



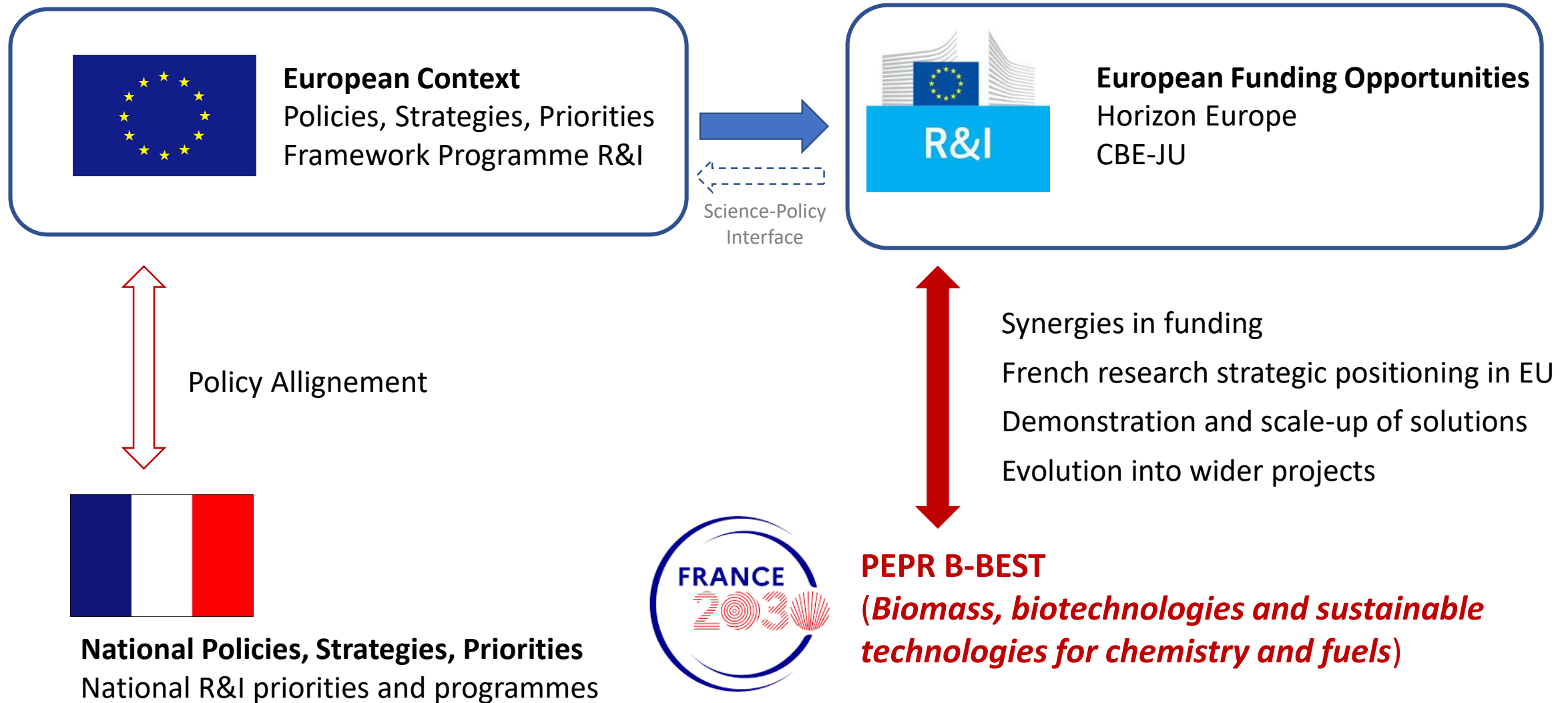
➤ European dimension of B-BEST Programme

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INRAE-DESSE (Direction de l'Enseignement supérieur des sites et de l'Europe)

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➤ European dimension of B-BEST Programme



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➤ European Context

> European Context

The EU Bioeconomy Strategy

5 main goals:

- Ensure food and nutrition security
- Manage natural resources sustainably
- Reduce dependence on non-renewable, unsustainable resources
- Limit and adapt to climate change
- Strengthen European competitiveness and create jobs

https://research-and-innovation.ec.europa.eu/research-area/environment/bioeconomy/bioeconomy-strategy_en

EU countries with a national bioeconomy strategy:

Austria, Finland, [France](#), Germany, Ireland, Italy, Latvia, the Netherlands and Spain

[BIOEAST](#) Initiative (Central & Eastern Europe)

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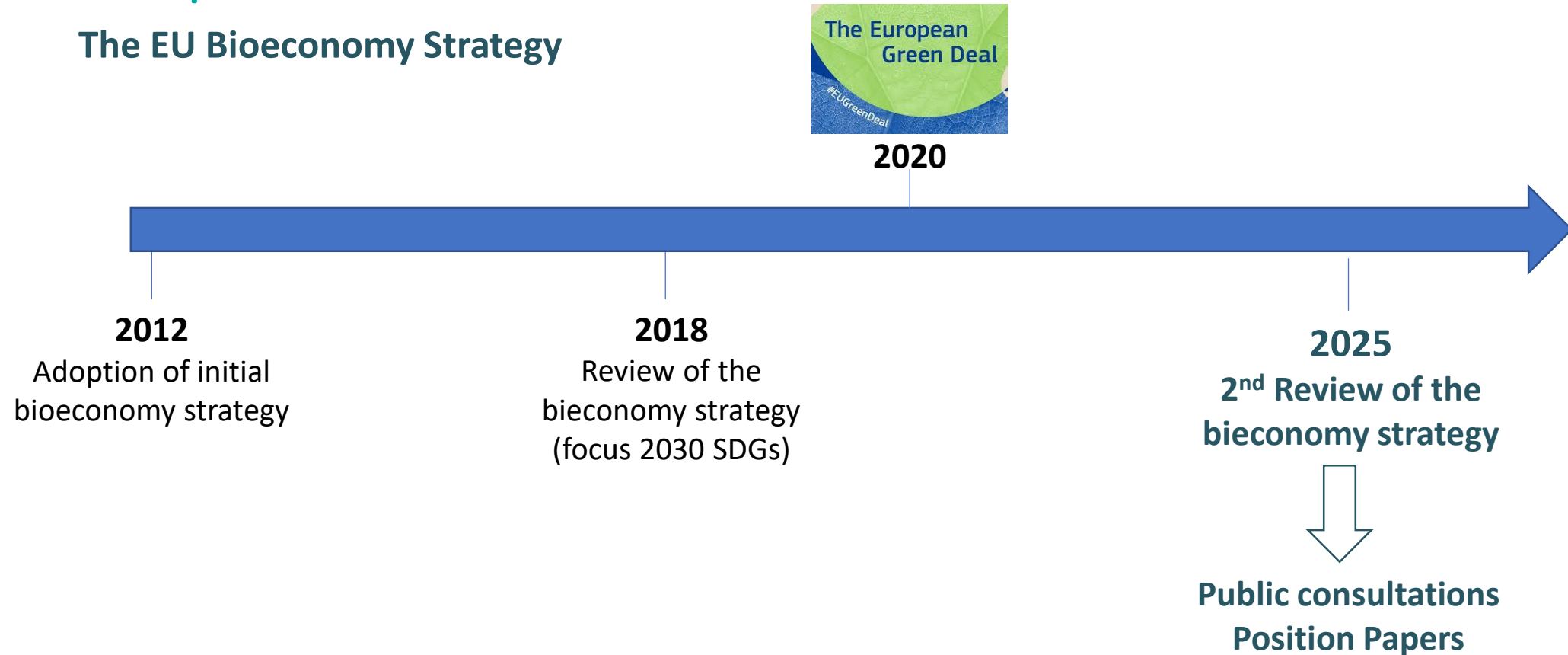
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Bioeconomy Action Plan 2018: (14 concrete actions)

- ❑ **Strengthen and scale-up the biobased sectors, unlock investments and markets**
 - mobilise stakeholders in developing and deploying sustainable biobased solutions
 - launch a €100 million circular bioeconomy thematic investment platform
 - analyse enablers and bottlenecks for the deployment of biobased innovations
 - promote and develop standards
 - facilitate the deployment of new sustainable biorefineries
 - develop substitutes to fossil-based materials that are biobased, recyclable and marine biodegradable
- ❑ **Deploy local bioeconomies rapidly across the whole of Europe**
 - launch a strategic deployment agenda for sustainable food and farming systems, forestry and biobased products
 - launch pilot actions for the deployment of bioeconomies in rural, coastal and urban areas
 - support regions and EU countries to develop bioeconomy strategies
 - promote education, training and skills across the bioeconomy
- ❑ **Understand the ecological boundaries of the bioeconomy**
 - Enhance knowledge on biodiversity and ecosystems
 - monitor progress towards a sustainable bioeconomy
 - promote good practices to operate the bioeconomy within safe ecological limits
 - enhance the benefits of biodiversity in primary production

> European Context

The EU Bioeconomy Strategy



The EC aims to highlight bioeconomy as a positive outcome of the Green Deal in a new narrative that showcases the bioeconomy & bioproducts as EU competitiveness enablers

➤ European Context

EC Communication « Boosting Biotechnology and Biomanufacturing in the EU » (March 2024)



Simplified regulatory framework and faster access to market

- Launch a study analysing how biotech legislation could be further streamlined. This study could lay the foundations for a possible EU Biotech Act.



