

PERIN

Portugal in Europe
Research and Innovation Network

EU Funding Opportunities - Horizon Europe

FCT Fundação
para a Ciência
e a Tecnologia



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EUROPEAN UNION



#HorizonEU

HORIZON EUROPE

THE EU RESEARCH &
INNOVATION PROGRAMME

2021 - 2027

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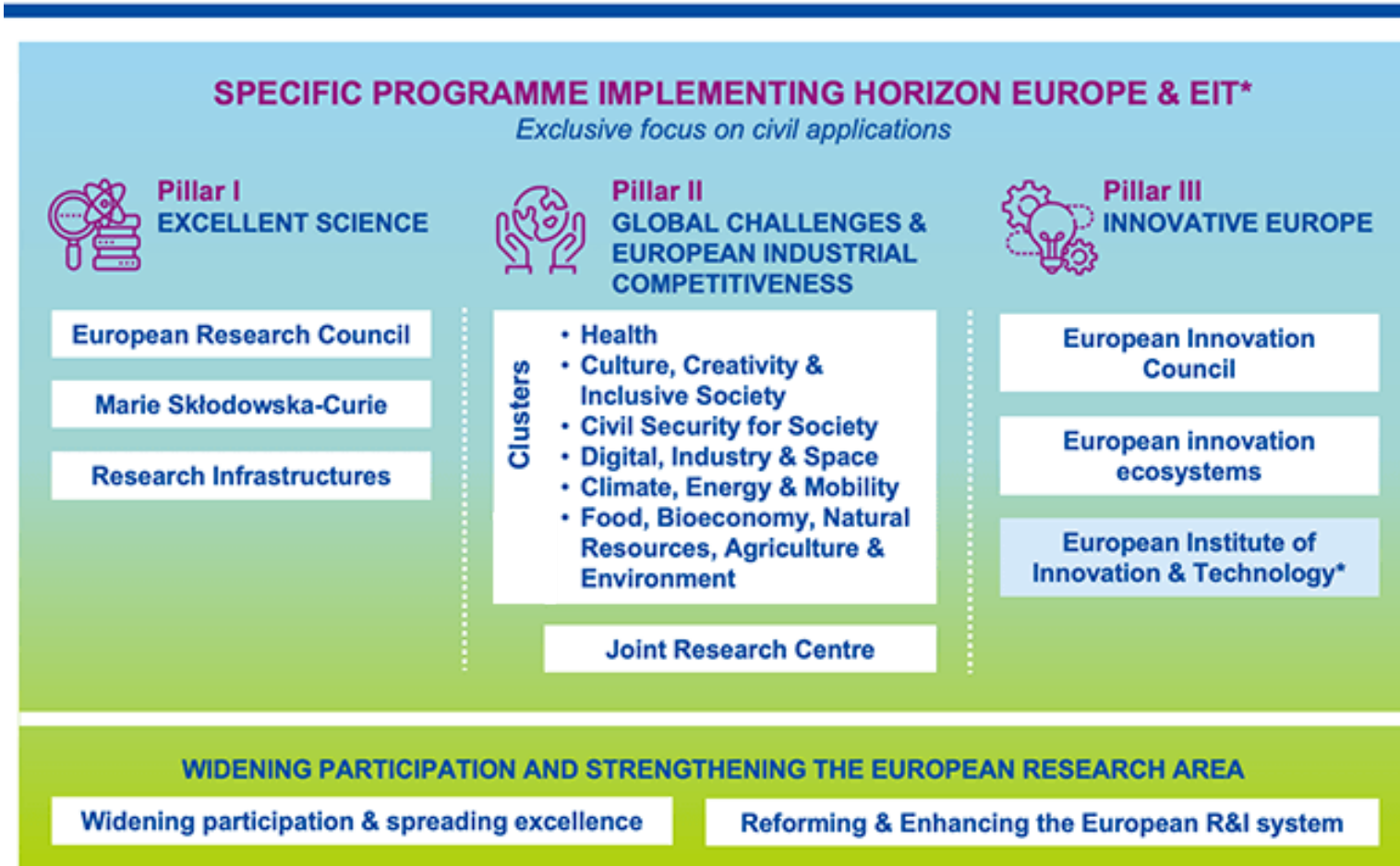
EU funding programmes

EU-wide collective effort					National regional and local			Financial instrument
Horizon Europe	Digital Europe	CEF	Creative Europe	Health	Cohesion	Agriculture funds	RRF	InvestEU
Research Innovation	Strategic capacities: computing, data, testbeds, etc. Advanced digital skills EU-Wide deployment	Broadband and 5G roll out Connecting Communities	Cultural Heritage Media	Data Spaces for Health Telemedicine eHDSI	Digital connectivity in white and grey areas Support to enterprises in line with Smart specialisation Digital skills for all citizens	Making use of Big Data for CAP monitoring Broadband rollout in rural areas	Connect Scale-up Modernise Reskill and Upskill 20% digital	Leverage private capital for investments in SMEs, research, digital, infrastructure, skills...

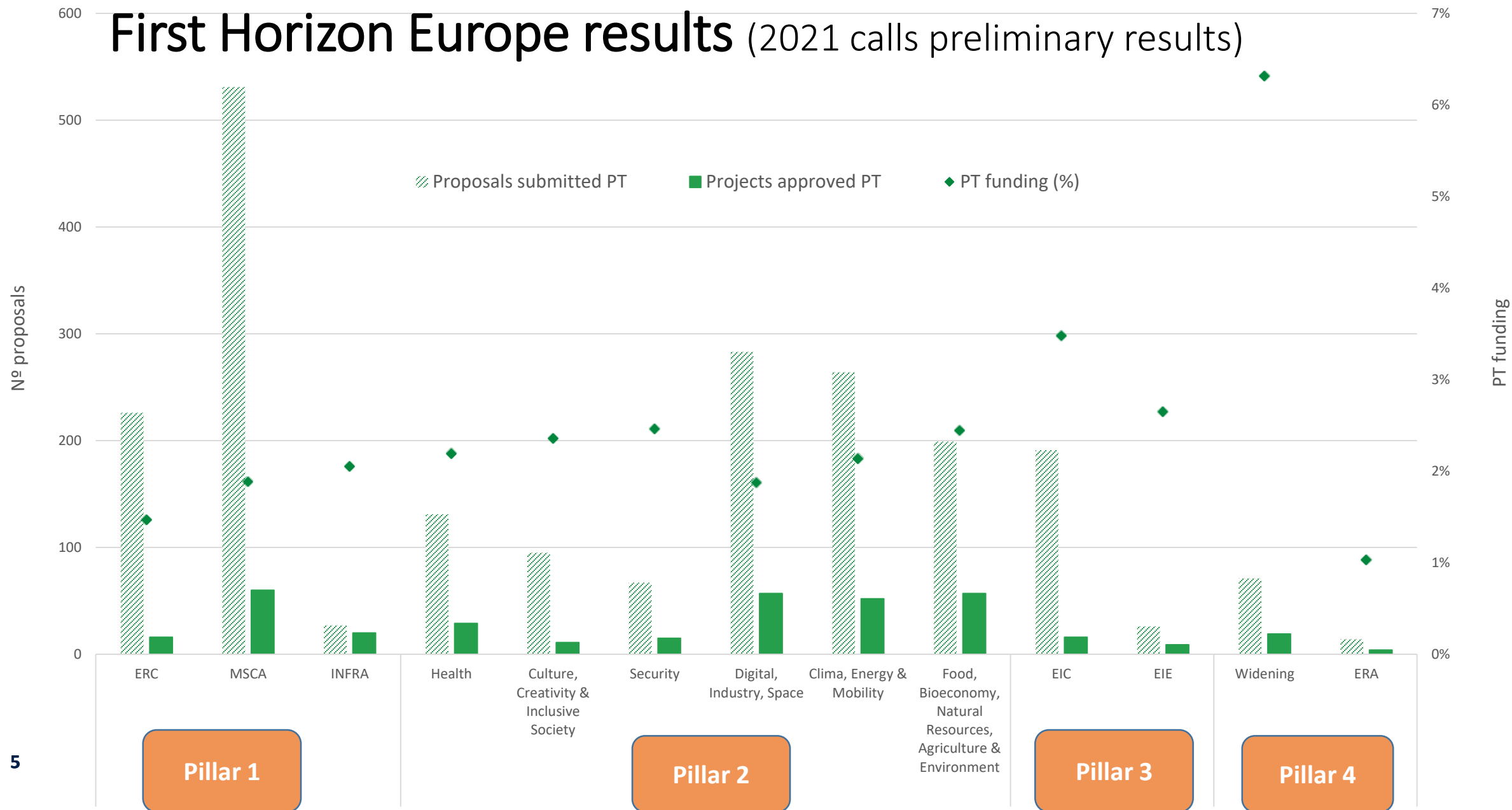
95.5 billion euros for R&D&I

Horizon Europe Structure

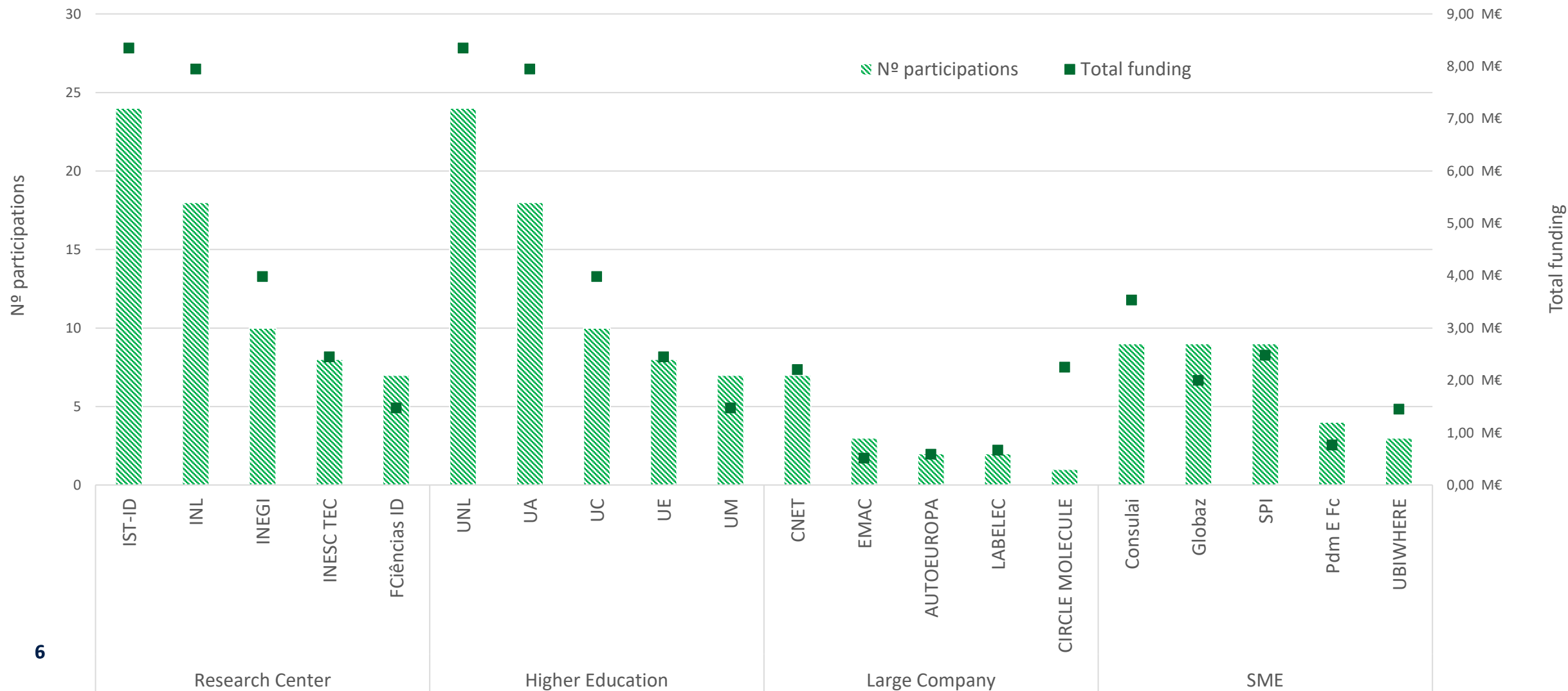
HORIZON EUROPE



First Horizon Europe results (2021 calls preliminary results)



