ΤΜΗΜΑ ΜΟΡΙΑΚΗΣ ΒΙΟΛΟΓΙΑΣ ΚΑΙ ΓΕΝΕΤΙΚΗΣ

Υπεύθυνη συντονίστρια μαθήματος
Μαρία Αλεξίου Χατζάκη
Αναπλ. Καθηγήτρια

PERSONAL SKILLS DEVELOPMENT

Academic Skills:
Research proposals & Funding resources

ΚΥΡΙΑΚΉ 7 ΔΕΚΕΜΒΡΊΟΥ 2025

ΑΝΔΡΕΑΣ ΠΑΛΙΑΛΕΞΗΣ

PROJECT ADVICER
EC CINEA

CINEA in a nutshell

EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY

CINEA - the **Climate, Infrastructure and Environment Executive Agency** started its operations on 1 April 2021
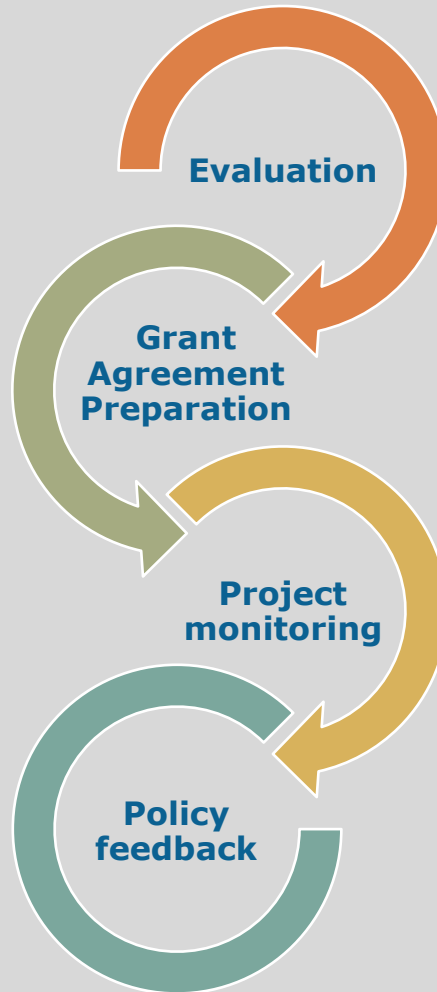
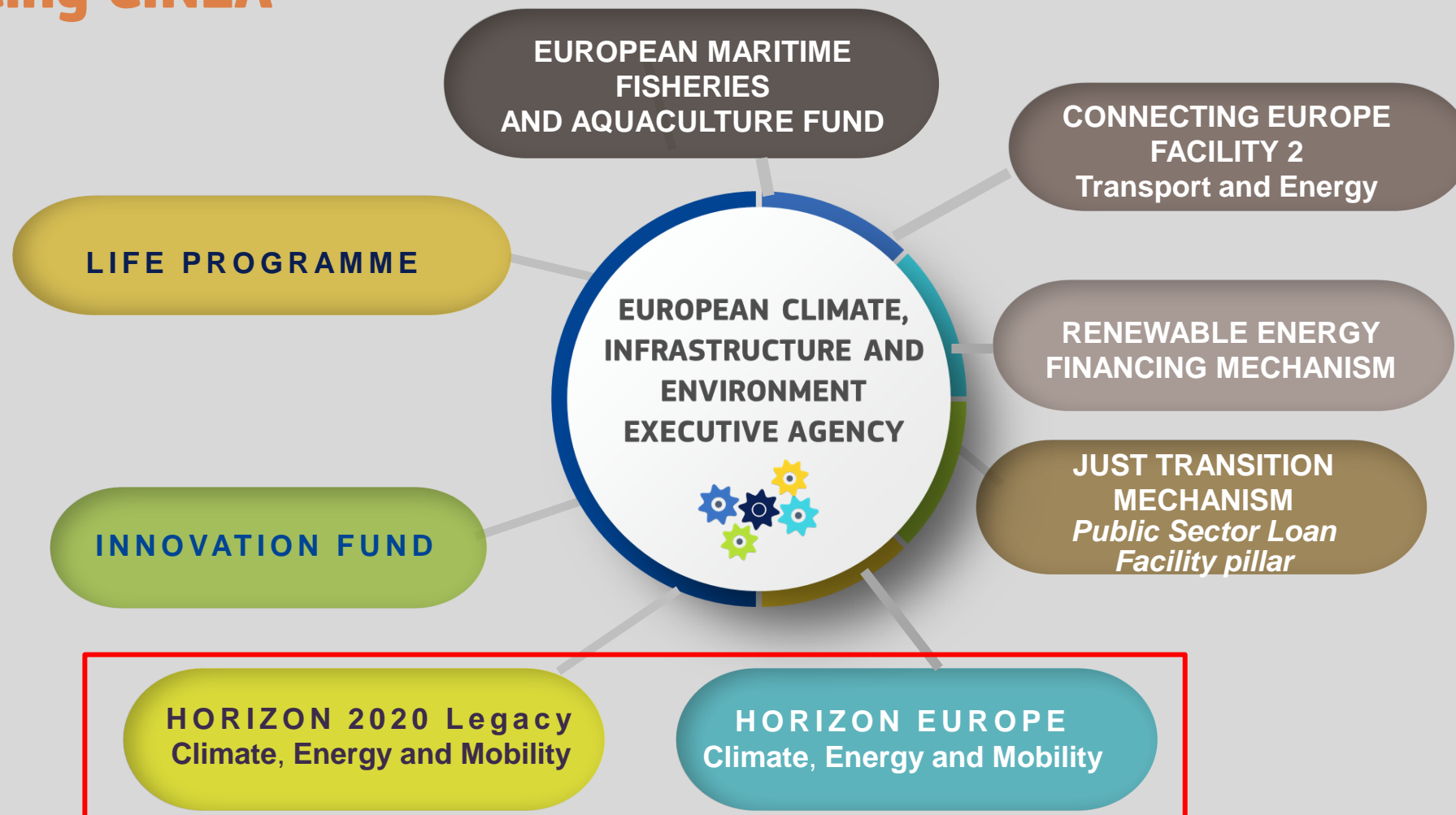**> 74 billion** **for the period 2021-2027**