Better support for scale-up and ease of navigating regulations

- Establish an EU Biotech Hub to help companies navigate through the regulatory framework and identify support to scale up, by end 2024.



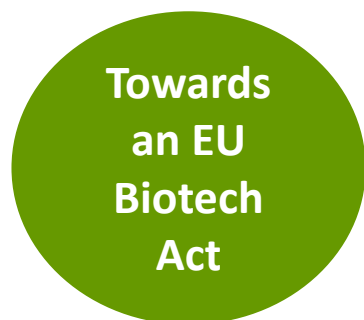
Foster a larger market for biotechnology and biomanufacturing

- Deepen cooperation with international partners, such as the US, on biotechnology research, under the Science and Technology Agreements, by end 2024.



Enable fair comparison with fossil-based products

- Further develop methodologies to ensure a fair comparison between fossil-based and bio-based products, in 2025, including the review of the Product Environmental Footprint.



Encourage more investments

- Launch a study to identify barriers and ways to support the consolidation of investment funding, by mid-2025.
- Advocate for the inclusion of biotech and biomanufacturing as part of the European Innovation Council accelerator Work Programme 2025.



Review the EU Bioeconomy Strategy by end 2025

- By taking into account the current societal, demographic and environmental challenges, reinforcing the bioeconomy's industrial dimension and its links to biotechnology and biomanufacturing to contribute to a stronger EU economy.



Accelerate the uptake of AI in biotechnology together with stakeholders

- Support structured exchanges with businesses and industry in biotech and biomanufacturing in the context of the GenAI4EU initiative.
- Raise awareness of facilitated access to the EuroHPC supercomputers for AI startups and the science and innovation community.
- Support the development of advanced generative AI models for healthcare, leveraging data, existing tools and using EuroHPC supercomputing capacities.



Some R&I topics on Horizon Europe 2025 Work Programme will be expected address the objectives of this Communication. Collaboration with USA encouraged

IBISBA Research Infrastructure clearly cited in the communication as a trusted digital repository and trusted network for the sector

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➤ European Context

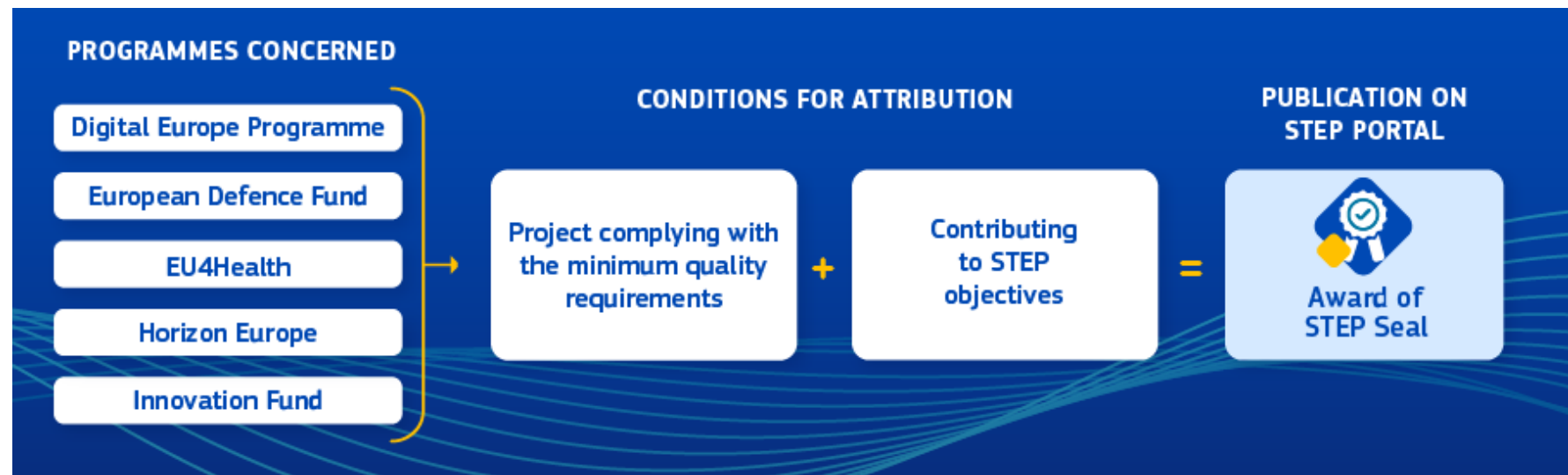
Strategic Technologies for Europe Platform (STEP)

Set up by the EU to support European Industry and boost investment in critical technologies in Europe. STEP will raise and steer funding across 11 EU programmes to three target investment areas:

- Digital technologies and deep-tech innovation
- Clean and resource efficient technologies
- Biotechnologies

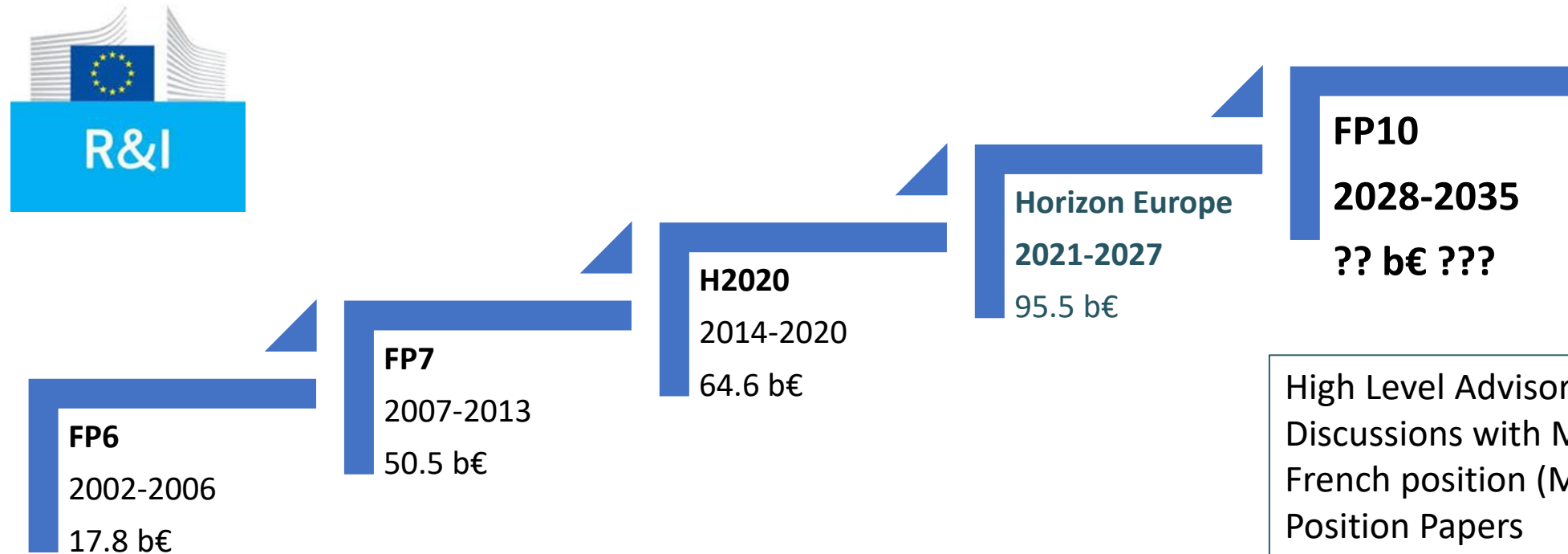


The **STEP Seal** (so called “**Sovereignty Seal**” under the STEP Regulation) is the EU quality label awarded to the high-quality projects contributing to the STEP objectives. It will give them visibility and help attract alternative or additional public and private investments.



