

CBE JU Call 2023: introduction

Virginia Puzzolo

Head of the Programme Unit

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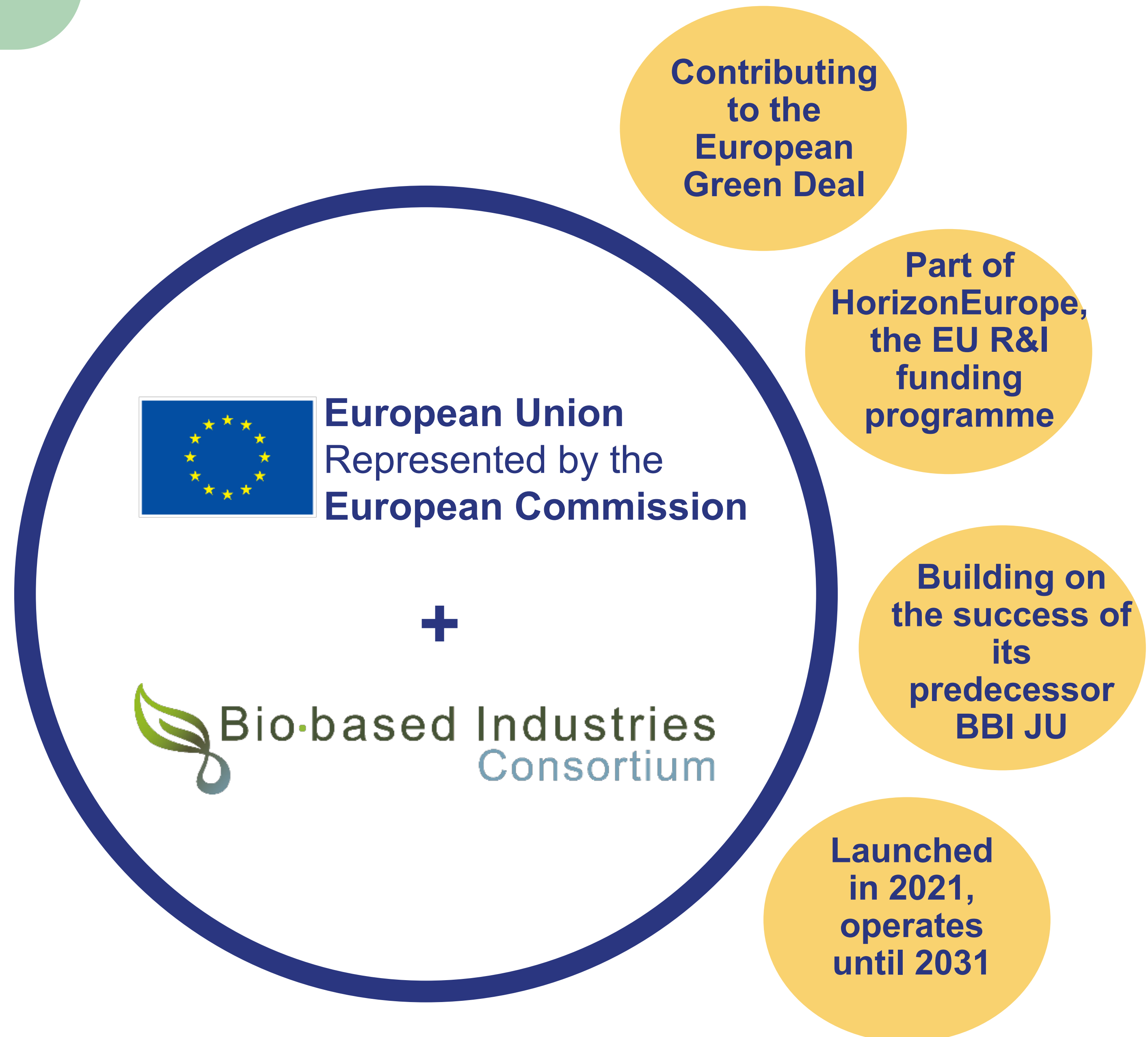
Circular Bio-based Europe Joint Undertaking (CBE JU) and its Objectives