> 600 staff **by 2027**

from 2800+ projects managed in October 2021 to > 6700 projects by 2027

Whole cycle of project implementation

- Evaluation
- Grant Agreement Preparation
- Project monitoring
- Policy feedback

- **Policy feedback** as an essential part of funding activities

- **Expertise** at the service of beneficiaries in managing the complete lifecycle of projects

- Exploitation of **synergies** and dynamic ways to work across programmes

Introducing CINEA

EUROPEAN MARITIME FISHERIES AND AQUACULTURE FUND

CONNECTING EUROPE FACILITY 2
Transport and Energy

LIFE PROGRAMME

EUROPEAN CLIMATE, INFRASTRUCTURE AND ENVIRONMENT EXECUTIVE AGENCY

RENEWABLE ENERGY FINANCING MECHANISM

JUST TRANSITION MECHANISM
Public Sector Loan Facility pillar

INNOVATION FUND

HORIZON 2020 Legacy
Climate, Energy and Mobility

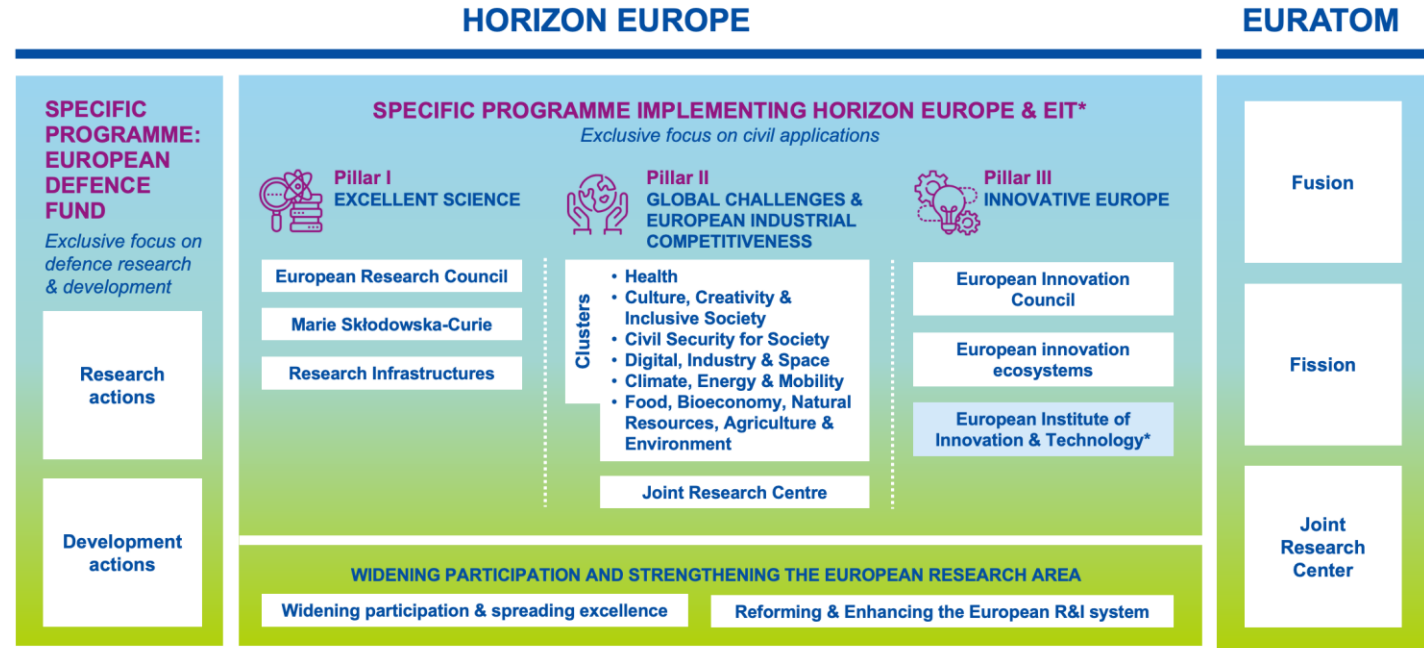**HORIZON EUROPE**
Climate, Energy and Mobility

EU MISSIONS

About Horizon Europe

◦ Horizon Europe supports research and innovation through Work Programmes, which set out funding opportunities for research and innovation activities.

HORIZON EUROPE

EURATOM

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

Exclusive focus on defence research & development

Research actions

Development actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications

Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures

Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters
- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre

Pillar III INNOVATIVE EUROPE

European Innovation Council

European innovation ecosystems

European Institute of Innovation & Technology*

Fusion

Fission

Joint Research Center

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme
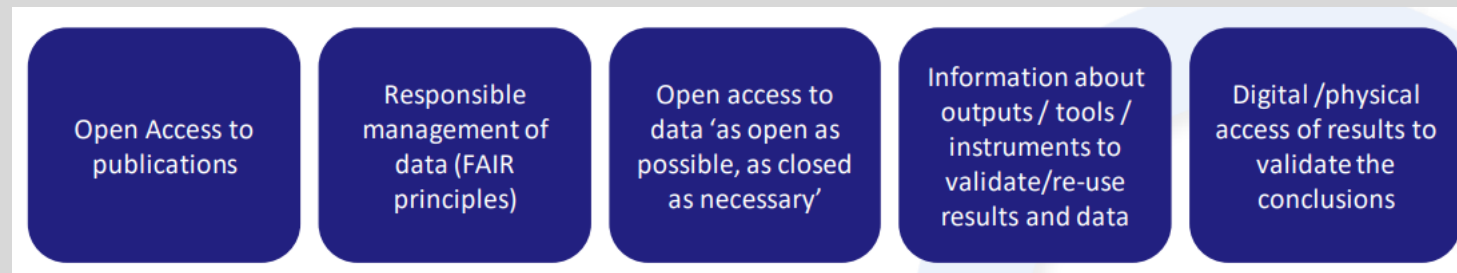
European Commission

Horizon Europe Work Programme

- Horizon Europe is implemented through **work programmes** which set out funding opportunities mainly through **calls for proposals**.

- A call for proposals will normally contain one or more **topics** with a common deadline. The budget of the call is distributed among topics. Where topics share a budget envelope, proposals for these topics will be competing against each other and will result in a single ranking list.