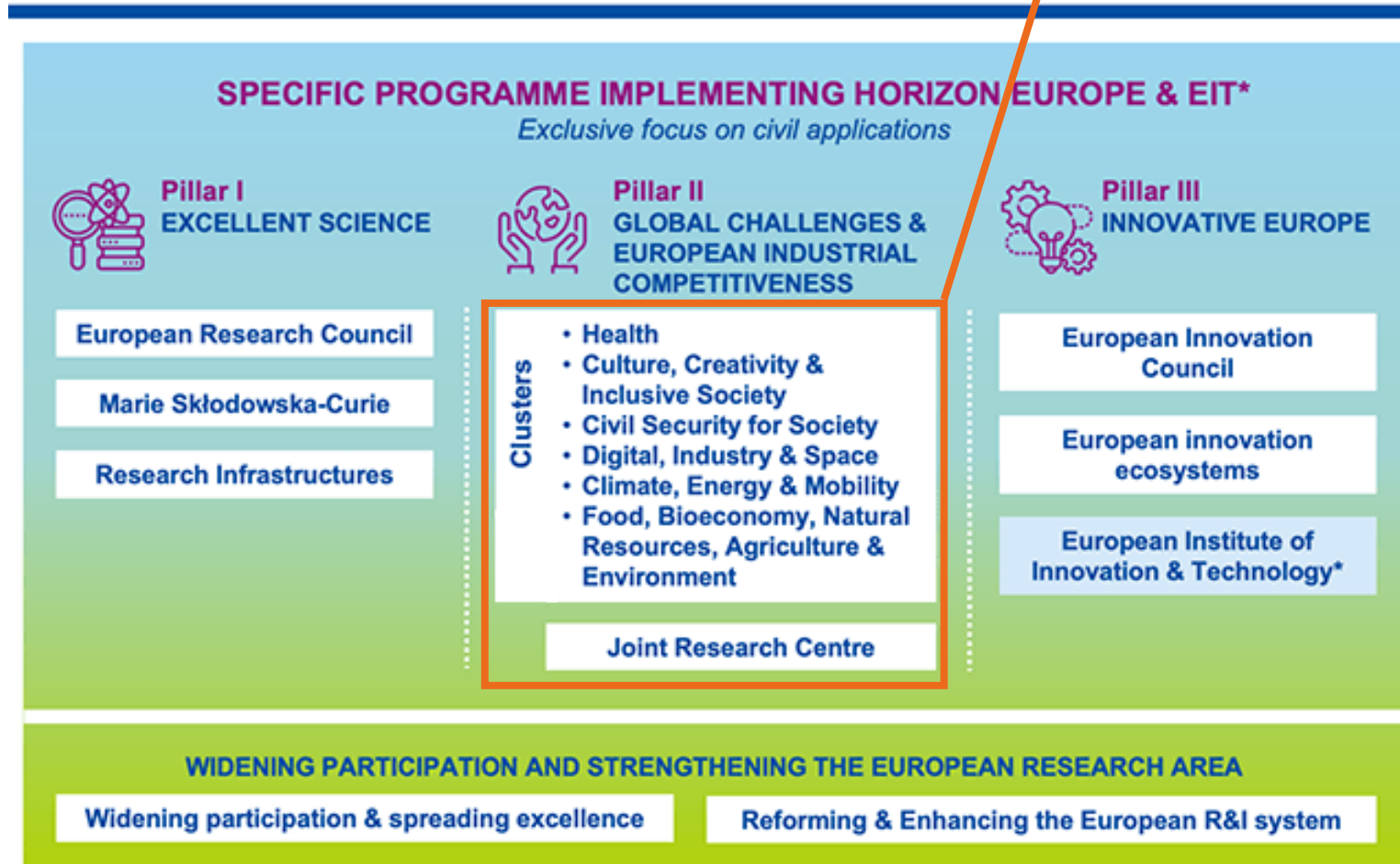
HE | Ranking of PT participation in 2021 calls (preliminary results)



Funding opportunities – Large collaborative projects



HORIZON EUROPE



Some of the European strategy & Initiatives



European Partnerships – Why ?

1

THEY BRING TOGETHER KEY ACTORS FROM ACROSS SECTORS TO JOINTLY IMPLEMENT R&I ROADMAPS.

EXAMPLE

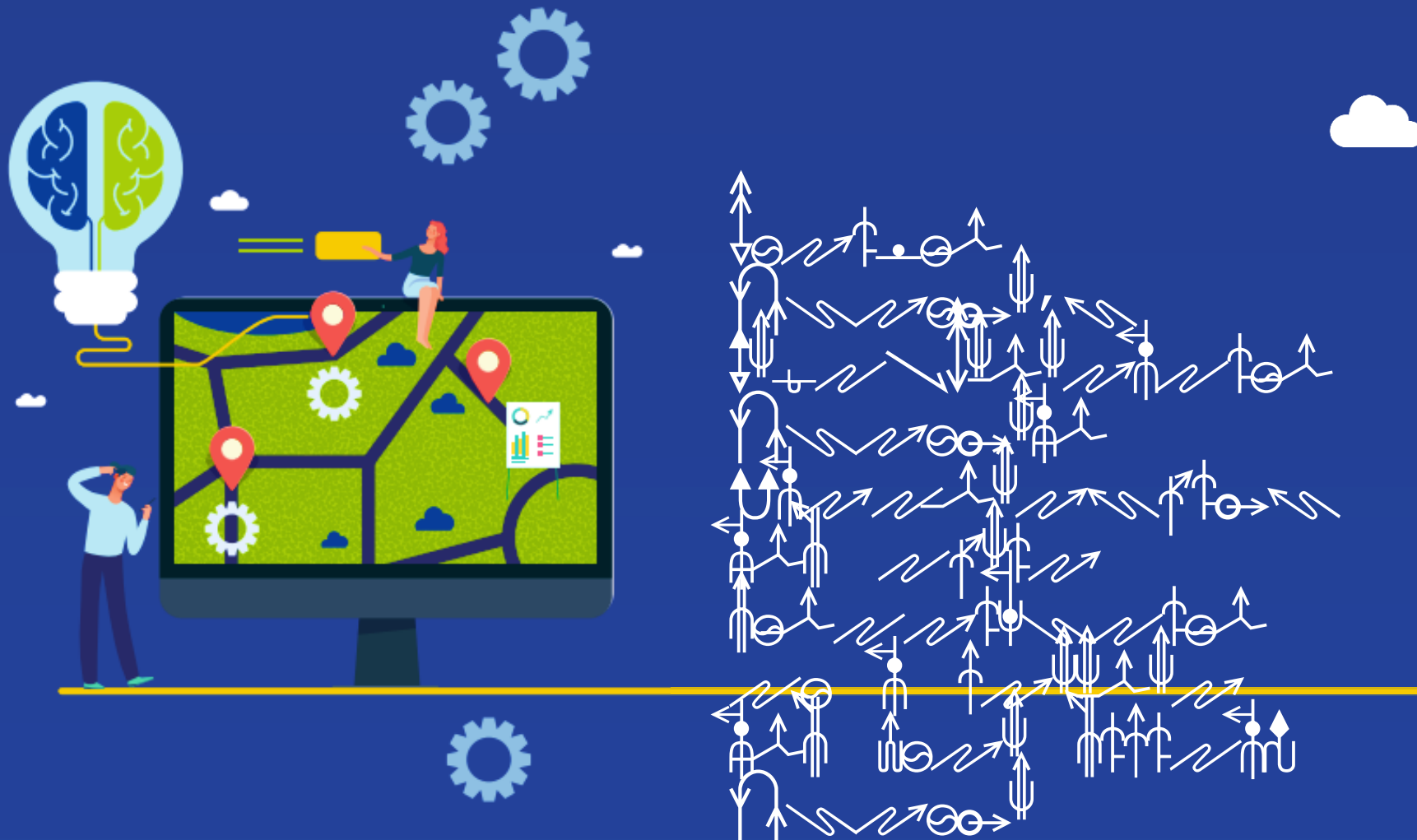
Photonics21 has developed a roadmap for European photonics for 2021-2027 with more than 1700 companies and research organisations across Europe.

2

THEY CREATE CRITICAL SCALES OF INVESTMENT TO DEMONSTRATE RADICALLY NEW INNOVATIONS ACROSS EUROPE.

EXAMPLE

The proposed partnership on clean hydrogen aims to roll-out hydrogen technologies at scale... building on the Fuel Cells and Hydrogen Joint Undertaking's successful demonstration of zero-emission fuel cell buses and refuelling infrastructure.



European Partnerships – A New Approach in HE (~50% of Pillar II budget)

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...	EIT	SUPPORT TO INNOVATION ECOSYSTEMS
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe	InnoEnergy	Innovative SMEs
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth	Climate	
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3	Climate Neutral, Sustainable & Productive Blue Economy	Digital	
Chemicals risk assessment	European Metrology (Art. 185)	Europe's Rail	Water4All	Food	
ERA for Health	AI-Data-Robotics	Connected and Automated Mobility (CCAM)	Animal Health & Welfare*	Health	
Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*	Raw Materials	
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*	Manufacturing	
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*	Urban Mobility	
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People		Cultural and Creative Industries	
	Global competitive space systems**	Clean Energy Transition			
		Driving Urban Transitions			

CROSS-PILLARS II AND III

European Open Science Cloud

- Institutionalised Partnerships (Art 185/7)
- Institutionalised partnerships / EIT KICs
- Co-Programmed
- Co-Funded

* Calls with opening dates in 2023-24
** Calls with opening dates not before 2022

