements

3



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



- 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.

Example 1: IA Flagship Criterion: ≥ 20% IKOP	BIC member	Industry / Academia	Total eligible costs	Funding rate	Requested EU contribution	IKOP		
Coordinator (BIC member)	Y	industry	€ 7,000,000	60%	€ 4,200,000	€ 2,800,000		
Beneficiary 1	Ν	academia	€ 590,000	100%	€ 590,000			
Beneficiary 2 (BIC member)	Y	industry	€ 5,000,000	60%	€ 3,000,000	€ 2,000,000		
Beneficiary 3	Ν	industry	€ 3,000,000	60%	€ 1,800,000			
Beneficiary 4	N	academia	€ 800,000	100%	€ 800,000			
TOTAL			€ 16,390,000		€ 10,390,000	€ 4,800,000		
Percentage IKOP = € 4,800,000 = 29,3% > 20%								

BIC has set up an open and fast procedure to become a BIC member: https://biconsortium.eu/membership



In-kind contribution to operational activities (IKOP)

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

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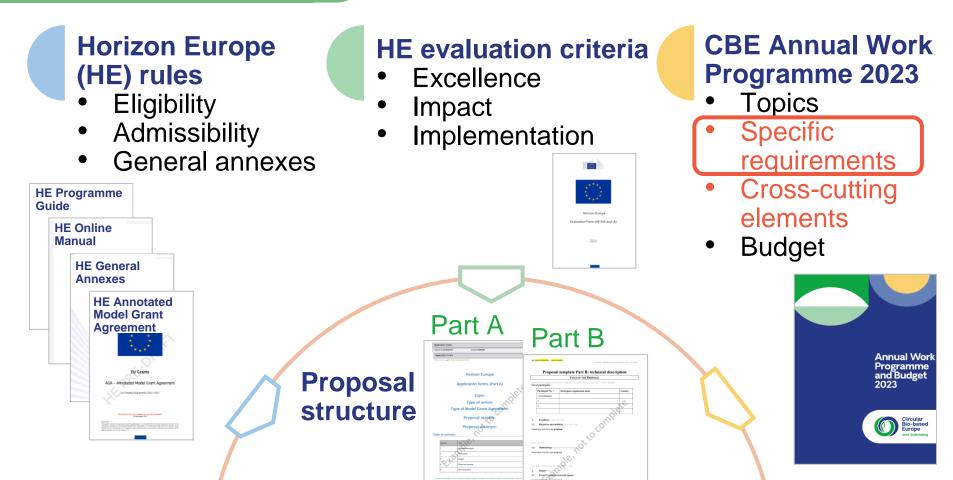
→ Minimum percentage of IKOP must be reflected in the budget of partners that are BIC members.

Example 2: IA Criterion: <u>≥ 15% IKOP</u>	BIC member	Industry / Academia	Total eligible costs	Funding rate	Requested EU contribution	IKOP		
Coordinator (BIC member)	Y	industry	€ 3,200,000	60%	€ 1,920,000	€ 1,280,000		
Beneficiary 1	N	academia	€ 590,000	100%	€ 590,000			
Beneficiary 2	N	industry	€ 1,500,000	60%	€ 900,000			
Beneficiary 3	N	industry	€ 3,000,000	60%	€ 1,800,000			
Beneficiary 4	N	academia	€ 800,000	100%	€ 800,000			
TOTAL			€ 9,090,000		€ 6,010,000	€ 1,280,000		
Percentage IKOP = €1,280,000 = 14,1% < 15%								

BIC has set up an open and fast procedure to become a BIC member: https://biconsortium.eu/membership



Horizon Europe + CBE requirements





CBE JU specific requirements





Specific requirement of the CBE JU Call 2023	Type of action	Where to include it in Part B
Feedstock sourcing	RIA and IA, incl. FLAG	Part B – Structured question (Y/N) in the introduction
Feedstock sustainability requirements (a,b,c,d)	RIA and IA, incl. FLAG	Part B – Structured question (Y/N) in the introduction
Description of feedstock	RIA and IA, incl. FLAG	Part B – 1.2 Methodology
Environmental performance - Ex-ante assesment		
 Identification of environmental issues Estimation of environmental sustainability Estimation of carbon removal 	RIA and IA, incl. FLAG	Part B – 1.2 Methodology
Ex-post assessment of environmental sustainability and circularity		
 Dedicated task Dedicated task or WP (LCA) Dedicated task or WP (LCSA) 	RIA IA FLAG	Part B – 3.1 Workplan and resources
Economic viability	RIA	Part B – 2.2 Measures to maximise
Business case Business plan	IA, incl. FLAG FLAG	impact Annex (Business plan)
Recommendations to stakeholders	IA, incl. FLAG	Part B – 3.1 Workplan and resources
Multi-actor approach	IA, incl. FLAG RIA and CSA, when specified	Part B – 1.2 Methodology