➤ European Context

Preparation of the Next Framework Programme of R&I (FP10, 2028-2035)



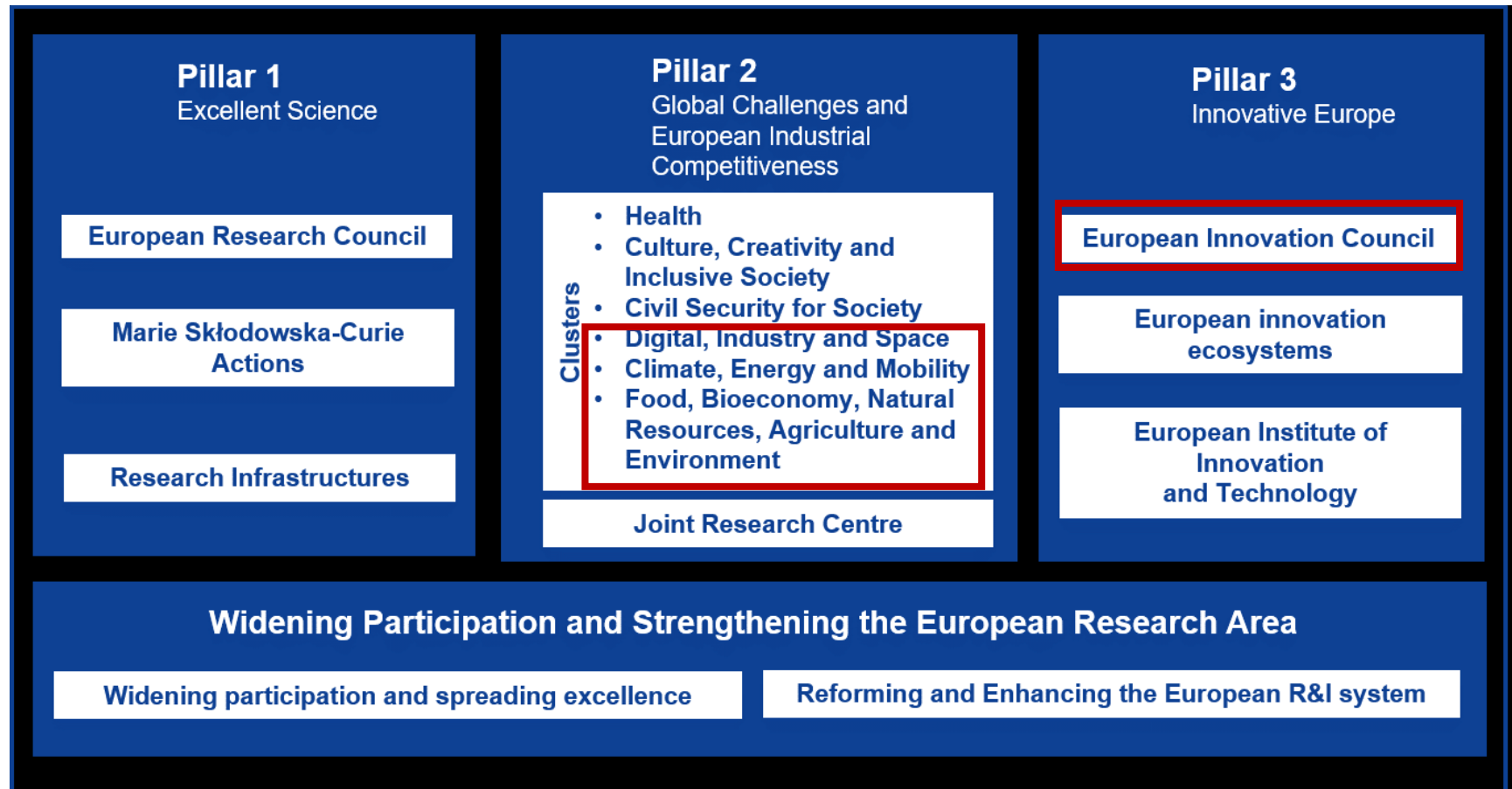
- High Level Advisor group
Discussions with MS
French position (MESR)
Position Papers
Discussions on:
- Budget
 - Structure of FP
 - Technicalities of calls/projects
 - **Priority themes**

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➤ European Funding Opportunities

➤ European Funding Opportunities

Horizon Europe (2021-2027)



➤ European Funding Opportunities

Horizon Europe (2021-2027) – Pillar II



Cluster 4 – Digital, Industry and Space

- Most calls of interest under « *Resilient value chains* » destination
- Bio-based materials, bio-based chemicals, SSbD
- Futur Partnership in Advanced Materials ([Innovative Materials for EU \(I'M FOR EU\)](#))

Cluster 5 - Climate, Energy and Transport

- Most Calls of interest under « *Sustainable, secure and competitive energy supply* » destination.
- Some calls on bio-based fuels, but minority...
- Few calls open until 17/09/2024 – check [here](#)

Cluster 6 – Food, Bioeconomy, Natural Resources, Agriculture and Environment

- Most calls of interest under « *CIRCBIO Circular economy and bioeconomy sectors* » destination
- Transitions, innovative & sustainable value chains, biotechnologies, forests, marine resources, waste,...

Typology of projects:

- RIAs, IAs, CSAs
- Large collaborative projects
- Min. 3 different countries (in average 15-25 partners)
- In average 3-12 M€/project
- Multi-actor approach
- Evaluation criteria: Excellence, Impact and Implementation

Calendar:

- Almost all 2024 are closed...
- **Work programme 2025 to be published in the 1st quarter 2025, project submissions expected under June-October 2025 (?)**

➤ European Funding Opportunities

Circular Bio-Based Europe Joint Undertaking (CBE-JU, 2021-2031)



- **The most important european financing scheme in European Bioeconomy** (part of the Horizon Europe Programme)
- Follow-up of the BBI-JU (Bio-based industries joint undertaking, 2014-2020)
- 2 billion € Public-Private Partnership between the European Commission and the BIC ([Bio-based Industries Consortium](#))

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

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

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



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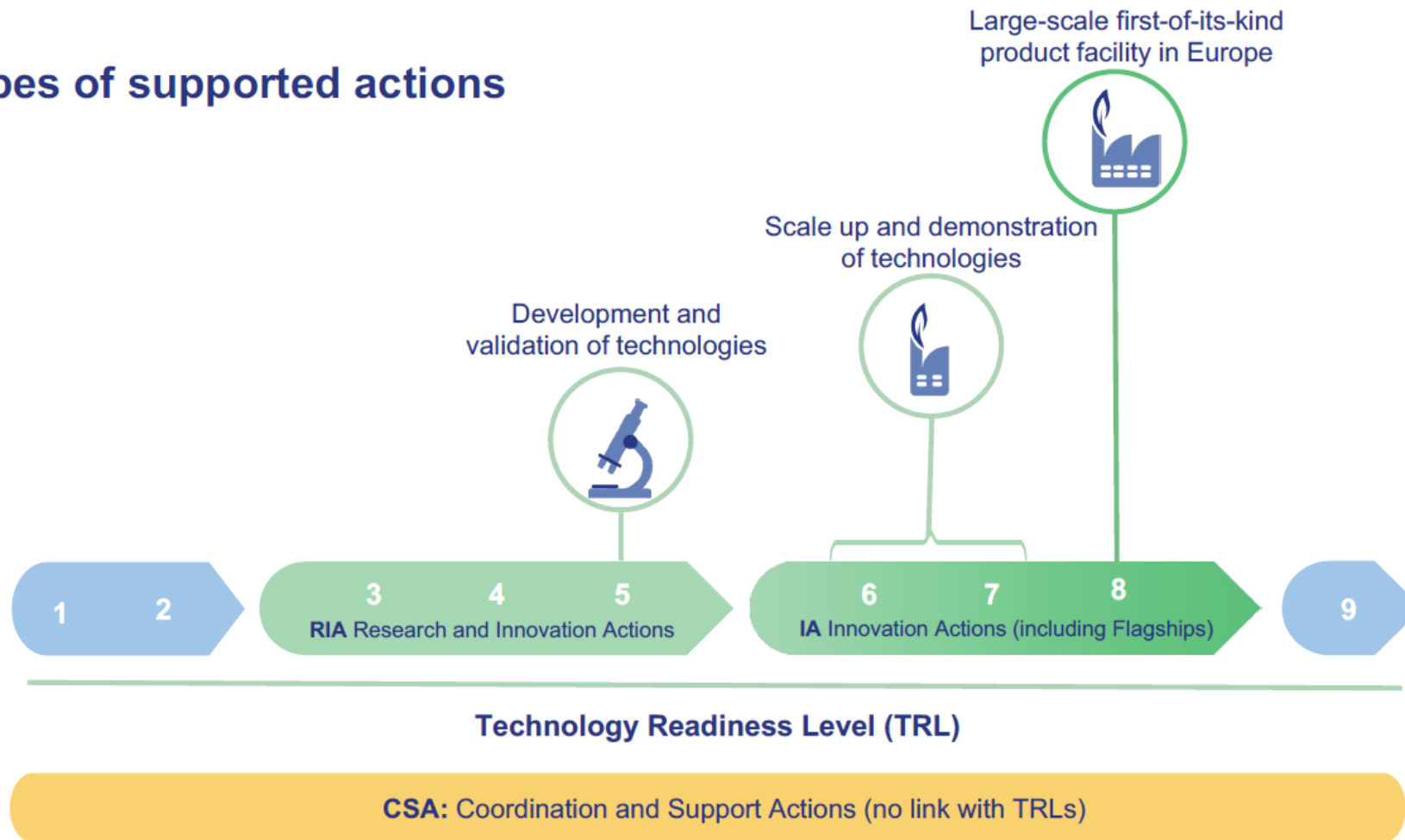
<https://www.cbe.europa.eu/>