**GOT IT!
...WHERE IS THE
FUNDING FOR MY
R&D&I PROJECTS ?**



European
Commission

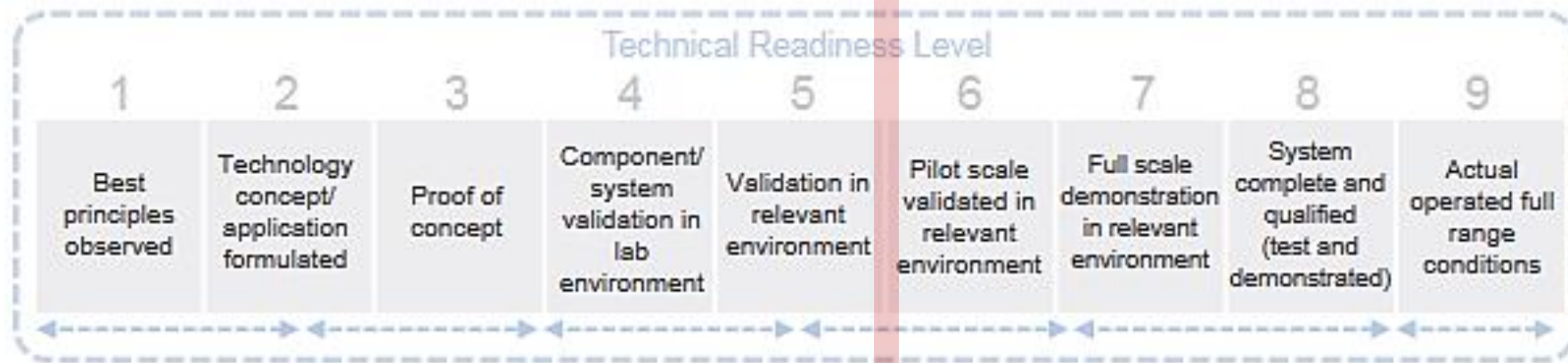


AGÊNCIA NACIONAL
DE INOVAÇÃO

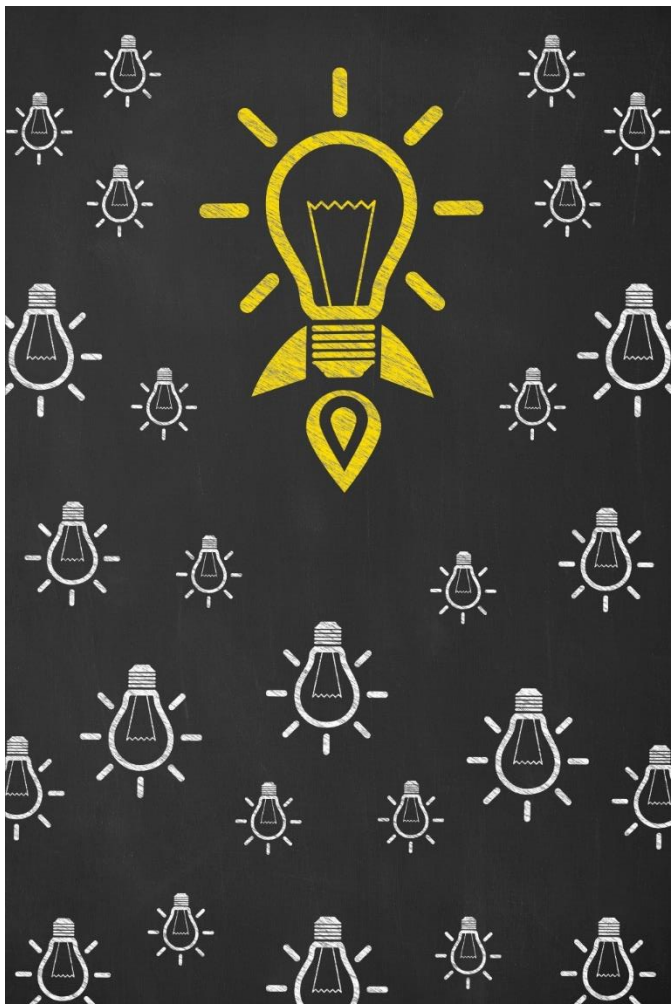
MULTIPLE FUNDING INSTRUMENTS – From idea to market

Research and Innovation Action (RIA –100% funding rate), TRL 2 -6, aiming to establish new knowledge, explore the feasibility of a new or improved technology, product, process, service or solution.

Innovation Action calls (IA > 60% funding rate), TRL>6 aiming at production and business plans for implementing new, altered or improved products, processes or services. These are close-to-market projects aiming for commercialization soon after the project.



What does it fund?



- **All activities directly related to the project** and necessary for its execution;
- It will not fund daily activities of entities, nor implementation of specific activities that are not related to the project;
- **Human resources, goods and services (inc. travel), equipment, etc,** are eligible costs
- Funding rates depend on the type of action and type of entity;

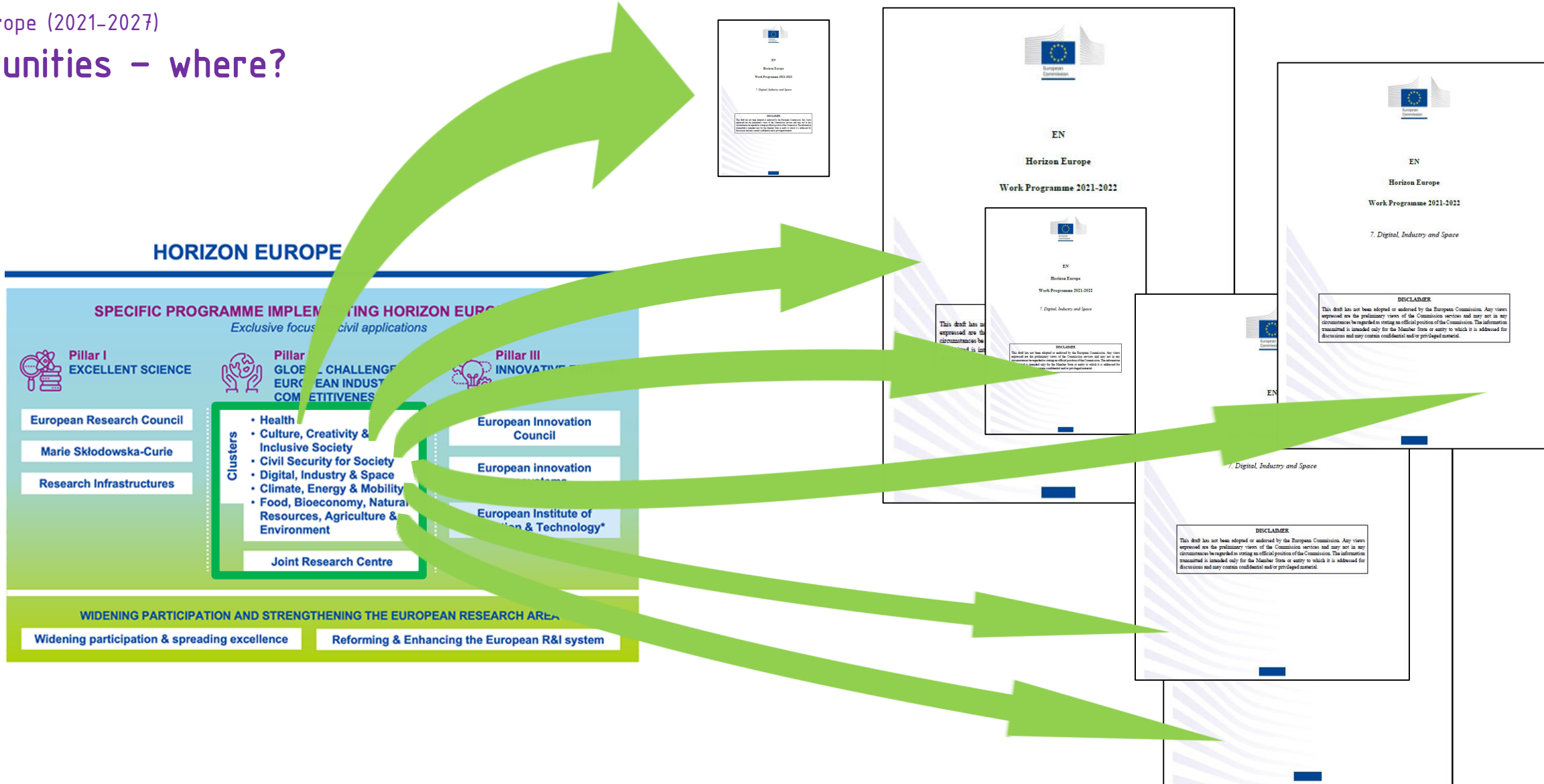
Topics: when

- Most topics from the 2021-2022 WP are closed by now;
- Official publication of WPs for 2023-2024 is **envisaged for December 2022**;
- Topics **have different opening and closing dates**; it changes not only from cluster to cluster, but also within the same cluster
- **Each topic is unique**; they are typically 'once in a life time', i.e. topics normally do not repeat;
- Some topics are related to other topics within Horizon Europe, but in different clusters, or are related to other topics from previous work-programmes



Horizon Europe (2021-2027)

Opportunities - where?





Horizon Europe - Work Programme 2021-2022
Food, Bioeconomy, Natural Resources, Agriculture and Environment

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HORIZON-CL6-2021-BIODIV-01-05: The economics of nature-based solutions: cost-benefit analysis, market development and funding 42

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HORIZON-CL6-2021-BIODIV-01-07: Ecosystems and their services for an evidence-based policy and decision-making 48

HORIZON-CL6-2021-BIODIV-01-08: Supporting the development of a coherent and resilient Trans-European Nature Network 51

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on biodiversity 67

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Top down



**The document
for your success!!**

**Biennial
Work Programme**

Reading and understanding the topics

TOPIC DESCRIPTION:

- **Specific conditions:** (table)
 - Expected EU contribution per project (M€)
 - Indicative budget (budget line, M€)
 - Type of Action: RIA/IA/CSA/Other
 - Technology Readiness Level (TRL)

- **Expected outcome:** consequential effects of project's outputs, such as uptake, use, and/or deployment of HEU project's outputs by direct target groups

- **Scope:** sets the context, delineates the problem and specifies the focus

- **Other instructions** (topic specific)

Each word counts!!

HORIZON-CL6-2022-**FARM2FORK**-02-05-**two-stage**: Innovative food from marine and freshwater ecosystems

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million .
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.

Expected Outcome: In line with the European Green Deal objectives, the farm to fork strategy for a fair healthy and environmentally friendly food system, the EU bioeconomy strategy and blue growth strategy, the successful proposal will support environmentally friendly, inclusive, safe and healthy seafood production through innovation in the supply chain.

Projects results are expected to contribute to all of the following expected outcomes:

- Implementation of the ecosystem approach for sustainable management of marine or freshwater fisheries or in aquaculture development.
- Wider and more diverse range of seafood (including from fresh waters) available to European consumers, and greater overall seafood consumption.
- Tools to limit the waste and discarding of seafood during production, processing, transport and consumption, including the minimisation of the environmental impacts of fisheries and aquaculture through better gears or practices.
- Verification of existing and development of new seafood processing methods that add nutritional and economic value and minimise the environmental impact.
- Improved professional skills and competences of those working and being trained to work within the blue economy.

Scope: Despite the vast diversity of biota in the European seas, rivers and lakes, consumers prefer only a few species for consumption. This is even more pronounced for aquaculture production where only a very limited number of fish and shellfish species are farmed. Moreover, some of the farmed species are higher predators and, despite improvements in feeds, fishing for feed is still a sad reality. Waste of seafood during production, processing, transport and consumption is massive; valorisation of fish and shellfish biomass is still far from achieving its full potential in the context of a circular economy.

Horizon Europe (2021-2027)

Opportunities – where?



Lets see
some specific
topic examples...