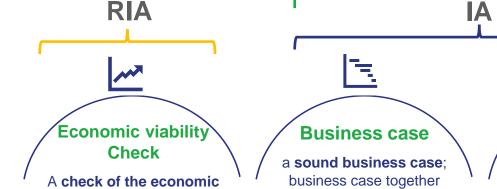




A competitive bioeconomy for a sustainable future CBE JU Call 2023: Requirements

Economic viability Business Case/Model/Plan

IA – Flagship

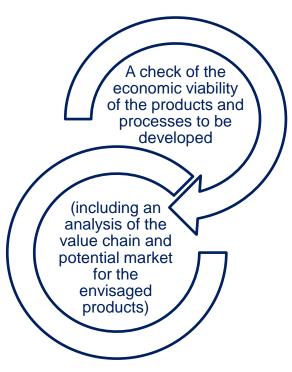


A check of the economic viability of the products and processes to be developed (including an analysis of the value chain and potential market for the envisaged products)





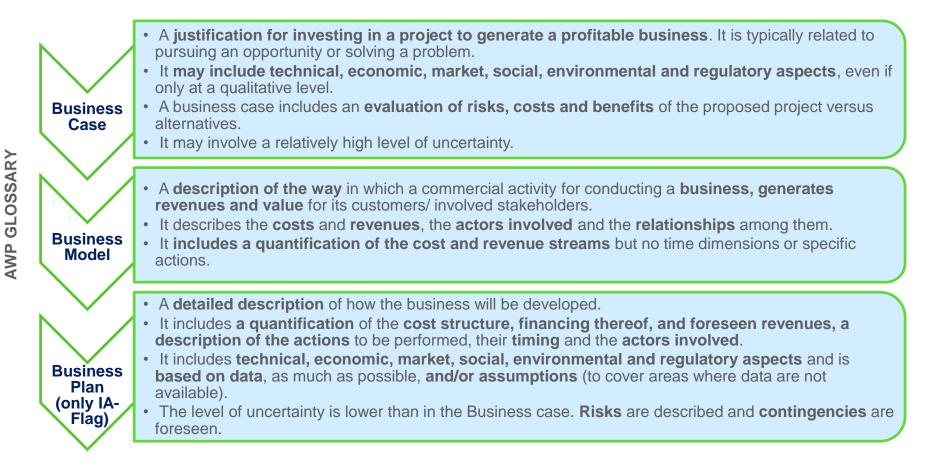
RIA: Economic viability check



- ✓ Dedicated section on 'economic viability'
- Focus on the potential market of the products and/or processes to be developed including some quantitative information for example on the market size and trends
- ✓ Analysis of the value chain
- ✓ if possible, include project projections estimates of costs of production/revenues of products or technologies



IA: Business case / model / plan

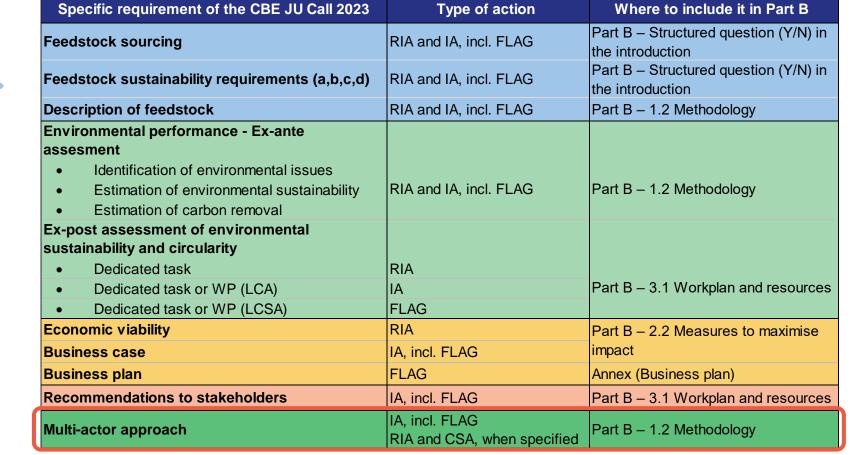




CBE JU specific requirements

Where to include it in Part B







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A competitive bioeconomy for a sustainable future CBE JU Call 2023: Requirements

Multi-actor approach: who and why



Ensures adequate involvement of all **key actors in the value chains** relevant for the topic and the objective of the proposed project.