- Applicants **apply to a specific call and topic**.

- Each topic to which applicants can apply will include:

  - The topic **scope**

  - The topic **expected outcomes**

  - The **expected impact** of the mission to which the topic belongs

  - The **type of action**

  - The topic **budget** (or budget shared by group of topics)

Open Science in Horizon Europe

- **Open science** is an approach to research based on open cooperative work that emphasizes the sharing of knowledge, results and tools as early and widely as possible → the principle of being as open as possible, as closed as necessary

| Open Access to publications | Responsible management of data (FAIR principles) | Open access to data 'as open as possible, as closed as necessary' | Information about outputs / tools / instruments to validate/re-use results and data | Digital /physical access of results to validate the conclusions |

- It is mandatory under Horizon Europe

- Good practice is to make project results widely accessible → deposit/archive in a trusted repository

For your publications:
OpenDOAR
https://sherpa.ac.uk/opendoar/

For your research data:
re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

For everything:
zenodo

Open Access to peer-reviewed publications

- Archive peer-reviewed manuscript (including articles, book chapters, etc.) in a trusted repository

- No embargo period → immediate open access!

- Choose a Creative Commons Attribution (CC BY) or equivalent open license to retain rights

- Deposit also research outputs, tools, or instruments necessary to validate the publications' conclusions

- Metadata: Add the project number and acronym

IMPORTANT

- No restrictions on where to publish

- Publication fees are reimbursable if the venue is full Open Access (publication fees for hybrid journals are not eligible costs in HE)
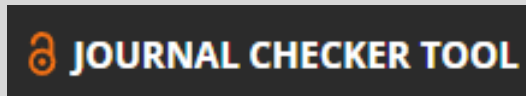
🔓 JOURNAL CHECKER TOOL
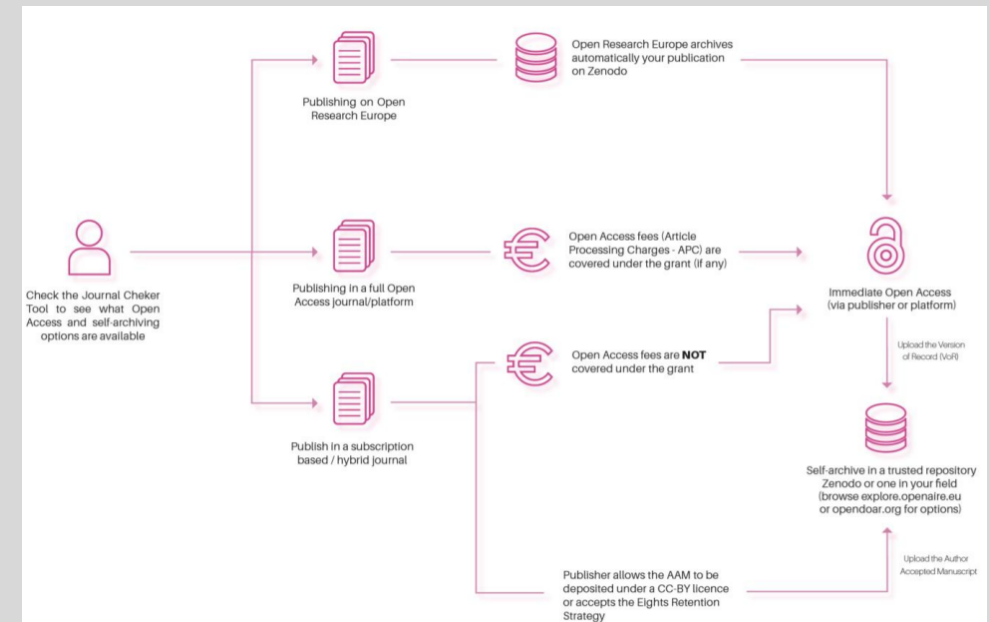
Main elements of the application form

The proposals can be of different type:
- Research & Innovation Actions (RIA)
- Innovation Action (IA)
- Coordination and Support Action (CSA)

The application form is made of two parts:
- **Part A** (web-based forms) is generated by the IT system. It is based on the information entered by the participants through the submission system.
  - 1 General information (Title, duration, abstract, ...)
  - 2 Participants - List of participating organisations: Description of individual researchers involved in the consortium; Role of participating organisation in the project; List of recent publications, relevant previous projects/activities, infrastructure or technical equipment.
  - 3 Budget (Total and per participant)
  - 4 Ethics and Security

- **Part B** is the narrative part that includes **three sections** that each correspond to an evaluation criterion:
  - Excellence, Impact, Quality and efficiency of the implementation
  - Page limit is **45 (for RIA and IA / 30** pages for **CSA;**
  - For topics using lump sum funding the limit for 'Research and Innovation' actions and 'Innovation' actions is 50 pages and the limit for 'Coordination and support' action is 33 pages.

- **Annex** is applicable in some cases:
  - Financial support to third parties
  - Detailed budget table (Financial Support to Third Parties, FSTP)

Evaluation criteria (RIAs and IAs)

Research and innovation action (RIA)

Activities to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution.
This may include basic and applied research, technology development and integration, testing, demonstration and validation of a small-scale prototype in a laboratory or simulated environment.

Innovation action (IA)

Activities to produce plans and arrangements or designs for new, altered or improved products, processes or services. These activities may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

EXCELLENCE

✓ Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is **ambitious**, and goes beyond the state-of-the-art.