➤ European Funding Opportunities

Circular Bio-Based Europe Joint Undertaking (CBE-JU, 2021-2031)



Types of supported actions



➤ European Funding Opportunities

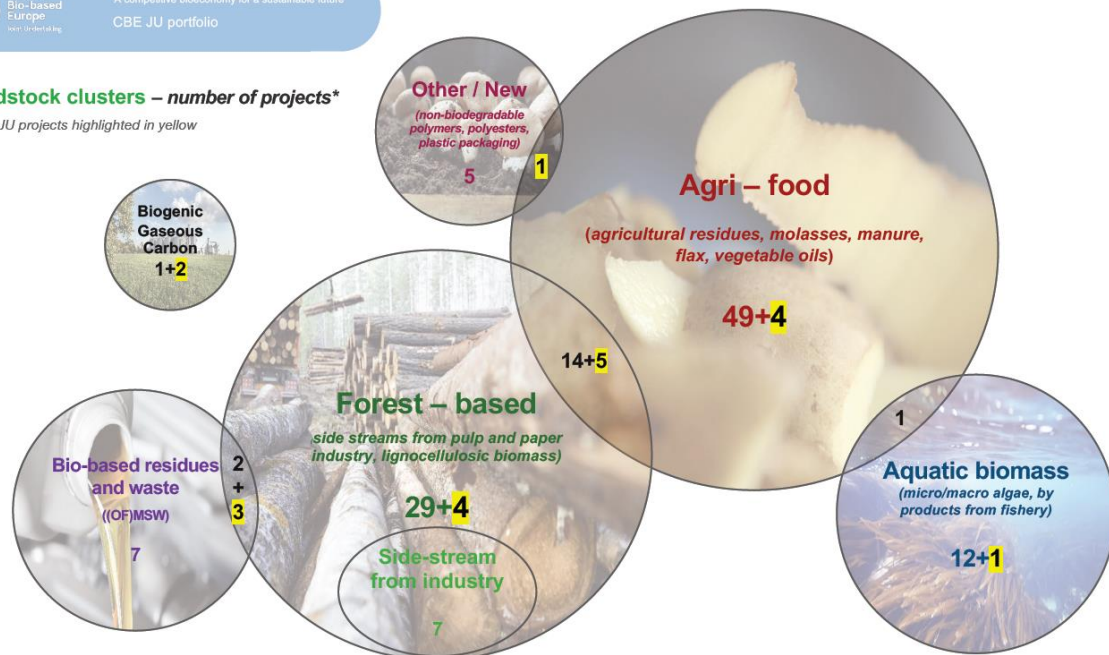
Circular Bio-Based Europe Joint Undertaking (CBE-JU, 2021-2031)



A competitive bioeconomy for a sustainable future
CBE JU portfolio

Feedstock clusters – number of projects*

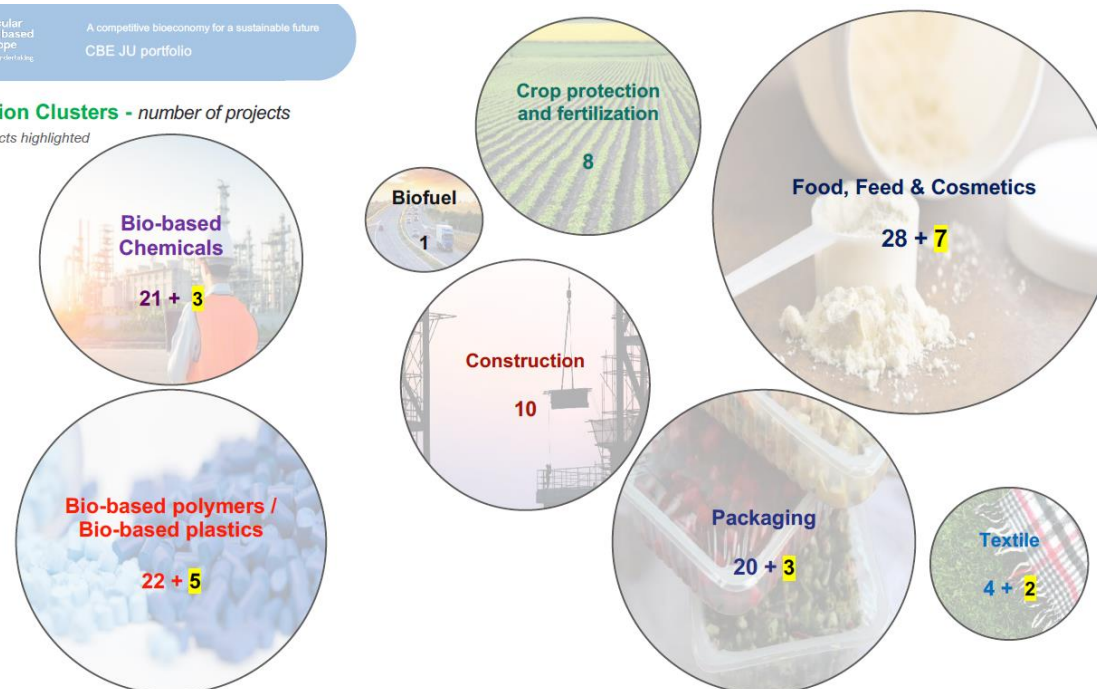
*CBE JU projects highlighted in yellow



A competitive bioeconomy for a sustainable future
CBE JU portfolio

Application Clusters - number of projects

*CBE JU projects highlighted



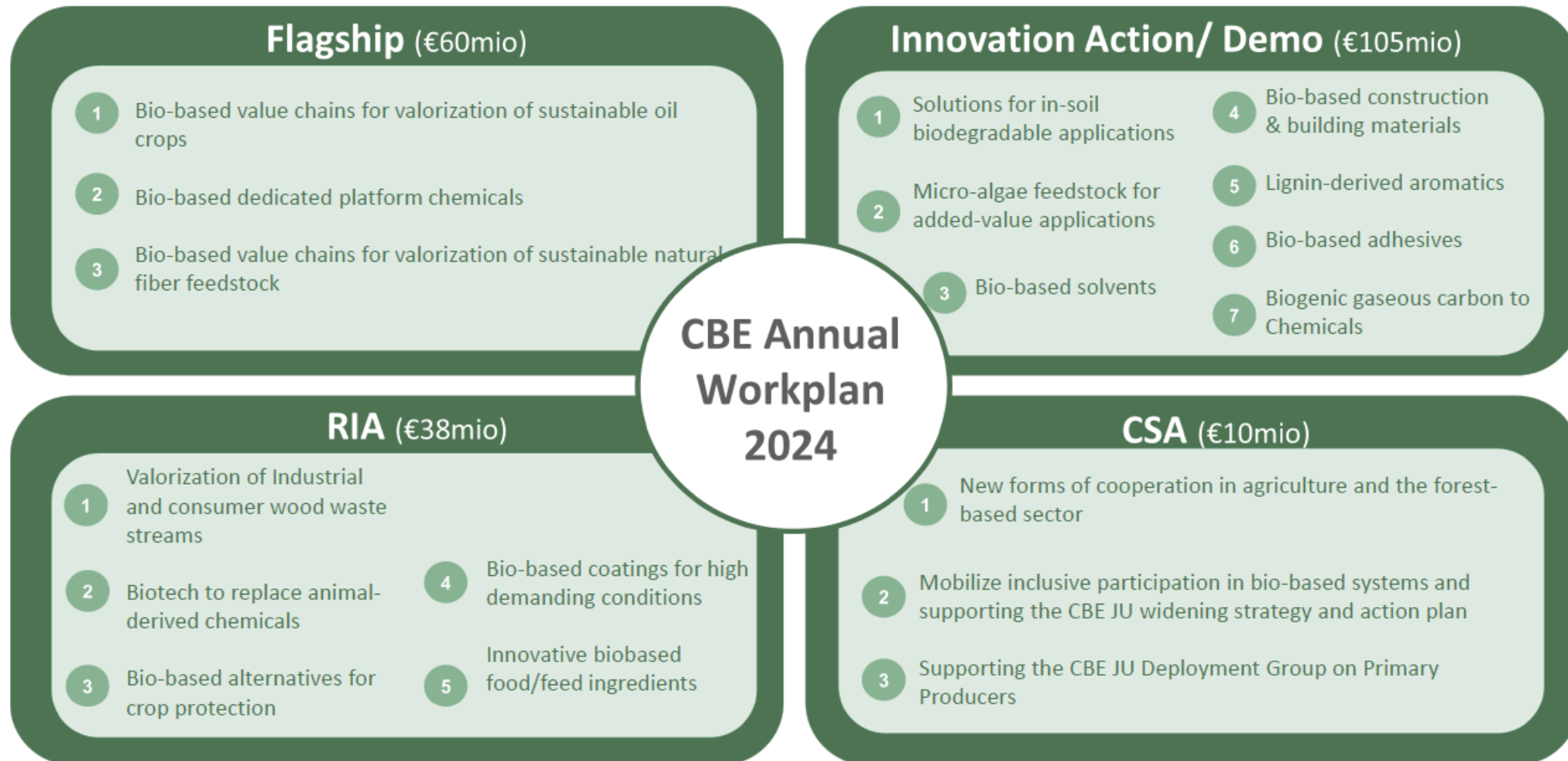
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<https://www.cbe.europa.eu/>; <https://www.cbe.europa.eu/projects>