Involvement along the whole project's course: from project idea, planning to implementation, communication and dissemination of results and to demonstration 'Co-creation' process'.
 the practical and local
 knowledge of key actors are used to develop solutions and create 'coownership' of results





Multi-actor approach



- Involvement of all key actors in the value chains Involvement ۲۲ ۲ along the whole project's course Co-creation process and co-ownership of results Acceptability and uptake
 - **Relevant actors** are clearly **identified** (e.g. depending on the topic, primary producers, processing industry, end-users, brand owners, etc.).
 - Sufficient representation of relevant actors consortium or/and with other forms of engagement.
 - **Needs/ problems/challenges/opportunities** of key actors (from biomass supply to end-users) are considered from concept idea to implementation.
 - High-quality knowledge exchange activities, tools or/and mechanisms enable co-creation and co-ownership of results (e.g participative workshops, advisory bodies, platforms, etc.) are planned.
 - **Dissemination and exploitation channels/ actions** addressing to the targeted actors are used.



Multi-actor approach in practice

"Project XXX will develop an **Advisory Board of Farmers** including regional authorities, food manufacturers, farmers, biorefinery owners, investors etc."

"In order to ensure a good engagement of the key stakeholders, **project partners cover the whole value chain from the field to the table** (farmers, technology providers, manufacturers, environmental assessment experts, end users)."





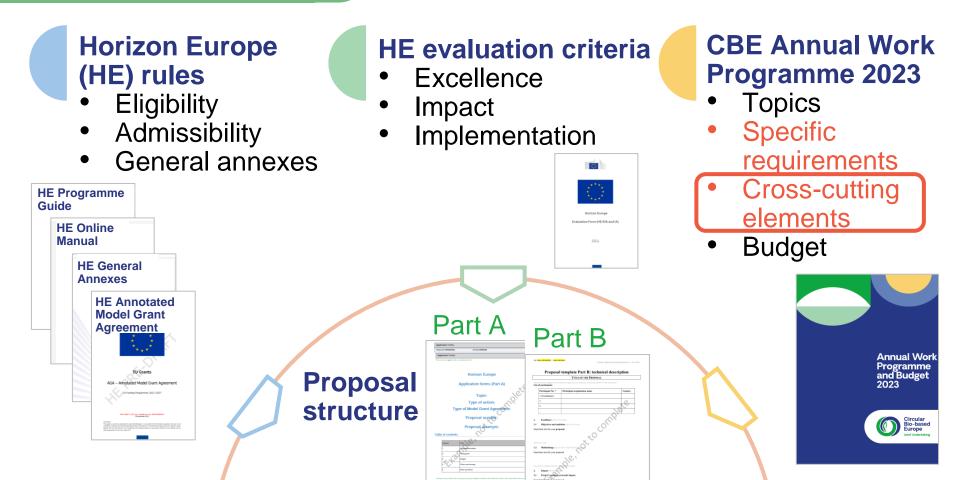
"6 interregional workshops will be held during the project to connect with actors from other regions not directly involved in the project"

"Project XXX consortium will integrate both primary producers and owners / providers of side streams directly and through biomass suppliers in contact with project partners."



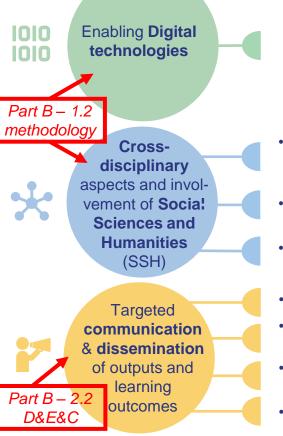


Horizon Europe + CBE requirements





Cross-cutting elements (AWP, 2.2.3.2)