✓ Soundness of the proposed **methodology**, including the underlying concepts, models, assumptions, **inter-disciplinary approaches**, appropriate consideration of the **gender dimension** in research and innovation content, and the quality of **open science practices** including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.
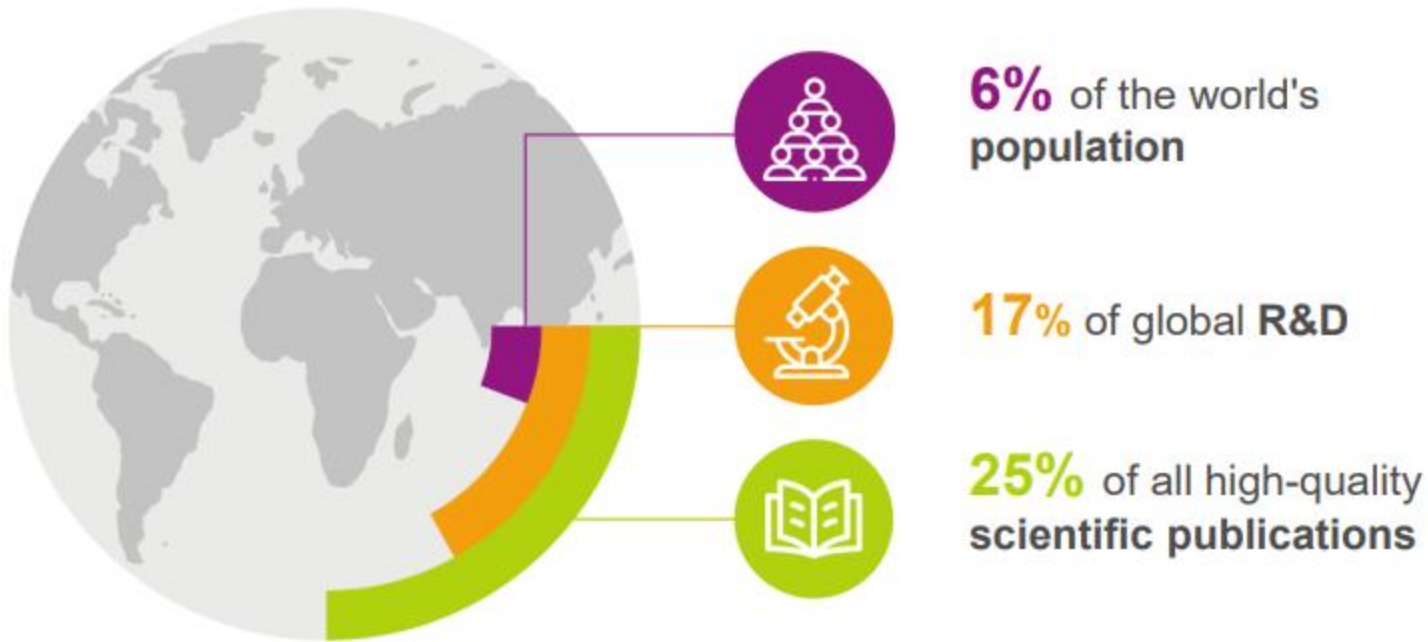
IMPACT

✓ Credibility of the **pathways** to achieve the expected **outcomes and impacts** specified in the work programme, and the likely scale and significance of the contributions due to the project.

✓ Suitability and quality of the **measures to maximize expected outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities.
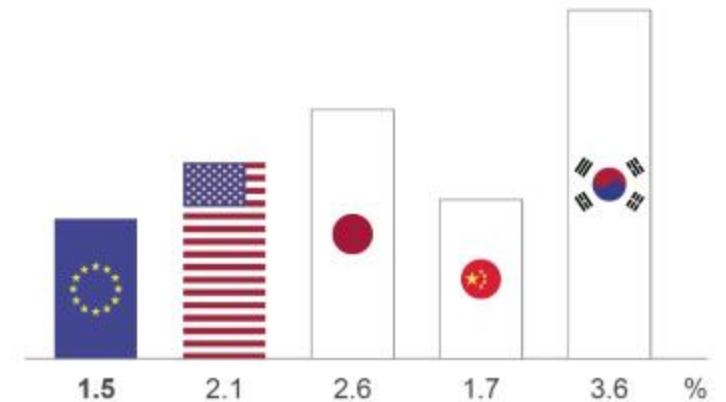
QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

✓ Quality and effectiveness of the **work plan**, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall.

✓ Capacity and role of each **participant**, and extent to which the **consortium** as a whole brings together the necessary expertise.

While benefiting from world-class research and strong industries… Our knowledge and skills are our main resources

6% of the world's **population**

17% of global **R&D**

25% of all high-quality **scientific publications**

1.5% EU business **R&D investment**

| 1.5 | 2.1 | 2.6 | 1.7 | 3.6 | % |

*EU figure is for 2019*
Figures for USA, Japan, China and South Korea are for 2018. Figures represent R&D as % of GDP

…Europe can do better at transforming this into **leadership in innovation** and **entrepreneurship**

About Horizon Europe

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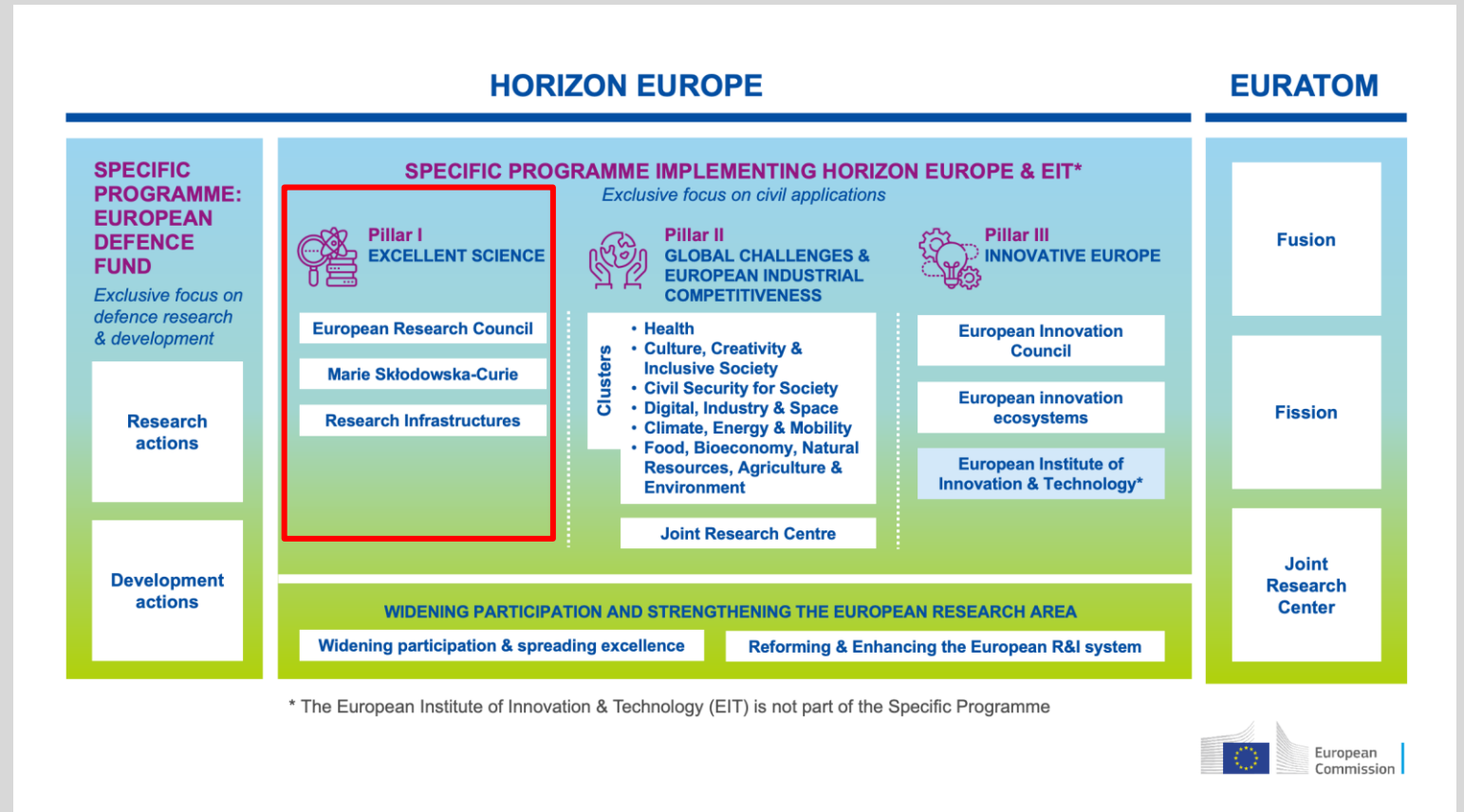
Pillar I
EXCELLENT SCIENCE:

reinforcing and extending the **excellence of the Union's science base**

European Research Council

Frontier research by the best researchers and their teams

€16 billion

Marie Skłodowska-Curie Actions

Equipping researchers with new knowledge and skills through mobility and training

€6.6 billion

Research Infrastructures

Integrated and inter-connected world-class research infrastructures

€2.4 billion

European Research Council
Established by the European Commission

Competitive funding to support investigator-driven frontier research across all fields, on the basis of scientific excellence.

Funding

10,000+ Projects funded since 2007

Over 70% of completed ERC projects led to breakthroughs or major advances (according to independent studies)

Starting Grant: up to €1.5 million. Duration: up to 5 years. 2-7 years of experience since completion of PhD.

Consolidator Grant: up to €2 million. Duration: up to 5 years. 7-12 years of experience since completion of PhD.

Advanced Grant: up to €2.5 million. Duration: up to 5 years. An excellent scientific track record of recognized achievements in the last 10 years.

Synergy Grant: 2-4 researchers (one can be based outside Europe). Up to a maximum of €10 million for a period of 6 years.

7 Nobel Prizes, 4 Fields Medals, hundreds of important prizes awarded to ERC grantees

80+ Nationalities (ERC grantees)

"The expertise that we gathered in cancer trials encouraged us to extend the use of mRNA vaccines towards the prevention of infectious diseases. Groundbreaking innovation requires decades of research and contributions from multiple research frontiers until it reaches maturity to provide benefit for humanity."
**ERC Grantee Uğur Şahin, Mainz University**

Marie Skłodowska-Curie Actions

the MSCA are the European Union's flagship funding programme for doctoral education and postdoctoral training of researchers.

Doctoral Networks (DN)

The objective of Doctoral Networks is to develop and implement excellent doctoral programmes through partnerships of organisations from different sectors and disciplines across Europe and beyond.
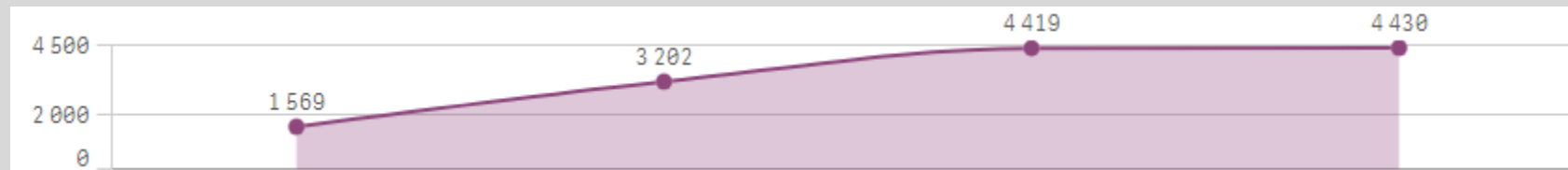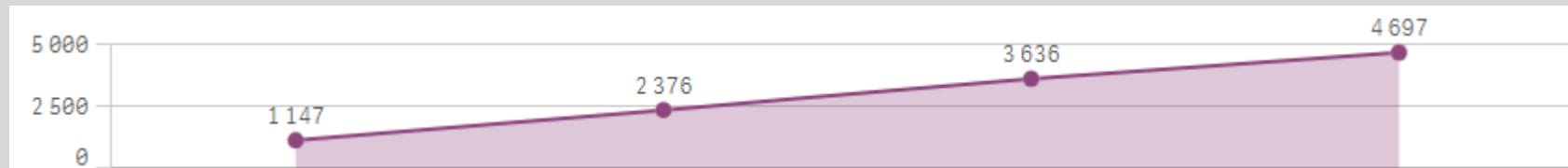
Marie Skłodowska-Curie Actions

Postdoctoral Fellowships (PF)

The objective of Postdoctoral Fellowships is to support researchers' careers, foster excellent research training and enhance the creative and innovative potential of researchers.
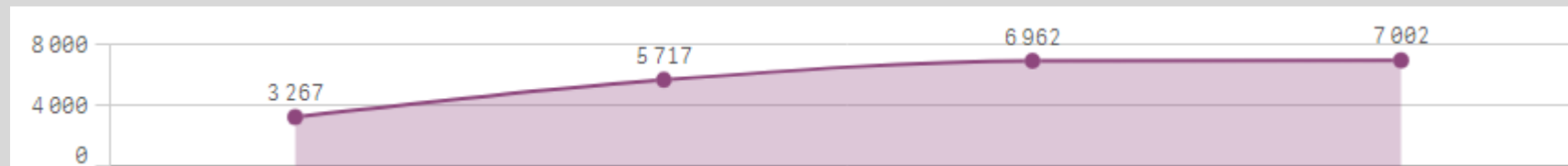
The Postdoctoral Fellowships action targets researchers already holding a PhD who wish to carry out their research activities abroad, acquire new skills and develop their careers.