SAÚDE



Cluster 1

Work Programme

Destination 1

Staying healthy in a rapidly changing society

Destination 2

Living and working in a health-promoting environment

Destination 3

Tackling diseases and reducing disease burden

Destination 4

Ensuring access to innovative, sustainable and high-quality health care

Destination 5

Unlocking the full potential of new tools, technologies and digital solutions for a healthy society

Destination 6

Maintaining an innovative, sustainable and globally competitive health-related industry

Pharmaceutical and Biomedical

HORIZON-HLTH-2021-TOOL-06-01:

Smart medical devices and their surgical implantation for use in resource-constrained settings

HORIZON-HLTH-2021-IND-07-01:

Green pharmaceuticals

HORIZON-HLTH-2021-IND-07-02:

Development, procurement and responsible management of new antimicrobials

HORIZON-HLTH-2021-DISEASE-04-02:

Building a European innovation platform for the repurposing of medicinal products

HORIZON-HLTH-2022-DISEASE-06-02-two-stage:

Pre-clinical development of the next generation of immunotherapies for diseases or disorders with unmet medical needs

HORIZON-HLTH-2022-DISEASE-06-04-two-stage:

Development of new effective therapies for rare diseases

HORIZON-HLTH-2022-TOOL-11-01:

Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers

HORIZON-HLTH-20xx-TOOL-5.02:

Bio-printing of living cells for regenerative medicine

European Partnerships

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...
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Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People	
	Global competitive space systems**	Clean Energy Transition	
		Driving Urban Transitions	

- Institutionalised Partnerships (Art 185/7)
- Institutionalised partnerships / EIT KICs
- Co-Programmed
- Co-Funded

* Calls with opening dates in 2023-24

** Calls with opening dates not before 2022

Health Partnerships under Horizon Europe

Institutional Partnerships



IHI

European Partnership
for Innovative Health
(2021)



GHP

Global Health
Partnership (2021)

Co-funded Partnerships



ERA4Health

European Research and
Innovation Area for
Health (2022)



PARC

European Partnership
for Chemicals Risk
Assessment
(2021)



RD

European Partnership on
Rare Diseases
(2023)



PM

European Partnership
for Personalised
Medicine
(2023)



THCS

European Partnership on
Health and Care
Systems Transformation
(2022)



AMR

European Partnership
for One Health/AMR
Antimicrobial Resistance
(2023-24)

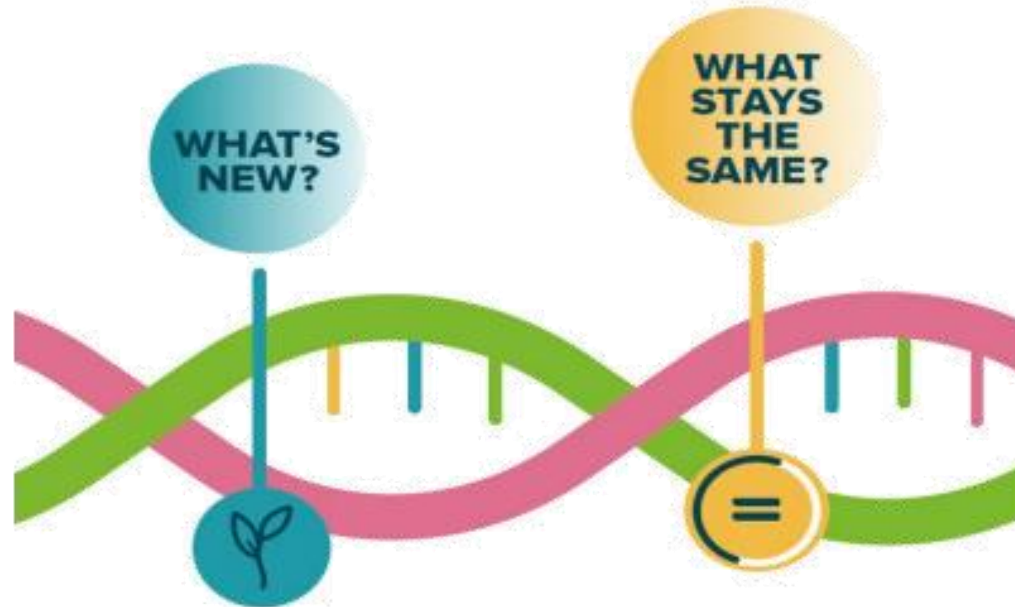
Co-Programmed Partnerships



**Pandemic
Preparedness**

European Pandemic
Preparedness
Partnership

Innovative Health Initiative (IHI)



- The way we're governed will change.
- The scope of the partnership is broader than IMI as it will cover the **entire continuum of care**.
- There will be new, specific objectives that align with the EU's latest health policy strategies.
- **Funding comes equally** from the public and industry partners.
- Calls for proposals will be **open and competitive**.
- Projects started under IMI will be managed by IHI.

- New Strategic Research and Innovation Agenda
- The Science and Innovation Panel
- One and two stage calls

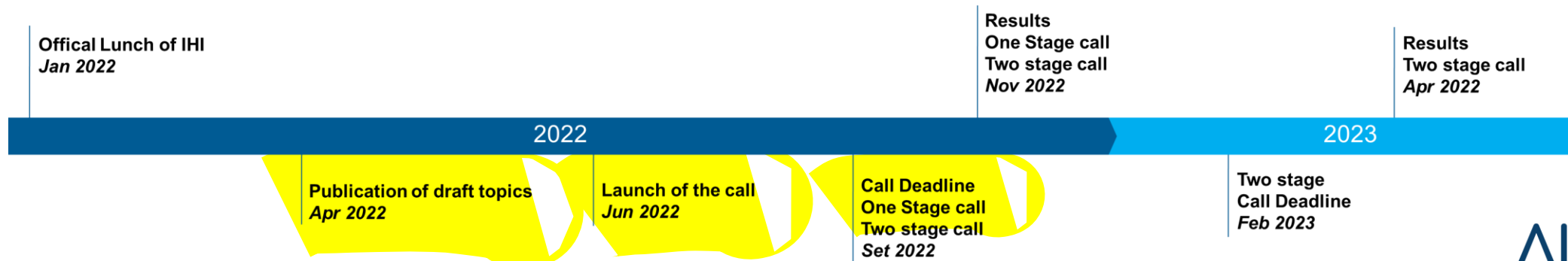
Innovative Health Initiative (IHI)

Call 1 – Ideas - Single-stage

- 1 Innovative patient-facing care pathways for patients with neurodegenerative diseases and comorbidities
- 2 Next generation imaging and image-guided diagnosis and therapy for cancer
- 3 Precision oncology: Innovative patient-centric, multi-modal therapies against cancer
- 4 Access and Integration of heterogeneous health data for improved health care in diseases areas of high unmet public health need

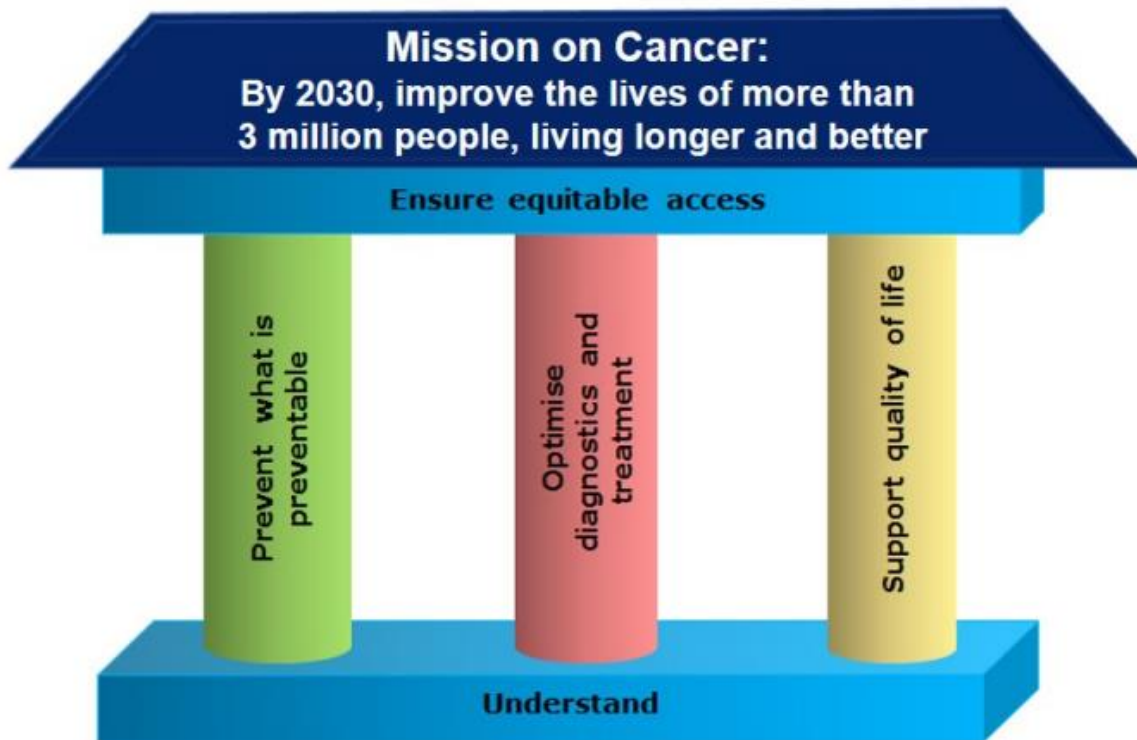
Call 2 – Ideas - Two-stage

- 1 New tools for prediction, prevention and monitoring of cardio-metabolic diseases including secondary manifestations to enable timely intervention
- 2 Strengthening EU clinical development excellence and innovation attractiveness: Harmonised methodology to promote the uptake of early feasibility studies (EFS)





Horizon Europe – Cancer Mission



Operational objectives (transversal):

- 1.Ensure equity and access to knowledge, research and care.
- 2.Promote innovation, test, validate, demonstrate and upscale solutions.
- 3.Address childhood cancer and personalised medicine.
- 4.Engage with the cancer community, citizens /patients and society at large.

HORIZON-MISS-2022-CANCER-01-01

Improving and upscaling primary prevention of cancer through implementation research

HORIZON-MISS-2022-CANCER-01-02

Strengthening research capacities of Comprehensive Cancer Infrastructures

HORIZON-MISS-2022-CANCER-01-03

Pragmatic clinical trials to optimise treatments for patients with refractory cancers

HORIZON-MISS-2022-CANCER-01-04

Towards the creation of a European Cancer Patient Digital Centre

HORIZON-MISS-2022-CANCER-01-05

Establishing of national cancer mission hubs and creation of network to support the Mission on Cancer

Cluster 1 Team - NCPs for Health

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CULTURA, CRIATIVIDADE, SOCIEDADE INCLUSIVA



Examples of expected themes in DEMOCRACY for 2023-2024

- 
- 1 Digital democracy
 - 2 1. Gender issues in extremist movements
 - 3 Governance in digital and climate transitions
 - 4 Emotional politics of democracies
 - 5 Public administrations
 - 6 Disruptive changes and democratic governance
 - 7 1. Deliberative and participatory democratic spaces
 - 8 Culture and democratic participation and political expression

Disclaimer: some of these topics may be considerably altered or eliminated. The indicative budget may be altered.

Examples of expected themes in CULTURAL HERITAGE AND CCIS for 2023- 2024



- 1 Remote monitoring of heritage
- 2 1.CCIs and climate transition
- 3 Digitisation of heritage
- 4 Cultural heritage in times of change
- 5 Rural cultural tourism
- 6 Linguistic capital
- 7 1.Social inclusion through arts education
- 8 New European Bauhaus

Examples of expected themes in TRANSFORMATIONS for 2023-2024



Disclaimer: some of these topics may be considerably altered or eliminated. The budget may be altered.