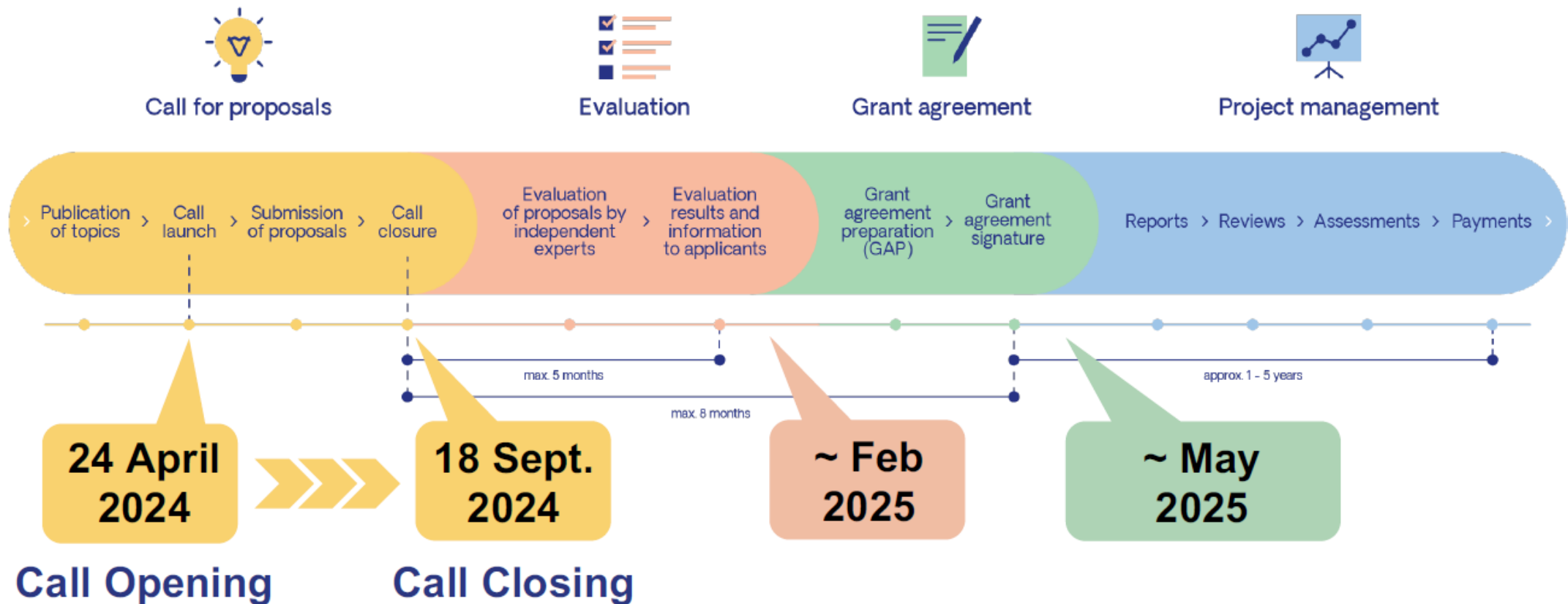
➤ European Funding Opportunities

Circular Bio-Based Europe Joint Undertaking (CBE-JU, 2021-2031)



➤ European Funding Opportunities

Circular Bio-Based Europe Joint Undertaking (CBE-JU, 2021-2031)



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<https://www.cbe.europa.eu/>; <https://www.cbe.europa.eu/projects>;
<https://www.cbe.europa.eu/infoday24>

➤ European Funding Opportunities

European Innovation Council

Pathfinder

- Early stage research on breakthrough technologies
- Grants up to €3/4 million
- Successor of FET (Open & Proactive)

Transition

- Technology maturation from proof of concept to validation
- Business & market readiness
- Grants up to €2.5 million

Accelerator

- Development & scale up of deep-tech/ disruptive innovations by startups/ SMEs
- Blended finance (grants up to €2.5 million; equity investment up to €15 million)
- Successor of SME instrument

- Mission to **identify, develop and deploy high risk innovations** of all kinds
 - Focus on **breakthrough, market-creating, deep-tech**
1. **Steered by EIC Board** of leading innovators (entrepreneurs, investors, researchers, ecosystem)
 2. **Business Acceleration Services** (coaches/ mentors, corporates, investors, ecosystem)
 3. **Pro-active management** (roadmaps, reviews, re-orientations, etc) with EIC Programme Managers
 4. **Follow up funding for results from Horizon** (ERC, EIT, collaborative) & national programmes



➤ European Funding Opportunities

<https://eic.ec.europa.eu/>

European Innovation Council – EIC Pathfinder

- Funds in research to develop the scientific basis to **underpin breakthrough technologies**
- supporting the **earliest stages of scientific, technological or deep-tech R&D**
- aiming to build on **new, cutting-edge directions in science and technology to disrupt a field and a market** or create new opportunities
- realising innovative technological solutions to **identify, develop and scale up breakthrough technologies and disruptive innovations in Europe**

EIC Pathfinder OPEN

- bottom-up approach with no predefined topics (“blanc topics”)
- 1 Call per year, usually deadline in March
- Max. 3 M€/project
- TRL 1-4
- At least 3 partners from 3 MS (in average 4-8)

EIC Pathfinder CHALLENGES

- top-down challenge-driven calls for tackling specific technology breakthroughs by portfolios of projects
- 1 Call per year, usually deadline in October
- Max. 4 M€/project
- TRL 1-4
- Possible Monobeneficiary (rare)

➤ European Funding Opportunities

<https://eic.ec.europa.eu/>

European Innovation Council

EIC Pathfinder Challenges 2024 (Deadline: 16 October 2024)

- ❑ **“Solar-to-X” devices** *(To make progress towards synthetic fuels and chemical technologies integrating all necessary conversion steps into a single device, solely and directly driven by solar energy)*
- ❑ **Towards cement and concrete as a carbon sink** *(To support breakthrough innovations and (alternative) pathways for decarbonised and carbon-negative cement and concrete)*
- ❑ **Nature inspired alternatives for food packaging and films for agriculture** *(To support interdisciplinary research leading to the development and production of sustainable nature inspired alternatives for food packaging and agricultural production such as, but not limited to, greenhouse and mulch films. To replace the use of fossil-carbon-based plastics from farm to fork and thereby support EU policy ambitions to move towards a more circular, resource efficient economy).*
- ❑ **Nanoelectronics for energy-efficient smart edge devices** *(To explore solutions that will have a drastic impact on decreasing the power consumption of any smart edge device, especially for Edge Processing and memories, Edge Sensing and Imaging, Edge Communication and Edge Power Management.)*
- ❑ **Strengthening the sustainability and resilience of EU space infrastructure** *(To support the development of innovations strengthening the protection of EU space infrastructure. To develop technologies for space debris mitigation and active debris removal and concepts for in-space recycling of dysfunctional orbital assets)*

➤ European dimension of B-BEST Programme

Thank you for your attention

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A systems-oriented research infrastructure for biotechnology and
biomanufacturing



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➤ What are European research infrastructure?