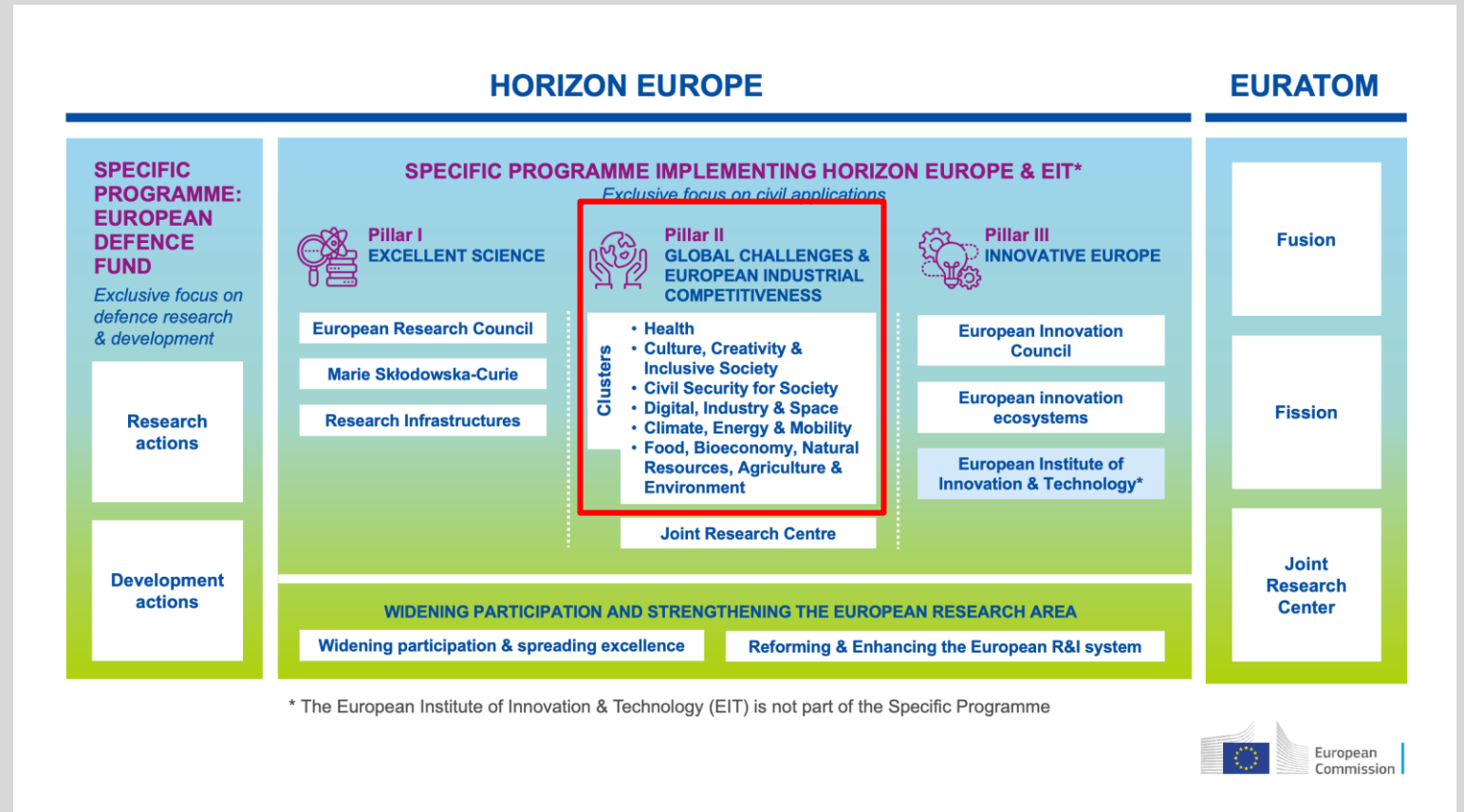# Marie Skłodowska-Curie Actions

Staff Exchanges (SE)

Staff Exchanges promote innovative international, inter-sectoral and interdisciplinary collaboration in research and innovation through exchanging staff and sharing knowledge and ideas at all stages of the innovation chain.
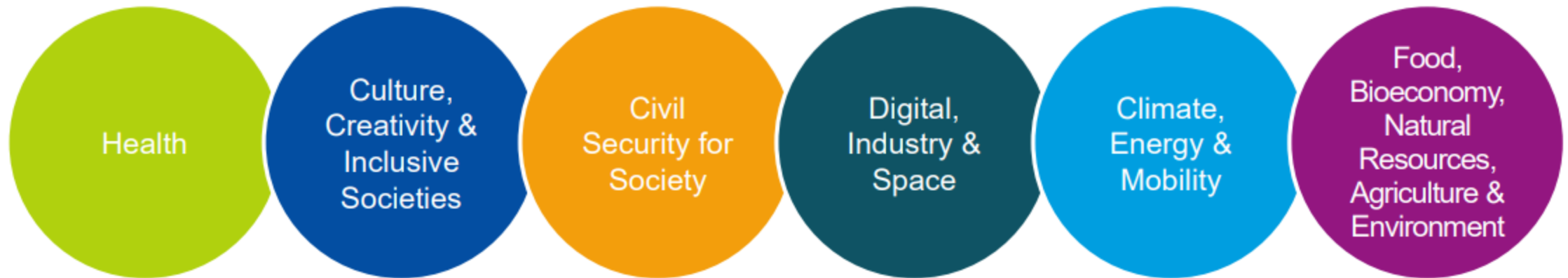
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HORIZON EUROPE   **EURATOM**

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

Exclusive focus on defence research & development

Research actions

Development actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*
Exclusive focus on civil applications

Pillar I EXCELLENT SCIENCE
- European Research Council
- Marie Skłodowska-Curie
- Research Infrastructures

Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters
- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre

Pillar III INNOVATIVE EUROPE
- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA
- Widening participation & spreading excellence
- Reforming & Enhancing the European R&I system

EURATOM
- Fusion
- Fission
- Joint Research Center

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European Commission

Pillar II - Clusters

GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS:

boosting **key technologies** and solutions underpinning **EU policies & Sustainable Development Goals** (6 clusters and JRC – non-nuclear direct actions)

Health

Culture, Creativity & Inclusive Societies

Civil Security for Society

Digital, Industry & Space

Climate, Energy & Mobility

Food, Bioeconomy, Natural Resources, Agriculture & Environment

€53.5 billion

Budget for clusters & for JRC

in current prices

Cluster 1	**Health**	**€8.246 billion** (including €1.35 billion from NGEU)
Cluster 2	**Culture, Creativity & Inclusive Societies**	**€2.280 billion**
Cluster 3	**Civil Security for Society**	**€1.596 billion**
Cluster 4	**Digital, Industry & Space**	**€15.349 billion** (including €1.35 billion from NGEU)
Cluster 5	**Climate, Energy & Mobility**	**€15.123 billion** (including €1.35 billion from NGEU)
Cluster 6	**Food, Bioeconomy, Natural Resources, Agriculture & Environment**	**€8.952 billion**
	JRC (non-nuclear direct actions)	**€1.970 billion**

Clusters are including a budget for Partnerships and Missions
NGEU is Next Generation EU programme – Recovery Fund

EU Missions

R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and **5 missions areas**. Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar, but may also benefit from actions carried out within other parts of the Programme as well as complementary actions carried out under other Union programmes.

Five Missions Areas

Adaptation to climate change, including societal transformation

Cancer
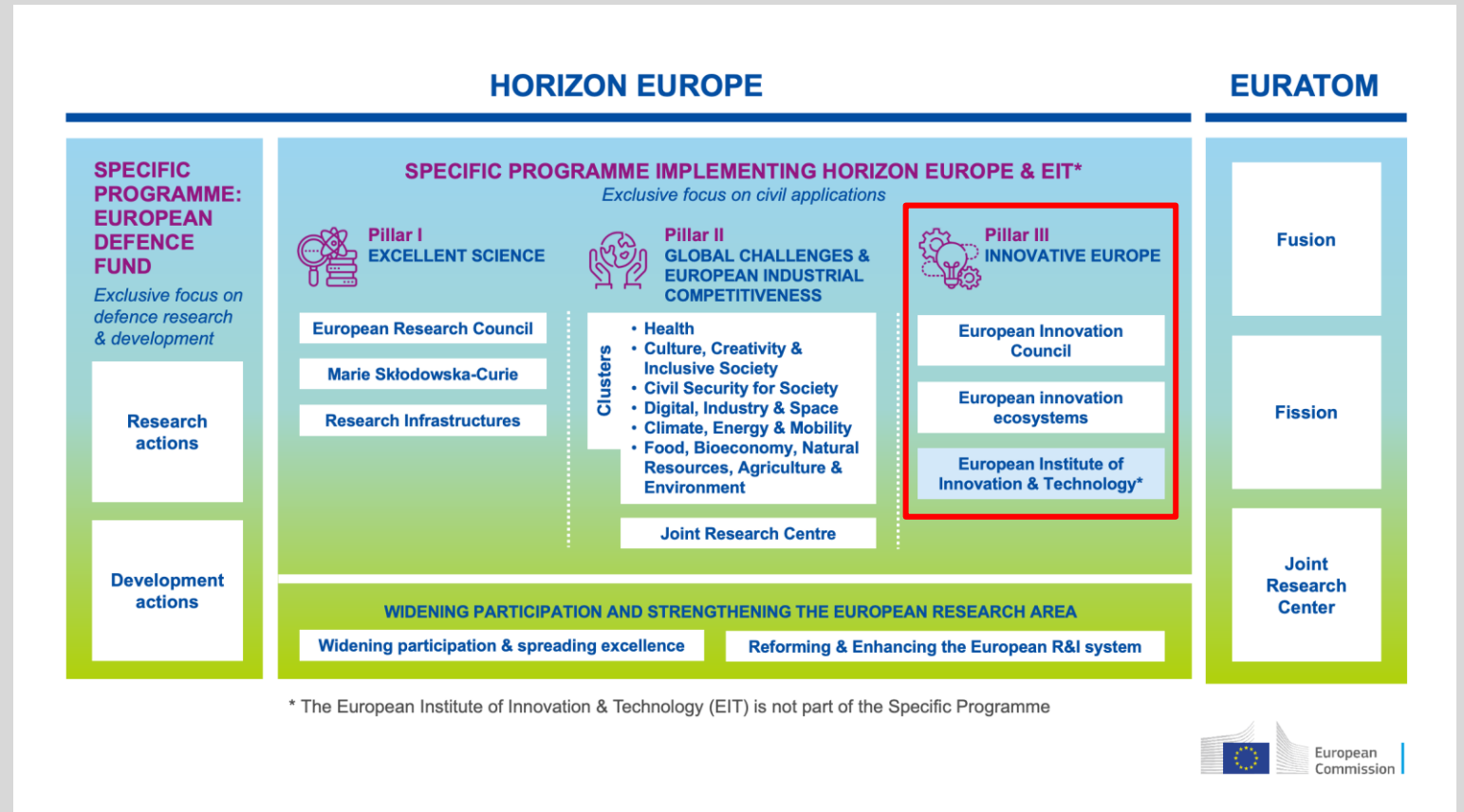
Healthy oceans, seas, coastal & inland waters

Climate-neutral & smart cities

Soil health & food

About Horizon Europe

◦ Horizon Europe supports research and innovation through Work Programmes, which set out funding opportunities for research and innovation activities.