Examples of expected themes in TRANSFORMATIONS for 2023-2024



- Loneliness in Europe
- 1.Active labour market policies and high unemployment
- Social services
- Arts, culture, education and training
- The role of social economy
- Education and labour for young people
- New technologies and human skills

Cluster 2

Work Programme

Destination 1

Democracy & Governance

Enhance democratic governance and citizen participation

Destination 2

European Cultural Heritage and Cultural and Creative Industries (CCIs)

Safeguard and promote cultural heritage

Destination 3

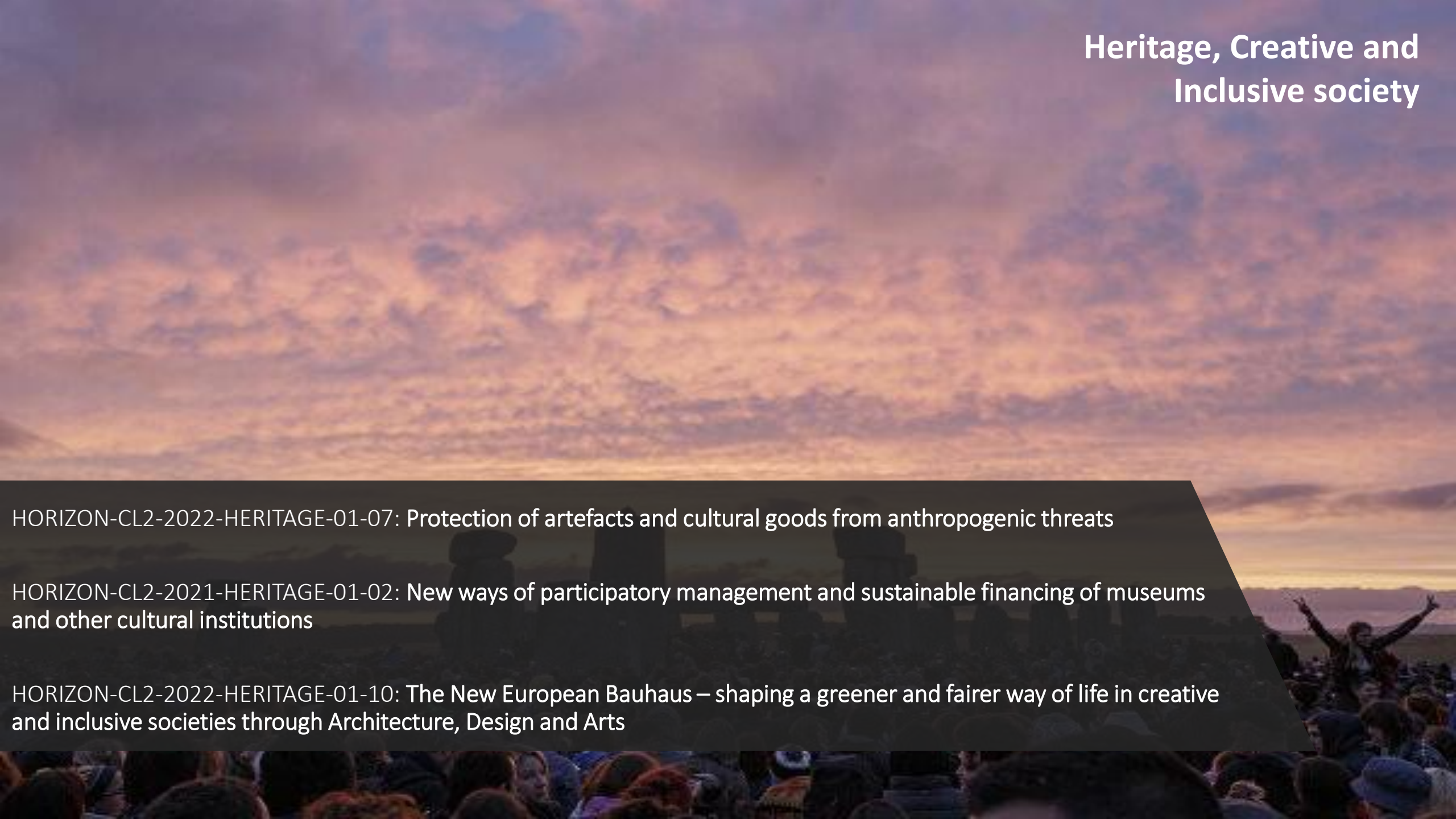
Economical & Social Transformations

Respond to and shape multifaceted social, economic, technological and cultural transformations

HORIZON-CL2-2022-DEMOCRACY-01-02: The future of democracy and civic participation

HORIZON-CL2-2022-TRANSFORMATIONS-01-09: Return and readmission of irregular migrants in the EU

HORIZON-CL2-2021-TRANSFORMATIONS-01-06: Towards a new normal? Employment and social impacts of changing supply chains and declining trade intensities

The background of the slide is a photograph of a sunset or sunrise over a landscape. The sky is filled with soft, colorful clouds in shades of orange, pink, and purple. In the foreground, the silhouettes of a large crowd of people are visible, some with their arms raised, suggesting a festival or public gathering.

Heritage, Creative and Inclusive society

HORIZON-CL2-2022-HERITAGE-01-07: Protection of artefacts and cultural goods from anthropogenic threats

HORIZON-CL2-2021-HERITAGE-01-02: New ways of participatory management and sustainable financing of museums and other cultural institutions

HORIZON-CL2-2022-HERITAGE-01-10: The New European Bauhaus – shaping a greener and fairer way of life in creative and inclusive societies through Architecture, Design and Arts

Cluster 2 Team - NCPs



Natalia Dias



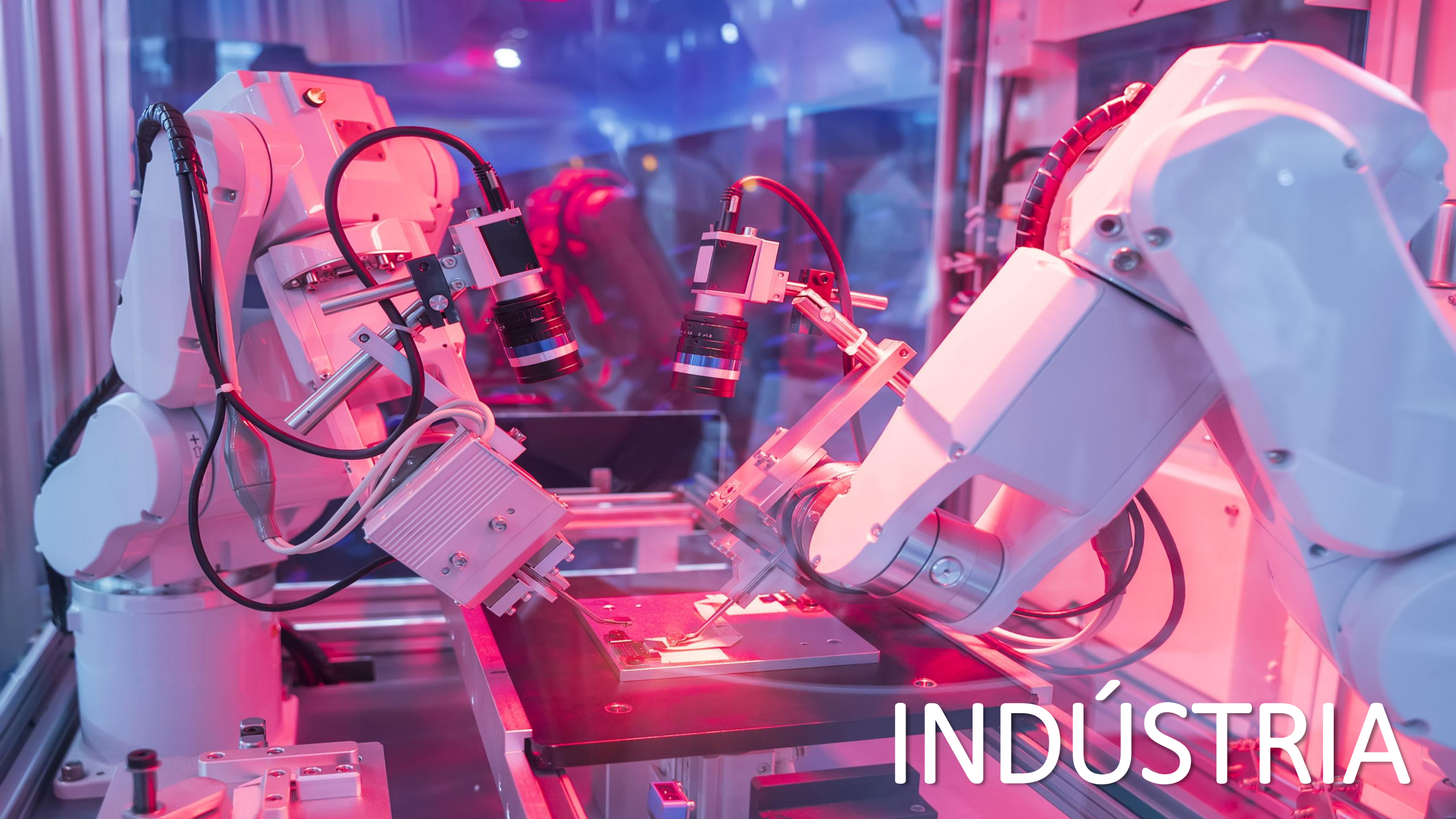
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INDÚSTRIA

Cluster 4 - Industry

Work Programme

Destination 1

Climate neutral,
circular and digitised
production

Destination 2

Increased autonomy in
key strategic value
chains for resilient
industry

Destination 3

World leading data and
computing
technologies

Destination 4

Digital and emerging
technologies for
competitiveness and fit
for the green deal

Destination 5

Open strategic
autonomy in
developing, deploying
and using global
space-based
infrastructures,
services, applications
and data

Destination 6

A human-centred and
ethical development of
digital and industrial
technologies

Smart and Intelligent Manufacturing

HORIZON-CL4-2022-DIGITAL-EMERGING-02-05:

AI, Data and Robotics for Industry optimisation (including production and services) (AI, Data and Robotics Partnership) (IA)

HORIZON-CL4-2021-TWIN-TRANSITION-01-02:

Zero-defect manufacturing towards zero-waste (Made in Europe Partnership) (IA)

HORIZON-CL4-2021-TWIN-TRANSITION-01-03:

Laser-based technologies for green manufacturing (Photonics - Made in Europe Partnerships) (RIA)

HORIZON-CL4-2024-TWIN-TRANSITION-01-01:

Biological Transformation Of Industries through advanced manufacturing (Made in Europe) (RIA)

HORIZON-CL4-2021-TWIN-TRANSITION-01-05:

Manufacturing Technologies For Bio-based Materials (Made In Europe Partnership) (RIA)

HORIZON-CL4-2022-RESILIENCE-01-19:

Advanced materials modelling and characterisation (RIA)

HORIZON-CL4-2022-RESILIENCE-01-12:

Functional multi-material components and structures (RIA)

HORIZON-CL4-2022-RESILIENCE-01-19:

Advanced materials modelling and characterisation (RIA)

HORIZON-CL4-2022-DIGITAL-EMERGING-02-18:

2D materials-based devices and systems for energy storage and/or harvesting (RIA)

HORIZON-CL4-2022-RESILIENCE-01-14:

Membranes for gas separations – membrane distillation (IA)

HORIZON-CL4-2022-RESILIENCE-01-13:

Smart and multifunctional biomaterials for health innovations (RIA)

HORIZON-CL4-2023-RESILIENCE-01-23:

COMPUTATIONAL MODELS for the development of safe and sustainable by design chemicals and materials (RIA)

Cluster 4 Team | Industry - NCPs



Sofia Azevedo



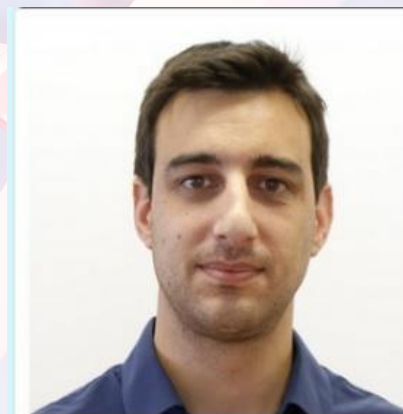
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DIGITAL



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Cluster 4 - Digital

Work Programme

Destination 1

Climate neutral, circular and digitised production

Destination 2

Increased autonomy in key strategic value chains for resilient industry

Destination 3

World leading data and computing technologies

Destination 4

Digital and emerging technologies for competitiveness and fit for the green deal

Destination 5

Open strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

Destination 6

A human-centred and ethical development of digital and industrial technologies

HORIZON-CL4-2021-DATA-01-03:

Technologies for data management (AI, Data and Robotics Partnership) (IA)

HORIZON-CL4-2022-DATA-01-01:

Methods for exploiting data and knowledge for extremely precise outcomes (analysis, prediction, decision support), reducing complexity and presenting insights in understandable way (RIA)

HORIZON-CL4-2022-DATA-01-03:

Programming tools for decentralised intelligence and swarms (RIA)

HORIZON-CL4-2022-DATA-01-02:

Cognitive Cloud: AI-enabled computing continuum from Cloud to Edge (RIA)

HORIZON-CL4-2022-HUMAN-01-03:

Internet architecture and decentralised technologies (RIA)

HORIZON-CL4-2022-DIGITAL-EMERGING-02-07:

Increased robotics capabilities demonstrated in key sectors (AI, Data and Robotics Partnership) (IA)

HORIZON-CL4-2022-DIGITAL-EMERGING-01-03:

Advanced multi-sensing systems (Photonics Partnership) (RIA)

HORIZON-CL4-2022-DIGITAL-EMERGING-01-30:

European Enabling technologies for Beyond 5G/6G RAN disaggregated architectures (RIA)

HORIZON-CL4-2022-DIGITAL-EMERGING-02-18:

2D materials-based devices and systems for energy storage and/or harvesting (RIA)

HORIZON-CL4-2022-DIGITAL-EMERGING-02-17:

New generation of advanced electronic and photonic 2D materials-based devices, systems and sensors (RIA)

Human centric digitalization

A conceptual image showing a white, articulated robotic hand on the left and a human hand on the right, both reaching towards each other. The background is dark, and the lighting highlights the mechanical joints of the robot and the skin texture of the human hand. The overall theme is human-robot interaction and digitalization.

HORIZON-CL4-2022-HUMAN-01-01:
AI for human empowerment (AI, Data and Robotics Partnership) (RIA)

HORIZON-CL4-2022-HUMAN-01-14:
eXtended Reality Technologies (RIA)

HORIZON-CL4-2021-HUMAN-01-25:
eXtended Collaborative Telepresence (IA)

HORIZON-CL4-2021-HUMAN-01-26:
Workforce skills for industry 5.0 (RIA)

European Partnerships

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3	Climate Neutral, Sustainable & Productive Blue Economy
Chemicals risk assessment	European Metrology (Art. 185)	Europe's Rail	Water4All
ERA for Health	AI-Data-Robotics	Connected and Automated Mobility (CCAM)	Animal Health & Welfare*
Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People	
	Global competitive space systems**	Clean Energy Transition	
		Driving Urban Transitions	

- Institutionalised Partnerships (Art. 185/7)
- Institutionalised partnerships / EIT-KICs
- Co-Programmed
- Co-Funded

* Calls with opening dates in 2023-24

** Calls with opening dates not before 2022



KDT JU
Key Digital Technologies Joint Undertaking

Electronic and Photonic components and the software that defines how they work

Deadline Set 2022

6G SNS

5G and beyond

More opportunities



EuroHPC
Joint Undertaking

Enhance supercomputing capacity

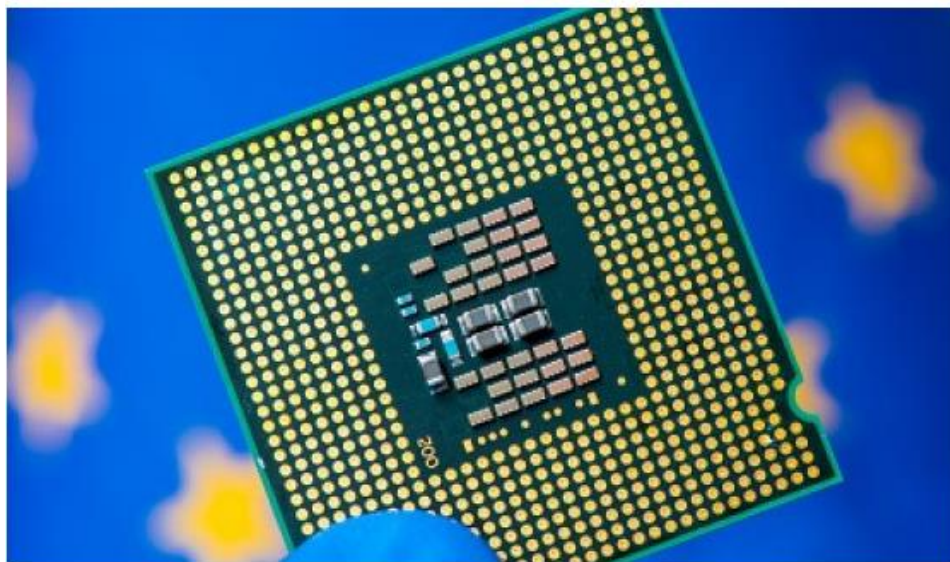
Deadlines with different cutoffs: Oct, Nov 2022



Measurement tech and infrastructures

Deadlines October 2022

European Chips Act



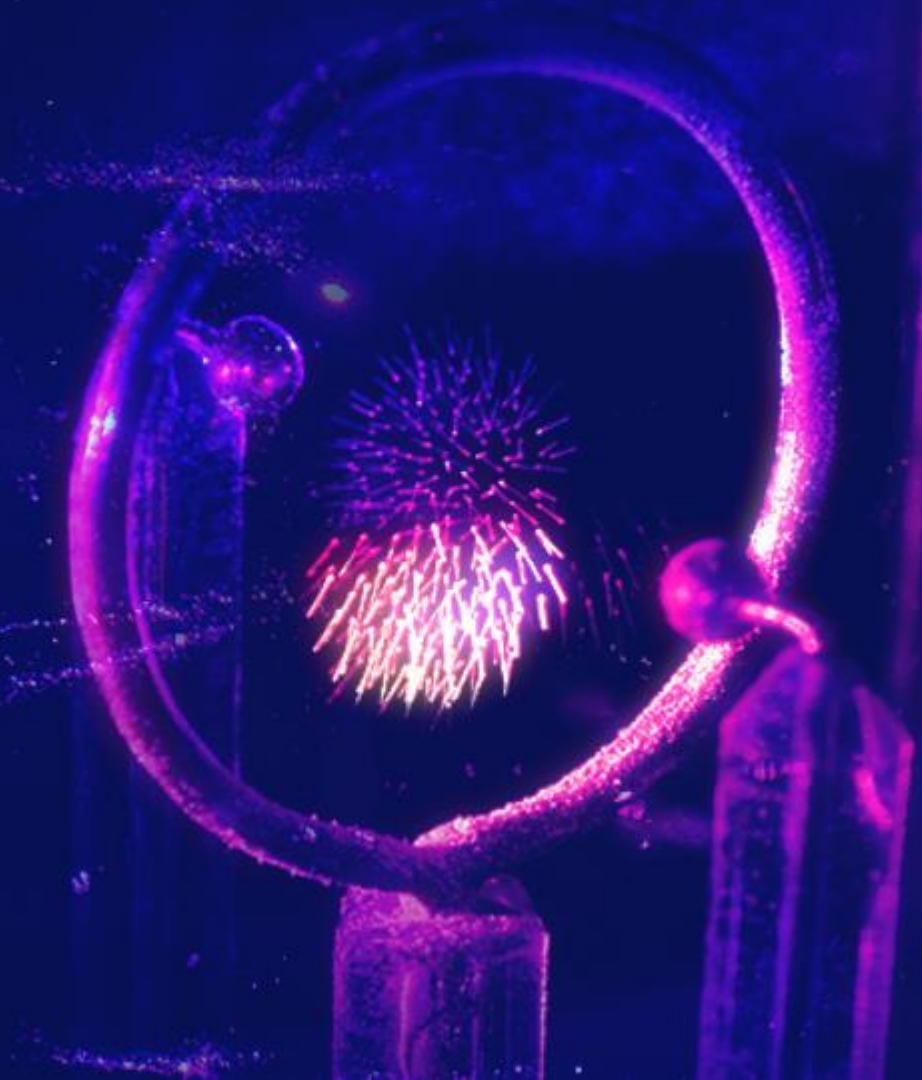
The European Chips Act will bolster Europe's competitiveness and resilience in semiconductor technologies and applications, and help achieve both the digital and green transition. It will do this by strengthening Europe's technological leadership in the field.

HORIZON-CL4-2023-DIGITAL-EMERGING-01-11 **(DRAFT)**: Low TRL research in micro-electronics and integration technologies for industrial solutions



The future is Quantum.

— The Second Quantum Revolution is unfolding now, exploiting the enormous advancements in our ability to detect and manipulate single quantum objects. The Quantum Flagship is driving this revolution in Europe.