1

Circular Bio-based Europe Joint Undertaking

€2 billion public-private initiative

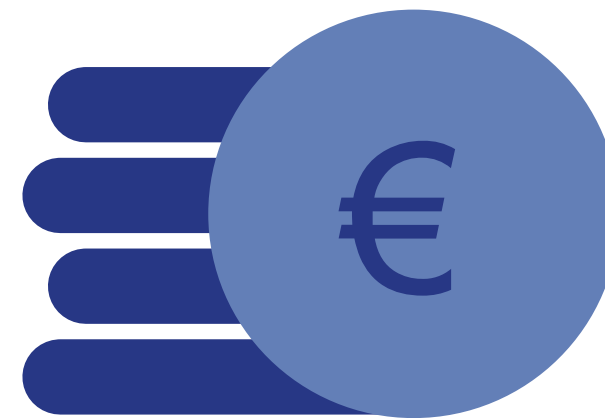
CBE JU is funding projects that deliver bio-based solutions – materials and products made from waste and biomass – in an innovative, sustainable and circular way



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

From SRIA to Call for proposals



From call to project



Call for proposals



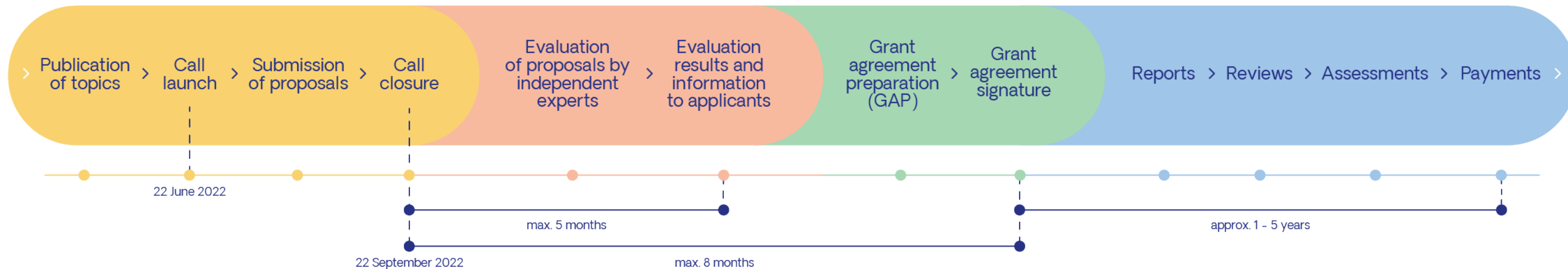
Evaluation



Grant agreement



Project management



CBE JU Annual Work Programme (AWP) 2023:

Topics

2

CBE JU Call 2023: topics list

No competition between topics !

Type of actions	Topics: HORIZON-JU-CBE-2023	Million EUR
IA-Flagships	IAFlag-01 Optimised and integrated woody-based value chains	17
	IAFlag-02 Expansion and/or retro-fitting of biorefineries towards higher-value bio-based chemicals and intermediates	17
	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
IAs	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
RIA	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
	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
CSA	S-01 EU-wide network of pilot plants and testing facilities, improving SMEs and start-ups' access to scale-up	1.5
	S-02 Supporting the capacity of regions in environmental sustainability assessment for the bio-based sectors	3
Total		215.5

Call topic structure

HORIZON-JU-CBE-2023-XX-NN **Topic title**

Type of action	Research and Innovation Action
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
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities
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
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