Pillar III
INNOVATIVE EUROPE:

stimulating **market-creating breakthroughs** and **ecosystems** conducive to innovation

European Innovation Council

Support to innovations with breakthrough and market creating potential

European innovation ecosystems

Connecting with regional and national innovation actors

European Institute of Innovation and Technology (EIT)

Bringing key actors (research, education and business) together around a common goal for nurturing innovation

The budget: **€10.6 billion**, incl. up to **€527 million** for ecosystems (including NGEU – Recovery Fund parts dedicated to EIC).

circa **€3 billion**

European Innovation Council

Support to innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors **(70% of the budget earmarked for SMEs)**

European Innovation Council – a one-stop-shop

- Helping researchers and innovators create markets of the future, leverage private finance, scale up their companies
- Innovation centric, risk taking & agile, pro-active management and follow up
- Mostly 'bottom up', but also targeting strategic challenges
- EIC Programme Managers to develop visions for breakthroughs and steer portfolios

Complementary instruments bridging the gap from idea to market

PATHFINDER	TRANSITION	ACCELERATOR
R&I grants (from early technology to proof of concept)	**R&I grants** (proof of concept to pre-commercial)	**Grants & investment (via EIC Fund) for single SMEs & start-ups** (from pre-commercial to market & scale-up)

Part

Widening Participation & Strengthening the European Research Area (ERA):

Widening Participation and Spreading Excellence

- Teaming, Twinning, ERA Chairs,
- European Cooperation in Science and Technology (COST)
- Boosting National Contact Points' (NCPs) activities, pre-proposal checks and advice
- Brain circulation
- Excellence initiatives:
- Possibility for entities from widening countries to join already selected collaborative R&I actions
- Recognition of participation
- Matchmaking services

Reforming and enhancing the EU R&I system

- Strengthening the evidence base for R&I policy
- Foresight
- Support for policy makers to the ERA development
- Support to national R&I policy reform, including Policy Support Facility
- Attractive researcher careers and links with higher education
- Open science, citizen science and science communication
- Gender equality
- Ethics and integrity
- Support to international cooperation
- Scientific input to other policies
- Support to the Programme implementation
- Support for National Contact Points
- Support to dissemination & exploitation

€2.96 billion

€0.44 billion

Synergies with other Union programmes

HORIZON EUROPE			
Other Union Programmes, including			
Common Agricultural Policy	InvestEU	ESF+	Innovation Fund
External Instrument	LIFE	Digital Europe	Internal Security Fund and Instrument for Border Management
Maritime & Fisheries Fund	EU4Health	Space Programme	
Connecting Europe Facility	ERDF	ERASMUS+	Single Market Programme
Just Transition Mechanism		Creative Europe	Recovery and Resilience Facility

Enhanced synergies

COMPATIBILITY
Harmonisation of funding rules; flexible co-funding schemes; pooling resources at EU level

COHERENCE & COMPLEMENTARITY
Alignment of strategic priorities in support of a common vision

The EU4Health programme is an unparalleled EU financial support in the health area. EU4Health is a clear message that public health is a priority for the EU and it is **one of the main instruments to pave the way to a European Health Union**.
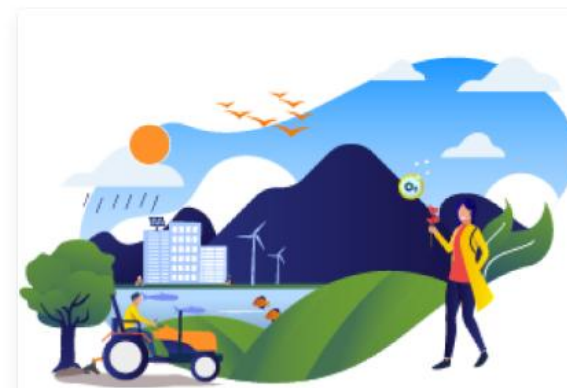
LIFE Programme
EU's funding instrument for the environment and climate action
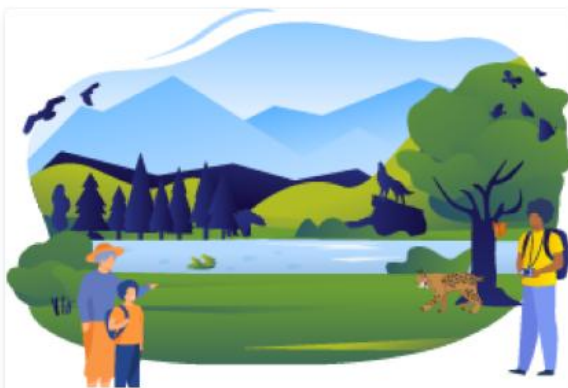
Nature and Biodiversity

Circular Economy and Quality of Life

Climate Change Mitigation and Adaptation

Clean Energy Transition

Forward looking

◦ Horizon Europe 2028 - 2034: twice bigger, simpler, faster and more impactful

◦ As part of the next long-term EU budget 2028-2034, the Commission is proposing to double the budget of the research and innovation framework programme to €175 billion. The new Horizon Europe will boost Europe's competitiveness and fund solutions to real-world challenges, from AI that supports doctors, to satellites that protect farmers, to cleaner, smarter ways to move, live, and work.

Programme structure

- **Pillar I 'Excellent Science'** aims to strengthen the EU's scientific base, attract top talent and promote excellent research in Europe. It covers the European Research Council (ERC), Marie Skłodowska-Curie Actions and science for EU policies through the Joint Research Centre. The ERC will be expanded to increase its ability to support frontier research, with a focus on funding excellent researchers and their teams following a 'Choose Europe' approach.
- **Pillar II 'Competitiveness and Society'** aims to support collaborative research and innovation in areas of high societal impact. It targets EU competitiveness in areas like the clean transition, digital leadership, defence, industry and space, in close cooperation with the European Competitiveness Fund. It will also address global societal challenges and features EU missions, as well as the New European Bauhaus Facility.
- **Pillar III 'Innovation'** aims to support innovation in Europe, with a focus on promoting the development of new products, services and business models. The European Innovation Council (EIC) will be expanded to fund high-risk disruptive projects in stages and will introduce a focus for defence and dual-use startups.
- **Pillar IV 'European Research Area'** aims to support the development of a unified European Research Area (ERA), with a focus on promoting excellence and impact, including a reformed widening component. As a novelty, it also supports the development and operation of research and technology infrastructures.

Useful links

[Erasmus+](#)

[CORDIS | European Commission](#)

[Work as an expert in EU](#)

[EU Funding & Tenders Portal](#)

[EU Funding & Tenders Portal – How to participate](#)

The end

Thank you for your attention