ESPAÇO



Cluster 4 - Space

Work Programme

Destination 1

Climate neutral,
circular and digitised
production

Destination 2

Increased autonomy in
key strategic value
chains for resilient
industry

Destination 3

World leading data and
computing
technologies

Destination 4

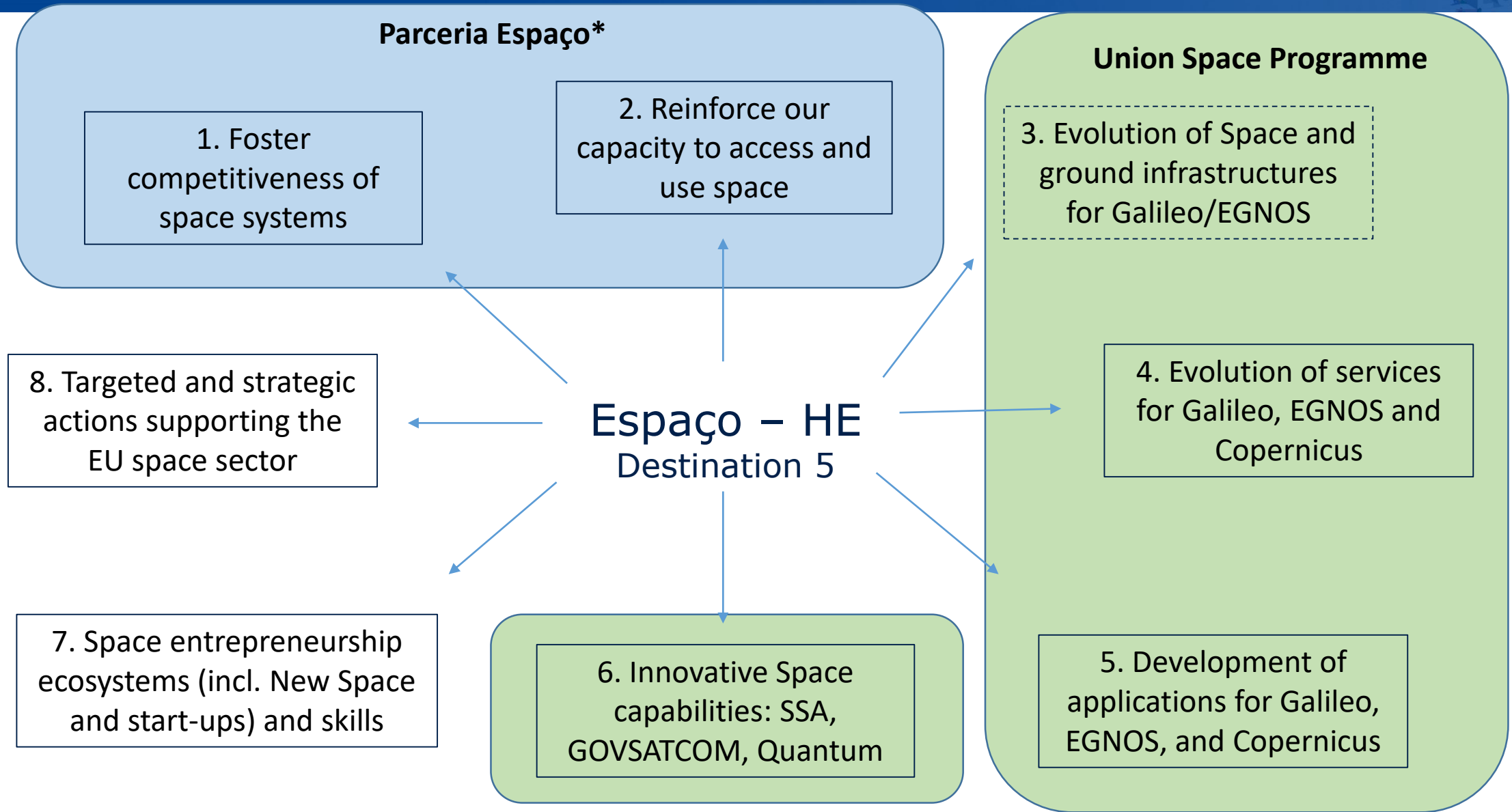
Digital and emerging
technologies for
competitiveness and fit
for the green deal

Destination 5

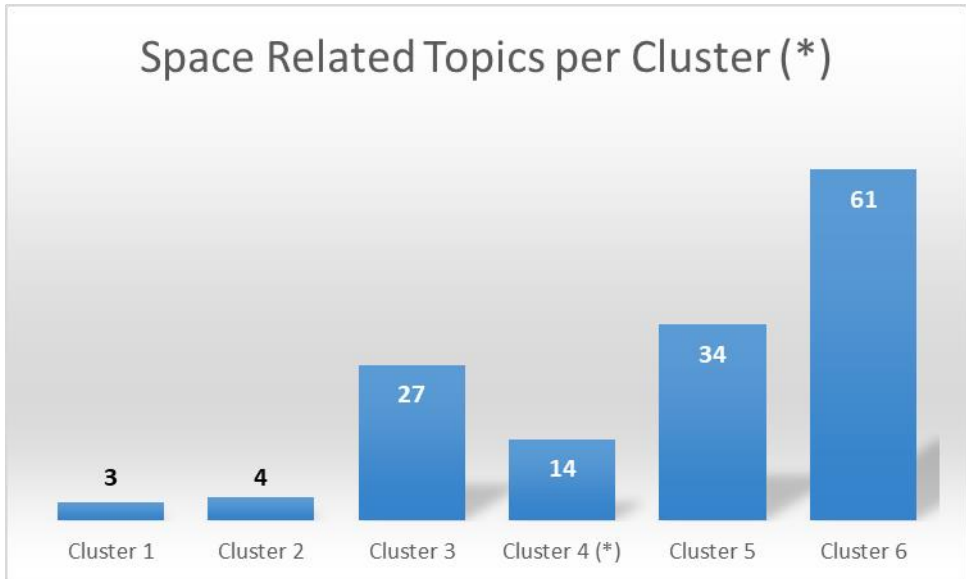
Open strategic
autonomy in
developing, deploying
and using global
space-based
infrastructures,
services, applications
and data

Destination 6

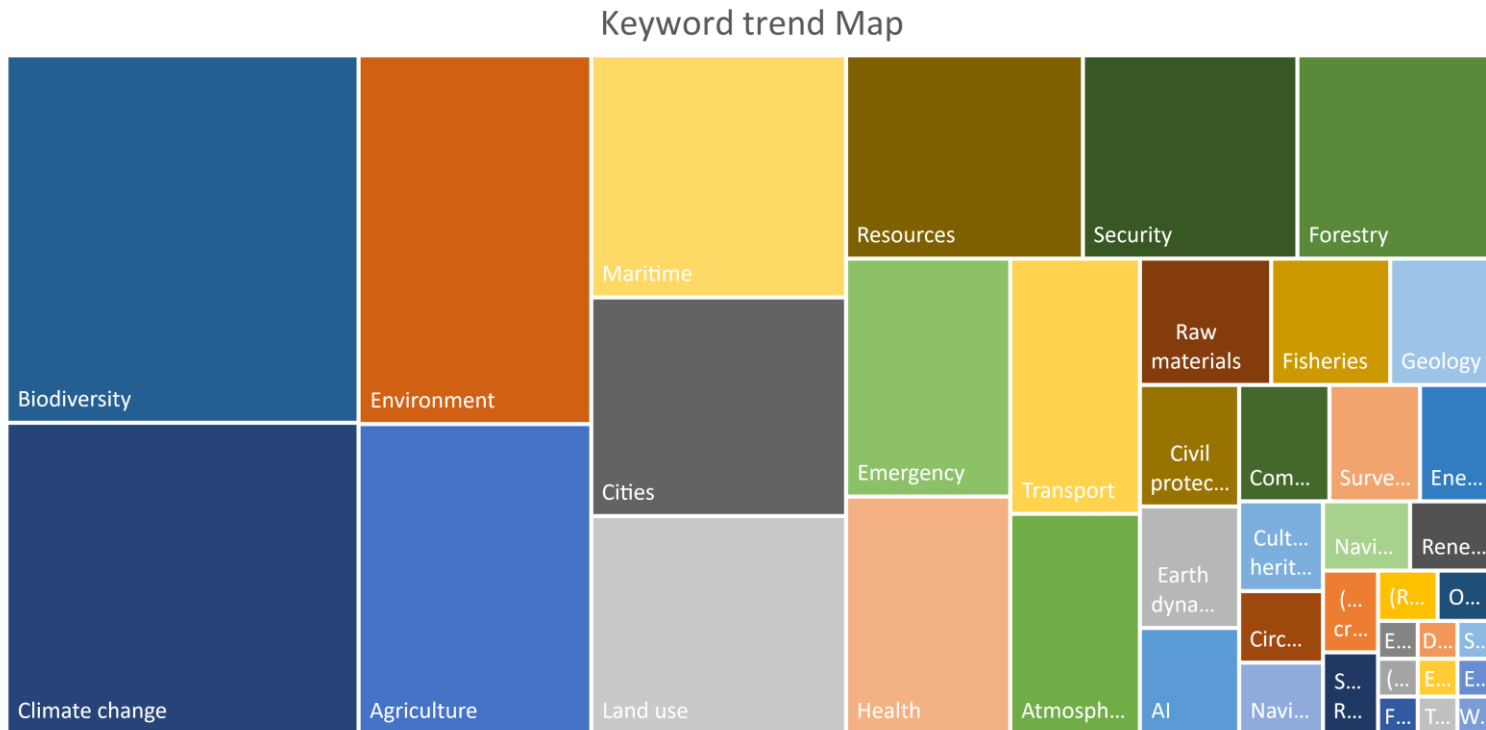
A human-centred and
ethical development of
digital and industrial
technologies



Espaço nas calls de Não-Espaço



(*) Considerando unicamente topics fora do Espaço



Abertura Calls

De 2022 muitas já abriram!

Exemplo: HORIZON-MISS-2022-CLIMA-01-01: User driven applications and tools for regional and local authorities, and other end users focusing on climate impacts, data and knowledge.

HORIZON-CL4-2021-SPACE-01-11:

End-to-end satellite communication systems and associated services

HORIZON-CL4-2022-SPACE-01-12:

Technologies and generic building blocks for Electrical Propulsion

HORIZON-CL4-2021-SPACE-01-42:

Copernicus Atmosphere Monitoring Service evolution

HORIZON-CL4-2021-SPACE-01-43:

Copernicus Security and Emergency Services evolution

HORIZON-CL4-2022-SPACE-01-41:

Copernicus Marine Environment Monitoring Service evolution

CASSINI Prizes



Prémio para deteção e remoção de plásticos nos Oceanos



Abriu a 5 de Julho 2022.

Prazo até 3 de Março 2023!



5th CASSINI Hackaton
Datas TBC!