- Facilities (or groups of facilities) that provide resources and services for research communities to conduct research and foster innovation
- Single-sited, distributed, or virtual.
- They include
 - major scientific equipment or sets of instruments
 - collections, archives or scientific data
 - computing systems and communication networks
 - any other research and innovation infrastructure of a unique nature which is open to external users



➤ From a European perspective, what is expected from RIs?

- Reduce fragmentation of the research and innovation ecosystem
- Avoid duplication of effort
- Better coordinate the development and use of Research Infrastructures
- Join forces internationally to construct and run large, complex or expensive infrastructures, respond to global challenges and/or foster combining skills, data and efforts of the world's best scientists
- Foster the innovation potential of RIs by making industry more aware of opportunities offered to improve their products and by the co-development of advanced technologies
- Use Research Infrastructures for science diplomacy
 - International science collaboration to address common problems and build partnerships



➤ In IBISBA, we envision a world where Europe's industrial biotechnology sector drives the global circular bioeconomy transition

- **At the R&D level, reaching this vision requires:**
 - sufficient investment in early-stage research (TRL 1- 3) to support innovation
 - cutting edge research infrastructure to support projects
 - optimised use of Europe's resources (human and financial)
 - careful planning of the research-innovation continuum (TRL 1 to 6)
 - tight cooperation between scientific disciplines cooperate to conceive fit for purpose bioprocesses
 - cooperation between stakeholders to build consistent strategic roadmaps



➤ IBISBA's value proposition

A response to fragmentation Europe's R&D&I space

- Increase accessibility of cutting-edge research infrastructure
 - Create a single point for access
 - Promote transnational access and mobility
- Streamline investments
 - Propose common strategic roadmaps
 - Create better visibility for national and regional financing authorities
- Improve translation of results
 - Use infrastructure as a focal point for public-private cooperation
 - Create innovation ecosystems

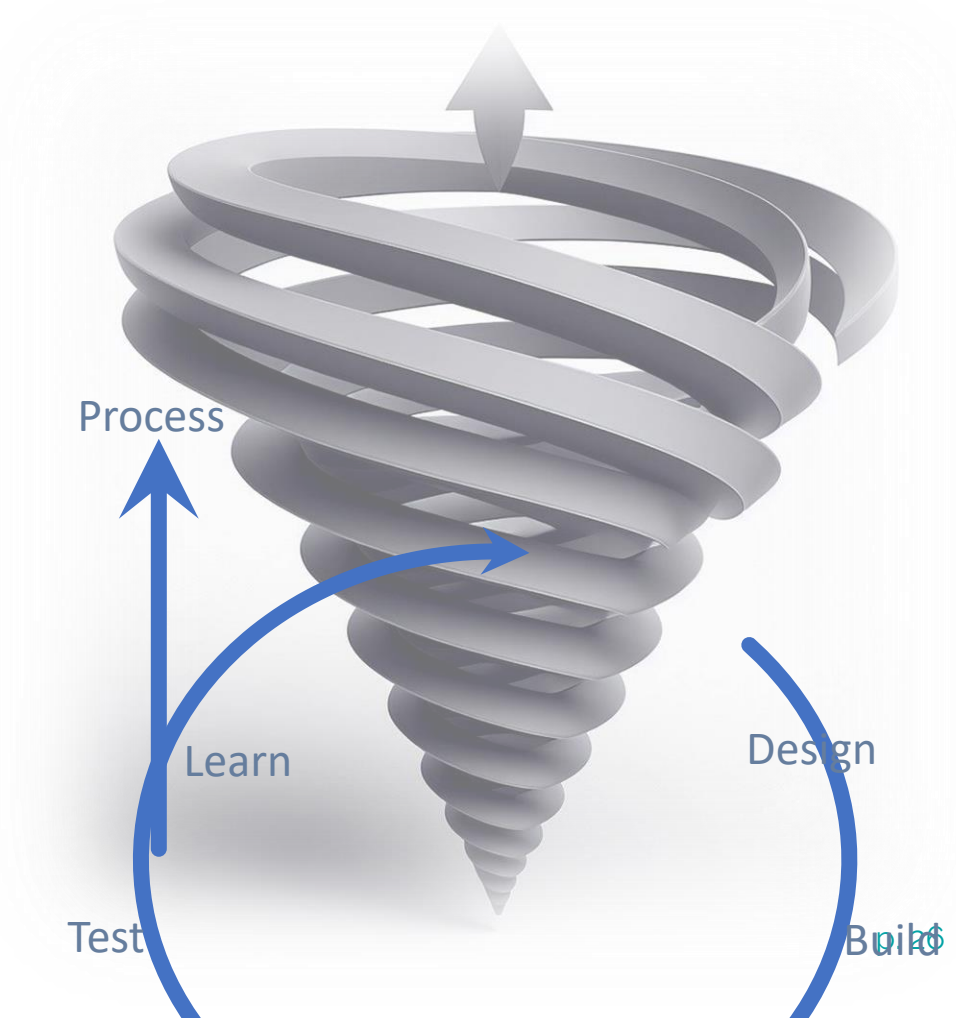


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➤ IBISBA's value proposition

Accelerating R&D&I processes in the biotech space

- Bring together a multidisciplinary community
 - Life sciences
 - Chemical engineering
 - Data and computational sciences
- Adopt a systems approach to bioprocess development
 - Progressively but rapidly integrate process relevant parameters into biocatalyst design



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➤ IBISBA's value proposition

Pragmatic solutions for data-driven approaches

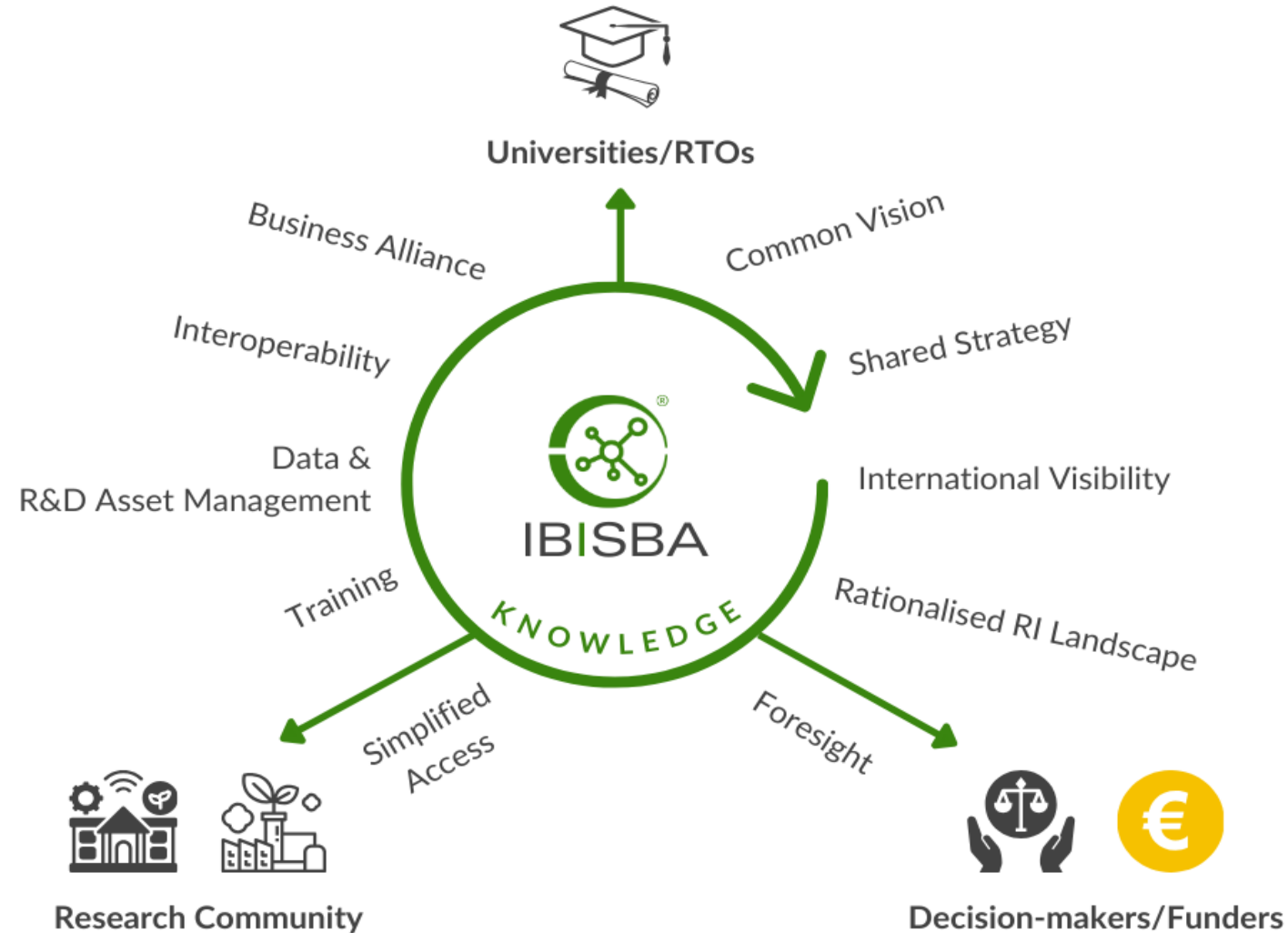
- Establish a well-connected community
 - Build interoperability to provide the basis for connected R&D services to support full project life cycles
- Nurture knowledge sharing
 - A repository for biotech knowledge assets (<https://hub.ibisba.eu/>), data standards
 - A platform to build advanced knowledge-driven approaches



