



#HorizonEU

THE EU
RESEARCH &
INNOVATION
PROGRAMME 2021 – 27

February 2026



HORIZON EUROPE

Investing to shape our future



Our Vision

The EU's key funding programme for research and innovation:

- Tackles **climate change**
- Helps to achieve the **UN's Sustainable Development Goals**
- Boosts the EU's **competitiveness and growth**
- Facilitates **collaboration** and strengthens the **impact of research and innovation** in developing, supporting and implementing EU policies while tackling global challenges
- Supports the creation and better diffusion of **excellent knowledge and technologies**
- **Creates jobs**, fully engages the EU's talent pool, boosts **economic growth**, promotes industrial competitiveness and optimises **investment impact** within a strengthened European Research Area



Credits: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

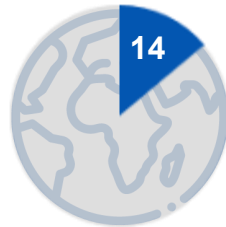


While benefiting from world-class research and strong industries...

The EU is home to **2.15 million researchers**, up from 1.48 million in 2013

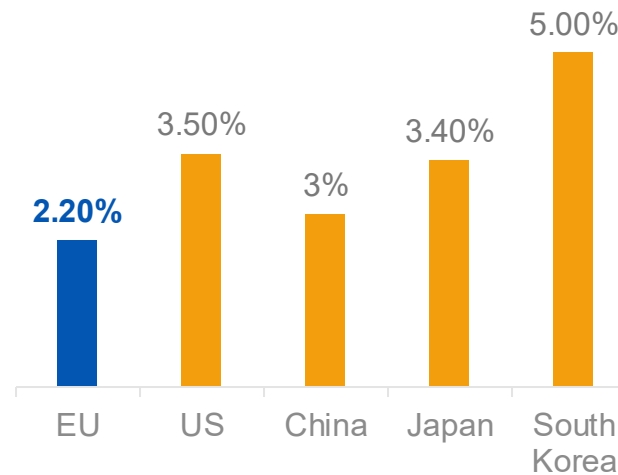


EU's share in **global R&D investments** is 14% (2022)



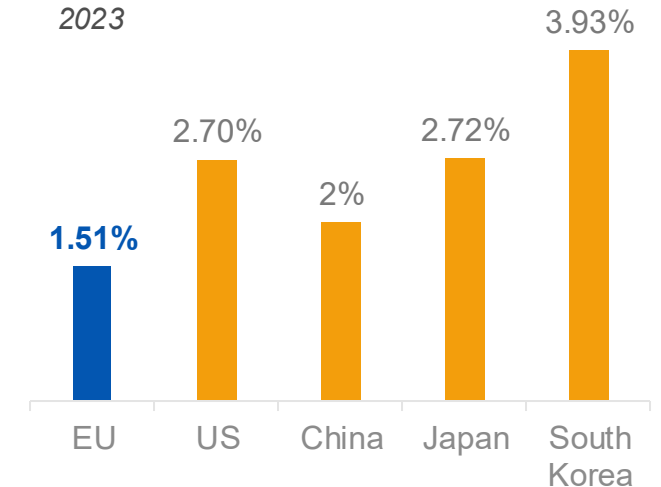
R&D intensity:

2023



EU's intensity is mostly lagging in private investments:

2023



While having 6% of the global population, the EU is home to **1 out of 6 researchers** in the world (15%)

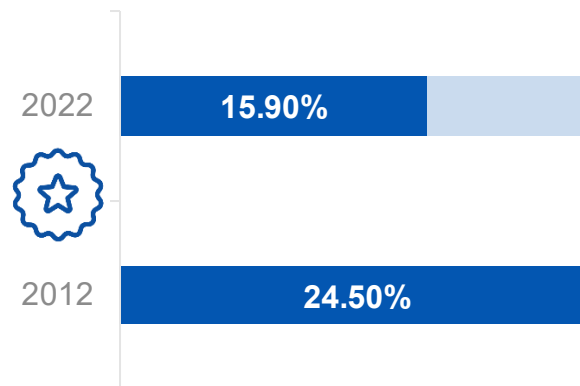


...Europe can do better at transforming this into leadership in innovation and entrepreneurship

EU is strong in **scientific output**: 18.1% of **global share of total publications** and 17.2% of top 10% of **most-cited scientific publications** (2022-24)