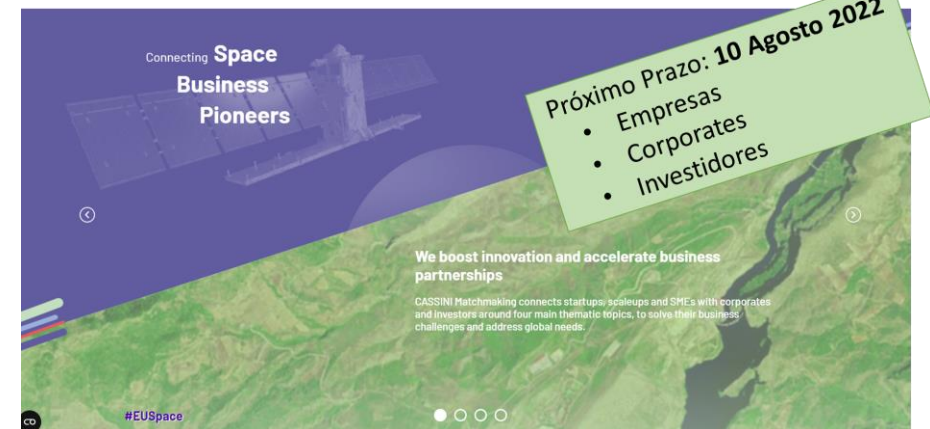
CASSINI Hackatons

CASSINI Matchmaking

CASSINI Business Accelerator



Implementação a partir de Q3 2022



Próximo Prazo: 10 Agosto 2022

- Empresas
- Corporates
- Investidores

Espaço – Horizonte Europa – CASSINI Investment Funds



INVESTMENT

CASSINI Seed and Growth Funding Facility

- + Target: €1 billion **EU Space Investment Fund** dedicated to early- and growth-stage companies
- + Implementation: InvestEU and EIF
- + Objectives: **Attract more VC funds** & space companies to raise VC financing
- + Requirement: Space Programme provides a budget contribution (“blending”) to InvestEU
- + Leverage: EIF adds capital + private funds

Contactar EIF se
houver interesse



Cluster 4 Team | Space - NCPs

A equipa



Digital, Industry and Space, alternate space

📍 Joan Alabart (PT Space)



Digital, Industry and Space, alternate space

📍 Marta Gonçalves (PT Space)

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ENERGIA E CLIMA



Cluster 5 Team - NCPs



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Luis Maia



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Cluster 5

Work Programme

Destination 1

Climate sciences and responses for the transformation towards climate neutrality

Destination 2

Cross-sectoral solutions for the climate transition

Destination 3

Sustainable, secure and competitive energy supply

Destination 4

Efficient, sustainable and inclusive energy use

Destination 5

Clean and competitive solutions for all transport modes

Destination 6

Safe, Resilient Transport and Smart Mobility services for passengers and goods

HORIZON-CL5-2022-D3-02-04:

Technological interfaces between solar fuel technologies and other renewables

HORIZON-CL5-2022-D3-02-05:

Renewable energy carriers from variable renewable electricity surplus and carbon emissions from energy consuming sectors

HORIZON-CL5-2021-D3-03-02:

Next generation of renewable energy technologies

HORIZON-CL5-2022-D3-01-14:

Thermal energy storage solutions (RIA)

HORIZON-CL5-2022-D3-01-13:

Energy system modelling, optimisation and planning tools

HORIZON-CL5-2022-D2-01-05:

Next generation technologies for High-performance and safe-by-design battery systems for transport and mobile applications (Batteries Partnership)

H2 production & Fuel cells



HORIZON-JTI-CLEANH2-2022-01-03:

Development of low temperature water electrolyzers for highly pressurised hydrogen production

HORIZON-JTI-CLEANH2-2022-01-06: Efficiency boost of solar thermochemical water splitting

HORIZON-JTI-CLEANH2-2022-01-07:

Bringing green hydrogen MW scale off grid installations closer to technical and financial maturity

HORIZON-JTI-CLEANH2-2022-05-05:

Research & Innovation co-operation with Africa on hydrogen

HORIZON-JTI-CLEANH2-2022-01-08:

Integration of multi-MW electrolyzers in industrial applications

HORIZON-JTI-CLEANH2-2022-06-02:

Hydrogen Valleys

European Partnerships

PILLAR II - Global challenges & European industrial competitiveness

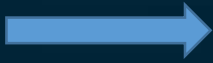
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- Co-Funded

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Institutionalised Partnerships (Art 187.)

- Clean Hydrogen - *successor of [FCH-JU](#)*
- [Clean Aviation](#) - *successor of [Clean Sky 2](#)*
- Europe's rail - *successor of [Shift2Rail](#)*
- Single European Sky ATM Research 3 - *successor of [SESAR 2020](#)*



European associations supporting these Partnerships

- [Hydrogen Europe](#)



- [Clean Sky 2 JU](#)



- [UNIFE - European Rail Supply Industry Association](#)



- [EUROCONTROL](#)





• Recursos Naturais e Bioeconomia

Towards a competitive European industrial battery value chain for stationary applications and e-mobility

- 1. Contribute to make Europe the 1st climate-neutral continent by 2050**
- 2. Enable the European leadership in the battery industry across the value chain, creating economic growth and jobs in a circular economy**
- 3. Contribute to achieve a zero-pollution ambition for a toxic-free environment**





BIODIVERSIDADE E AMBIENTE

Cluster 6 Team - NCPs




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Ricardo Carvalho

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Cluster 6

Work Programme

Destination 1

Biodiversity and ecosystem services

Destination 2

Fair, healthy and environment-friendly food systems from primary production to consumption

Destination 3

Circular economy and bioeconomy sectors

Destination 4

Clean environment and zero pollution

Destination 5

Land, ocean and water for climate action

Destination 6

Resilient, inclusive, healthy and green rural, coastal and urban communities

Destination 7

Innovative governance, environmental observations and digital solutions in support of the Green Deal

HORIZON-CL6-20xx-FARM2FORK:

Creating smart and attractive tools to enhance healthy and sustainable food provision, eating and treating of food at home

HORIZON-CL6-20xx-FARM2FORK:

Climate change and food safety: effects of climate change on food safety across food systems

HORIZON-CL6-20xx-FARM2FORK:

Sustainable organic food innovation labs: reinforcing the entire value chain

CBE: HORIZON-JU-CBE-2022-IAFlag-02

Alternative sources for high added value food and/or feed ingredients

HORIZON-CL6-2021-CIRCBIO-01-09:

Unlocking the potential of algae for a thriving European blue bioeconomy

HORIZON-CL6-20xx-CIRCBIO:

Circular bioeconomy start-up villages

CBE: HORIZON-JU-CBE-2022-R-02

BIO-BASED coatings, barriers, binders, and adhesives

HORIZON-CL6-20xx-CIRCBIO:

Novel, sustainable and circular **BIO-BASED TEXTILES**

HORIZON-CL4-2021-RESILIENCE-01-25:

BIOMATERIALS DATABASE for Health Applications (CSA)

HORIZON-CL6-20xx-ZEROPOLLUTION:

Safe-and-sustainable-by-design bio-based platform chemicals, additives, materials or products as alternatives

European Partnerships

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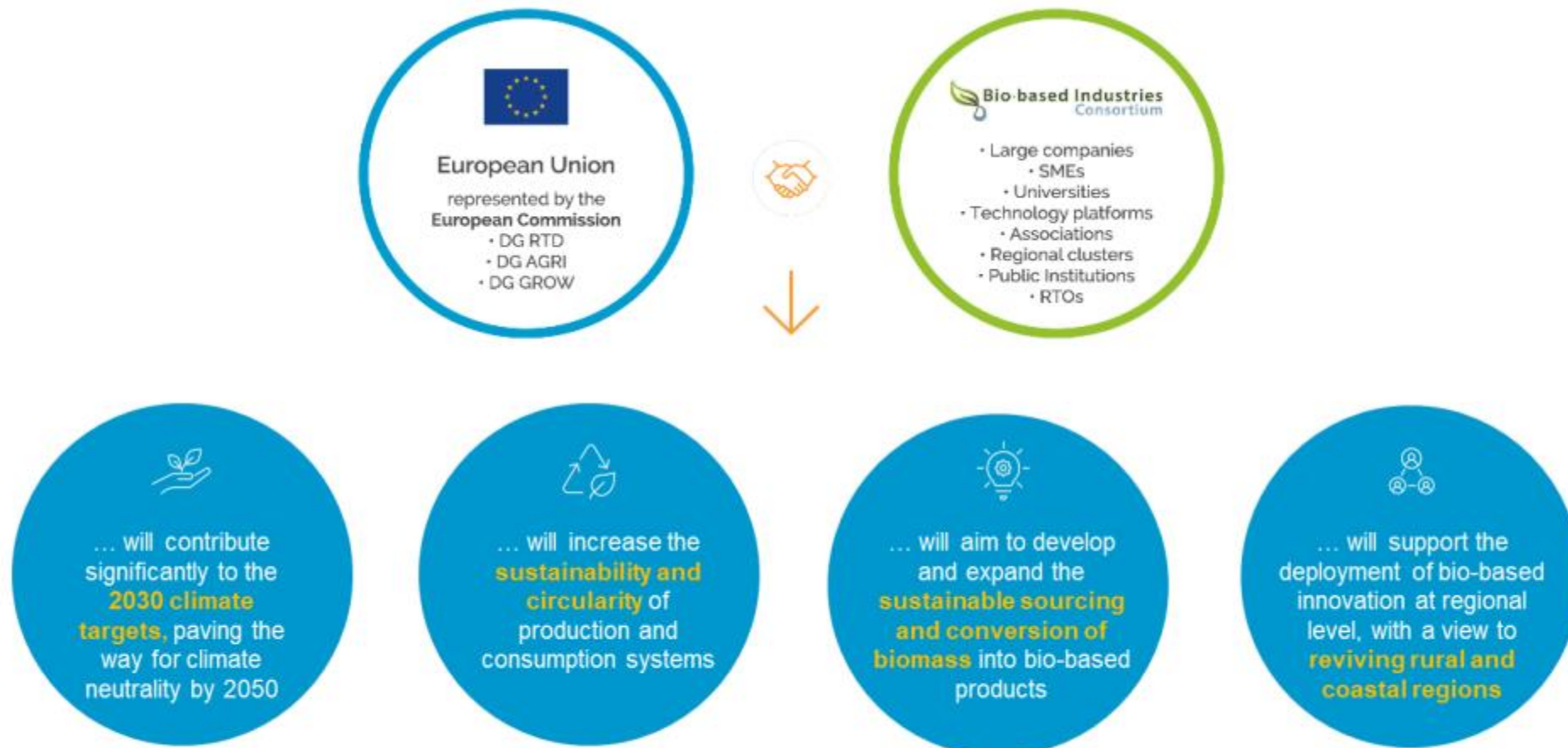
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What is the Circular Bio-based Europe Joint Undertaking (CBE JU)?

A new € 2 bn European Public-Private Partnership (PPP), the successor of Bio-based industries joint Undertaking (BBI JU)



12 topics and their budget

Topics		Indicative budget (million EUR)
Innovation actions		
HORIZON-JU-CBE-2022-IA-01	Biogenic carbon capture and use (CCU) for circular bio-based products	10
HORIZON-JU-CBE-2022-IA-02	Cooperative business models for sustainable mobilisation and valorisation of agricultural residues, by-products, and waste in rural areas	10
HORIZON-JU-CBE-2022-IA-03	Cost-effective production routes towards bio-based alternatives to fossil-based chemical building blocks	12
HORIZON-JU-CBE-2022-IA-04	Co-processing of mixed bio-based waste streams	12
Innovation actions – flagship		
HORIZON-JU-CBE-2022-IAFlag-01	Maximum valorisation of sustainably sourced bio-based feedstock in multi-product, zero-waste, zero-pollution biorefinery	14
HORIZON-JU-CBE-2022-IAFlag-02	Alternative sources for high added value food and/or feed ingredients	14
Research and innovation actions		
HORIZON-JU-CBE-2022-R-01	High performance bio-based polymers for market applications with stringent requirements	9
HORIZON-JU-CBE-2022-R-02	Bio-based coatings, barriers, binders, and adhesives	9
HORIZON-JU-CBE-2022-R-03	Circular-by-design bio-based materials to improve the circularity of complex structures	9
HORIZON-JU-CBE-2022-R-04	Proteins from alternative and unconventional sources	9
HORIZON-JU-CBE-2022-R-05	Sustainable fibres biorefineries feedstock	9
Coordination and support actions		
HORIZON-JU-CBE-2022-S-01	Developing and validating monitoring systems of environmental sustainability and circularity: collection of best practices and benchmarks	3
Total		120

PERIN

Portugal in Europe
Research and Innovation Network

EU Funding Opportunities - Horizon Europe

European Partnerships

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