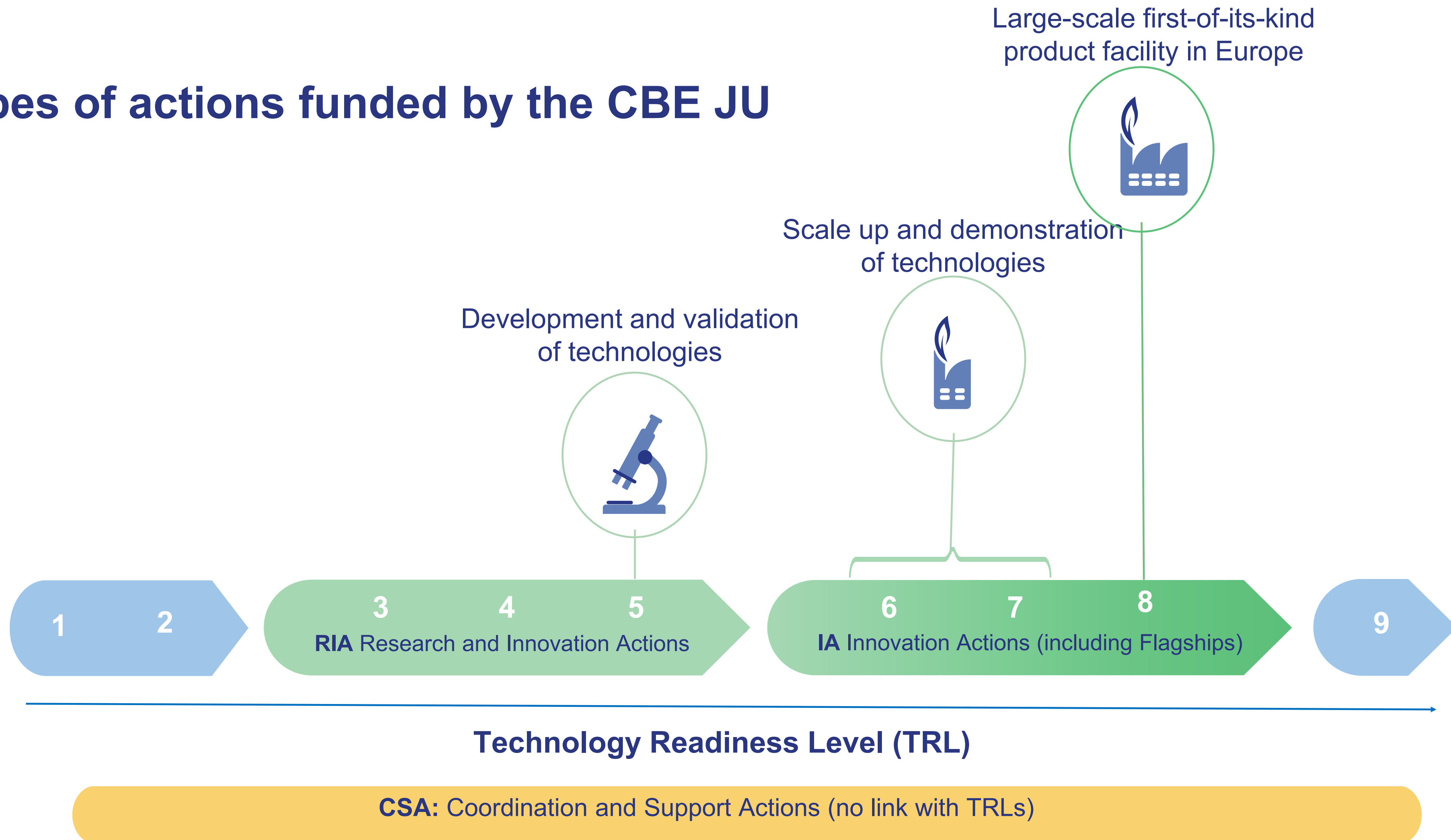
Topic

AWP
2023

Topic

Topic

Types of actions funded by the CBE JU



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Topic

AWP
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Topic

Topic

CBE JU General and Specific Objectives



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



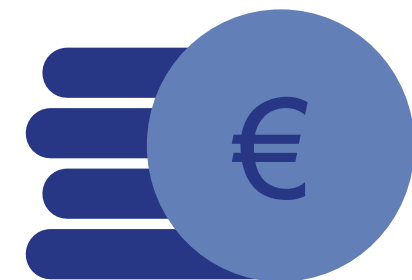
1.1. Increase cross-disciplinary **research and innovation** activities, reaping its benefits for the development and demonstration of **sustainable bio-based solutions**.



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



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



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



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



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



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

3.1. 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**.