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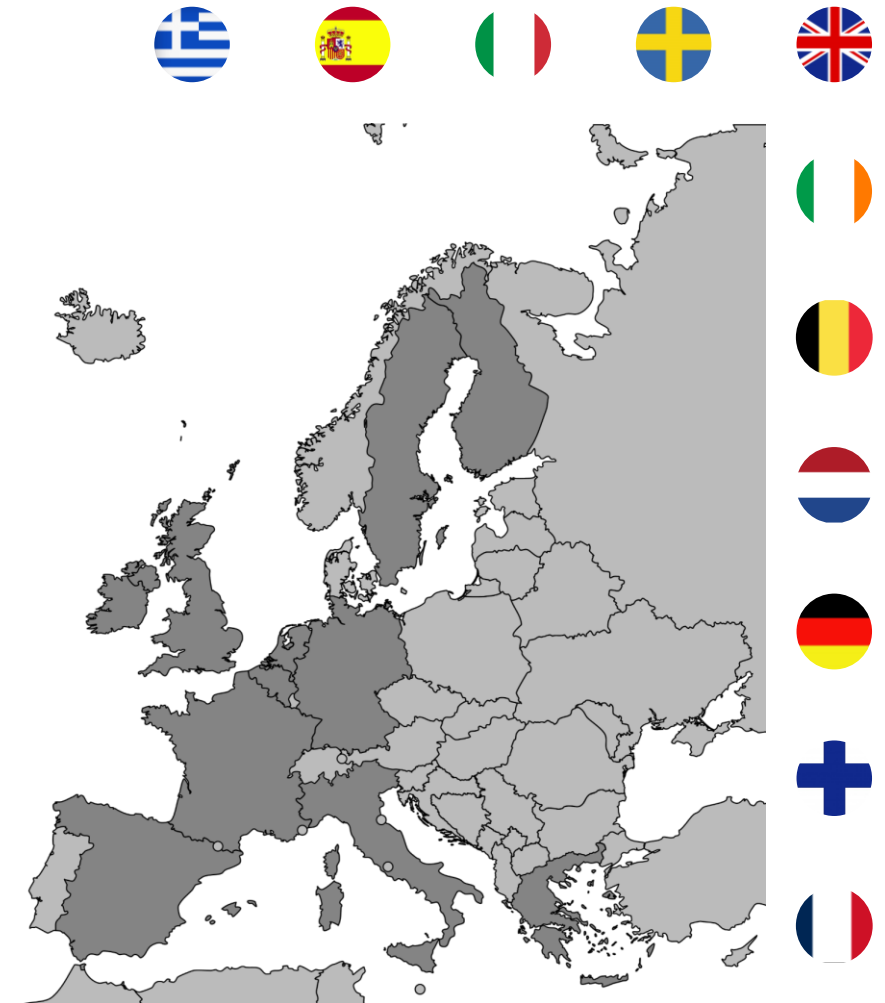


➤ IBISBA multiple services for multiple stakeholders



➤ IBISBA's current status

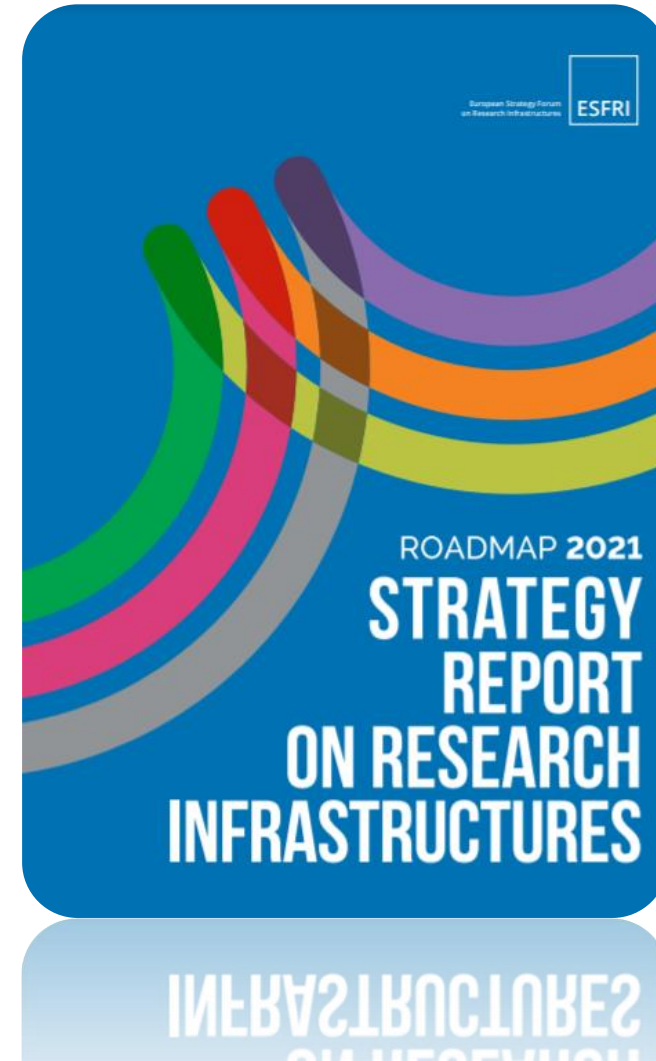
- Today, a memorandum of understanding
 - Binds 23 universities and major RTOs within a partnership
 - 7 countries participate in IBISBA's steering committee that works to create a legal entity



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➤ IBISBA - next steps

- IBISBA is part of the ESFRI strategic roadmap for research infrastructure
 - A member of the Life Sciences Research Infrastructure group
 - Our ambition is to create a permanent legal entity (ERIC ou European Research Infrastructure consortium)



➤ IBISBA - next steps

- IBISBA is clearly identified by the European Commission as strategic instrument for biotechnology
- IBISBA is already active in the development of tomorrow's biotech future