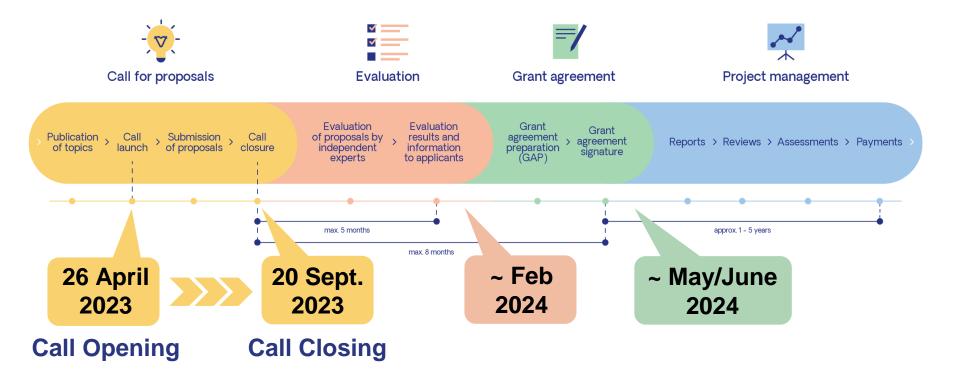


- Apply and/or adapt **existing/mature or novel digital technologies** provided that they are instrumental to achieving the project's outcomes and scope.
 - RIA and IA, incl. Flagships: chemicals, materials, catalysts and process design & modelling (including bioinformatics); process monitoring and optimization; tracking and tracing; data analytics and data management
 - ✓ IA, incl. Flagships: (real-time) process monitoring and optimisation (incl. environmental performance); predictive maintenance and plant engineering.
- Foster **cross-disciplinarity** and consider the social, economic, behavioural, institutional, historical and/or cultural dimensions, as appropriate, of the proposed circular bio-based innovations.
- Ensure that **contributions from the SSH are integrated** at various stages of their proposed project, and the actions required, participants and disciplines involved.
- Consider **public awareness raising, social engagement and social impact** aspects with respect to circular bio-based solutions.
- Disseminate the outputs and learning outcomes from the project.
- Incorporate **publications** on data, methodologies, including LCA assessment-related data to peer-reviewed scientific journals and conferences.
- Contribute data and results to the European Commission's Knowledge Centre for Bioeconomy.
- Add links with any trusted **repositories** for data, results and methodologies.

CBE JU Call 2023: Proposal preparation



Proposal preparation





A good and convincing CBE JU proposal



Ensure that the proposed work is within the **scope** of the topic



Demonstrate that the idea is **ambitious** and goes beyond the **state of the art**



Your **methodology** must take into account open science practices and interdisciplinarity (+ gender dimension, if applicable)



Show clearly how the proposed work could contribute to the **outcomes and impacts** described in the work programme (the pathway to impact)



Describe the planned measures to **maximise the impact** of the project ('plan for dissemination & exploitation including communication activities')



Demonstrate the quality of the **implementation**, including work plan, resources and participants

Read carefully the **AWP2023** and the **Strategic Research and Innovation Agenda (SRIA)**, for a good understanding of the context and long-term objectives of CBE JU !!!



In addition to having an **excellent idea** for a CBE JU project, you'll need to...

Address ALL # topic requirements # CBE JU specific requirements Understand the evaluation criteria (including novelties of Horizon Europe)

Be clear and convincing!



In other words,

an **excellent idea** is the basis of a good proposal but **is not sufficient**....

The expected impacts and implementation aspects are as important !

The proposal should excel in each single criterion ! Be **specific** in your objectives and expected impacts and **clearly** demonstrate how you aim to implement and sustain them



Aim for total "Topic eclipse"



Topic+ = Topic text + HE requirements + CBE specific requirements + CBE cross-cutting elements

every single word in topic text counts!



Two main sources of information

ly Area — User count and roles
count and roles
r an organisation

https://webgate.ec.europa.eu/funding-tendersopportunities/display/OM/Online+Manual



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



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Do you want to be an expert evaluator?



CBE JU (and the whole EU research family) are always looking for **new, competent experts** in diverse fields

To be considered for the Call 2023 evaluations, please:

- Create or update your expert profile via <u>https://ec.europa.eu/info/funding-</u> <u>tenders/opportunities/portal/screen/work-as-an-expert</u>
- E-mail <u>experts@cbe.europa.eu</u> ideally by 8 May 2023, mentioning your expert profile number (format EX20XX1234567)



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