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Topic

AWP
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Topic

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Links to the SRIA strategic priorities

SRIA Strategic priorities		CBE JU TOPICS AWP2023																		
		2023.IA-Flag01	2023.IA-Flag02	2023.IA-Flag03	2023.IA-Flag04	2023.IA-01	2023.IA-02	2023.IA-03	2023.IA-04	2023.IA-05	2023.IA-06	2023.IA-07	2023.R-01	2023.R-02	2023.R-03	2023.R-04	2023.R-05	2023.S-01	2023.S-02	
FEEDSTOCK		1.1.1 - Ensure the availability and quality of sustainable bio-based feedstock					X							X	X					X
		1.3.1 - Protect and enhance biodiversity and ecosystem services in bio-based feedstock supply systems												X	X					X
		2.1.1 - Demonstrate the sustainable supply of bio-based feedstock				X	X	X		X	X	X		X						
PROCESSING		1.1.2 - Develop innovative production systems in the bio-based industry					X									X	X			
		1.3.2 - Improve environmental performances of bio-based processes														X				
		2.1.2 - Deploy innovative production technologies	X	X	X	X	X	X	X	X	X	X	X							
PRODUCTS		1.1.3 - Develop innovative bio-based products															X	X		
		2.1.3 – Scale-up production and market uptake of innovative bio-based products	X	X	X	X		X			X	X	X						X	
CROSS-CUTTING	Communication	1.2.1 - Stimulate research activities in countries and regions with underdeveloped R&I capacity for bio-based systems																	X	X
		1.2.2 – Increase the awareness and capacity of national and regional research support agencies for industrial bio-based systems																		X
		1.2.3 - Facilitate the development of expertise in bio-based fields by improving higher education and skills development in the private sector																		
		2.1.4 - Build policy makers’ awareness and acceptance of bio-based solutions																		
		3.1.3 – Facilitate social acceptance of bio-based applications	X	X	X	X												X		
	Finance	2.2.1 – Improve the risk profile of bio-based projects																		
		2.2.2 - Develop investment tools and approaches that mitigate the investment risk in bio-based systems																	X	
	Environmental sustainability framework	3.1.1 - Set effective and robust environmental sustainability and circularity criteria for bio-based systems																		
		3.1.2 - Incorporate the environmental sustainability and circularity criteria in bio-based systems	X	X	X	X			X	X	X	X	X							X

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Expected Contribution to CBE KPIs

CBE KPIs: Objectives and Units of measurement		CBE JU AWP 2023 topics																	
		2023.IA-Flag01	2023.IAFlag-02	2023.IA-Flag03	2022.IAFlag-04	2023.IA-01	2023.IA-02	2023.IA-03	2023.IA-04	2023.IA-05	2023.IA-06	2023.IA-07	2023.R-01	2023.R-02	2023.R-03	2023.R-04	2023.R-05	2023.S-01	2023.S-01
1	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				x	x							x	x					
1.2	N of bio- waste management actors, involved as project beneficiaries and/or engaged in value chains at project level					x	x			x									
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				x	x	x	x		x	x		x	x					
3	Ensure environmental sustainability of feedstock																		
3.1	N of projects using feedstock generated with practices that contribute to enhance biodiversity						x			x	x	x		x					
3.2	N of projects using feedstock generated with practices aiming at zero-pollution (soil, water, air) and/or at reducing water consumption						x			x	x	x	x	x					
3.3	N of projects using feedstock generated with practices contributing to climate change mitigation and/or adaptation	x					x			x	x	x		x					
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					x		x			x					x			
4.2	N of projects developing innovative & sustainable processes that improve on resource efficiency and zero-waste	x	x		x	x		x	x		x					x			
4.3	N of projects developing innovative & sustainable processes enabling to address zero pollution				x	x	x	x		x	x					x			
4.4	N of projects with innovative & sustainable processes with improved energy efficiency	x	x			x		x			x					x			
4.5	N of products with improved life cycle environmental performance			x		x		x	x	x	x	x				x	x		
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)			x					x			x				x	x		
5.2	N projects developing circular production practises (incl. industrial & industrial urban symbiosis)	x	x	x	x				x					x	x	x	x		
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							x		x		x				x	x		
6.2	N of innovative bio-based drop in outputs meeting applications requirements							x		x		x				x	x		
7	Improve the market uptake of bio-based products																		
7	N of brand owners involved as project partners and/or engaged with other mechanisms			x						x		x						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																	x	x
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		x		x	x												x	x
10.2	N of regional hubs established and operated to process bio-based feedstocks and other cooperation aspects		x			x													
10.3	N of projects with synergies with other funding programmes at EU, national or regional level												x					x	x

Call topics



Expected outcomes: *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 project results are vital for the impact.

Scope: *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.



**Circular
Bio-based
Europe**
Joint Undertaking

Contact us

info@cbe.europa.eu
www.cbe.europa.eu

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