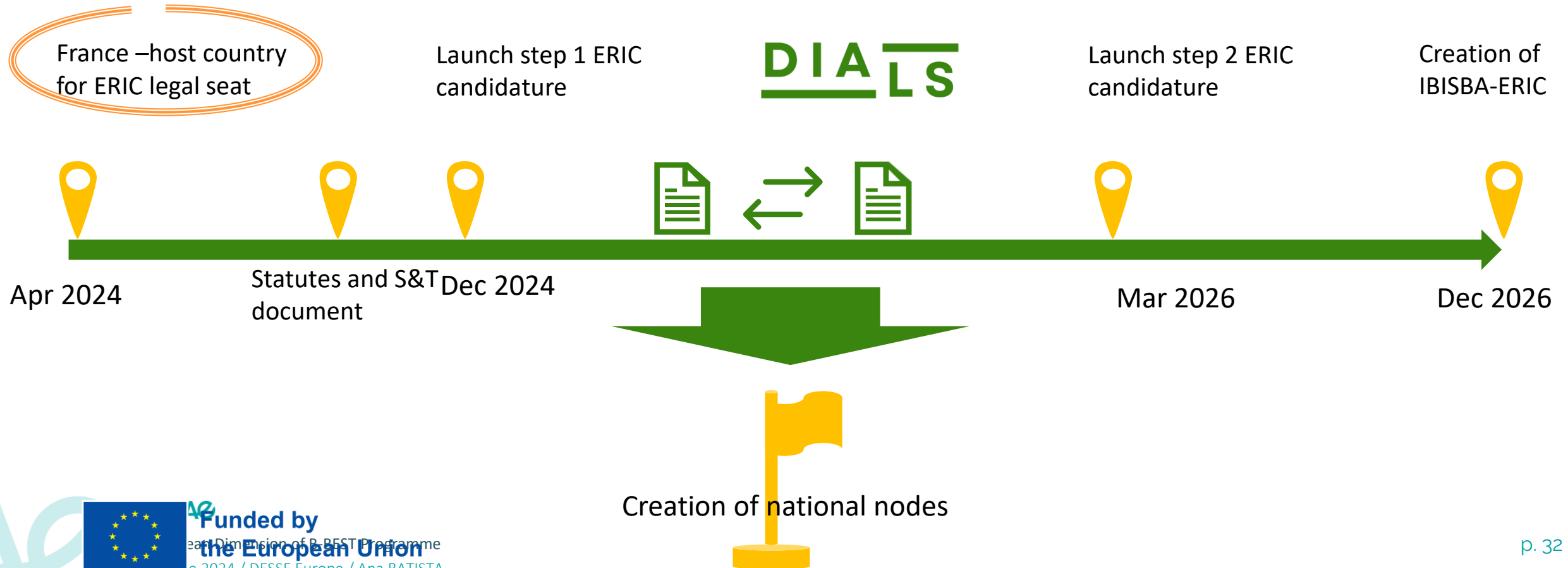


To facilitate a more productive use of Research Infrastructures, the Commission will explore ways to accelerate the development and use of the Industrial Biotechnology Innovation and Synthetic Biology Accelerator (EU IBISBA) as a trusted digital repository and service network for the sector.



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➤ IBISBA – next steps



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➤ IBISBA's French component

- Founded in 2015 and included in the French national research infrastructure roadmap since 2016
- 7 founding members

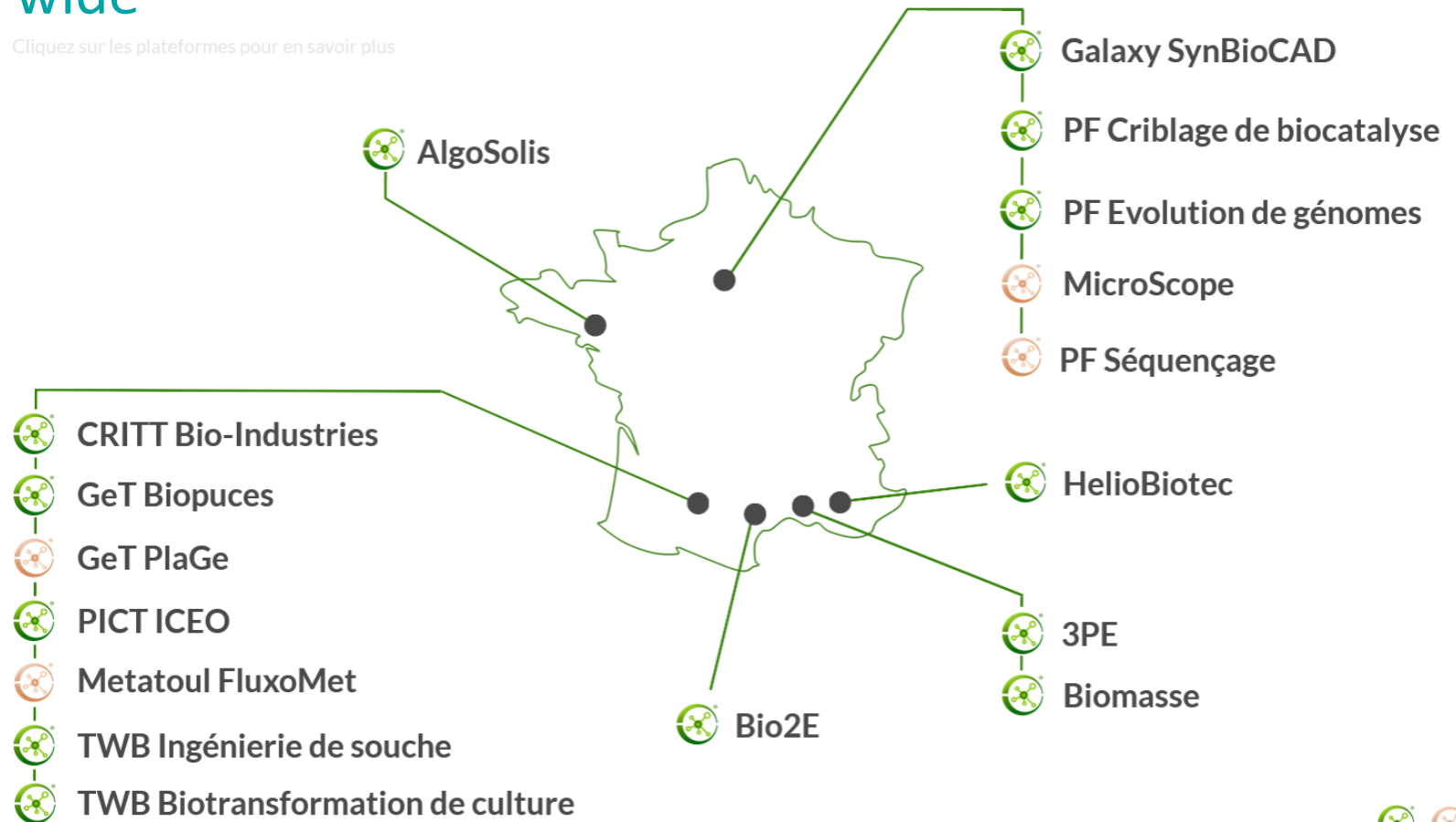
The logo for INRAE, featuring the word "INRAE" in a bold, teal, sans-serif font. The letter "e" is stylized with a circular element.A large, light blue, stylized "Ae" logo is partially visible on the left side of the slide.

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➤ IBISBA-FR organisation

- A range of facilities and wide expertise
- Full comitology

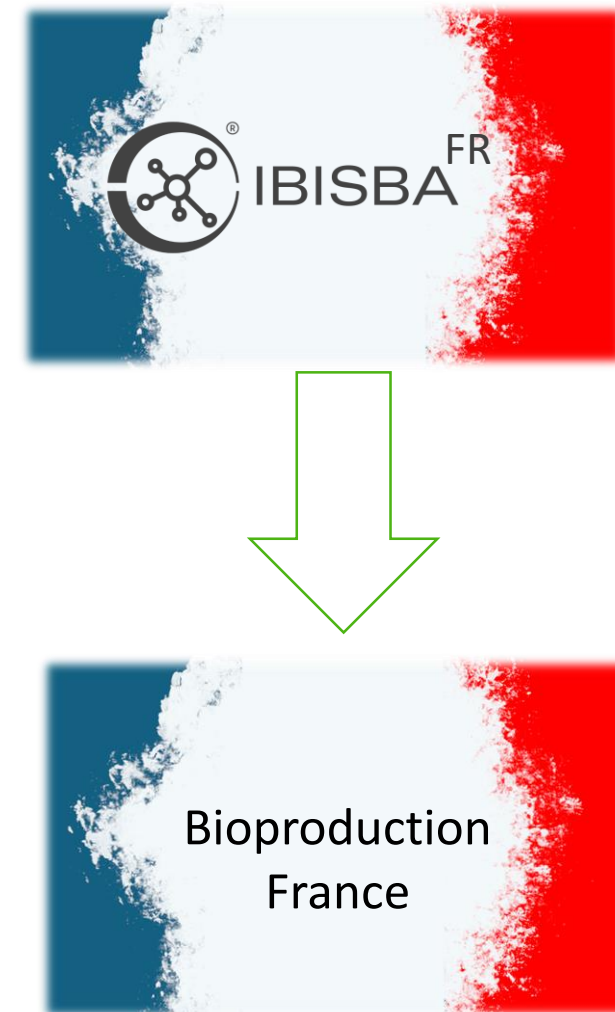
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➤ IBISBA-FR: tomorrow

- Designated host country for the IBISBA-ERIC legal entity
- Towards expansion and formalisation
 - Federate a larger cross-section of the French public sector biotech community
 - Propose an ambitious vision for biomanufacturing in France
 - Legal status to be defined (GIS ?)



➤ Take home message

Current challenges societal challenges are enormous

They require bold, innovative solutions

The scientific community must be bold and innovative in the way it responds

IBISBA proposes a new way to organise and federate R&D activities at a scale that can make a difference



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