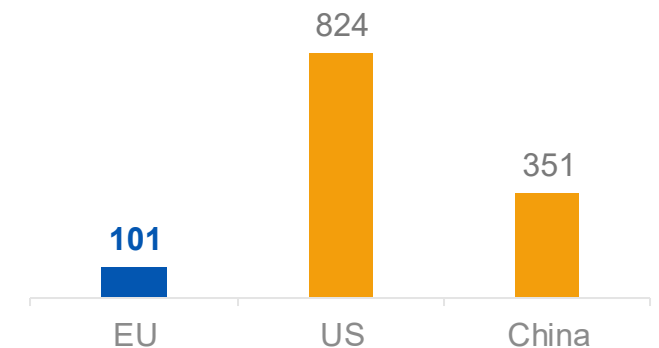


BUT EU's **share in patenting** is declining rapidly (from 24.5% in 2012 to 15.9% in 2022), while China's is rising



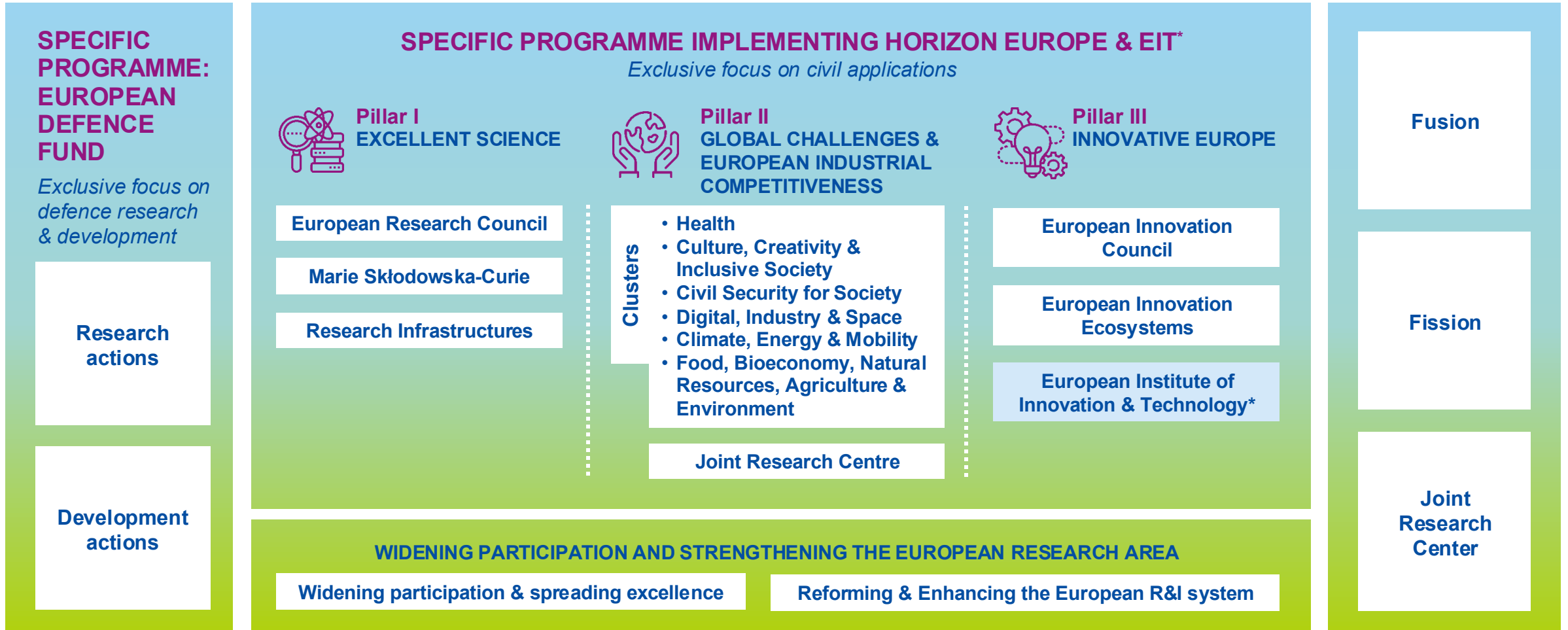
EU also still lags in the number of **unicorn companies** despite progress

September 2025



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EURATOM

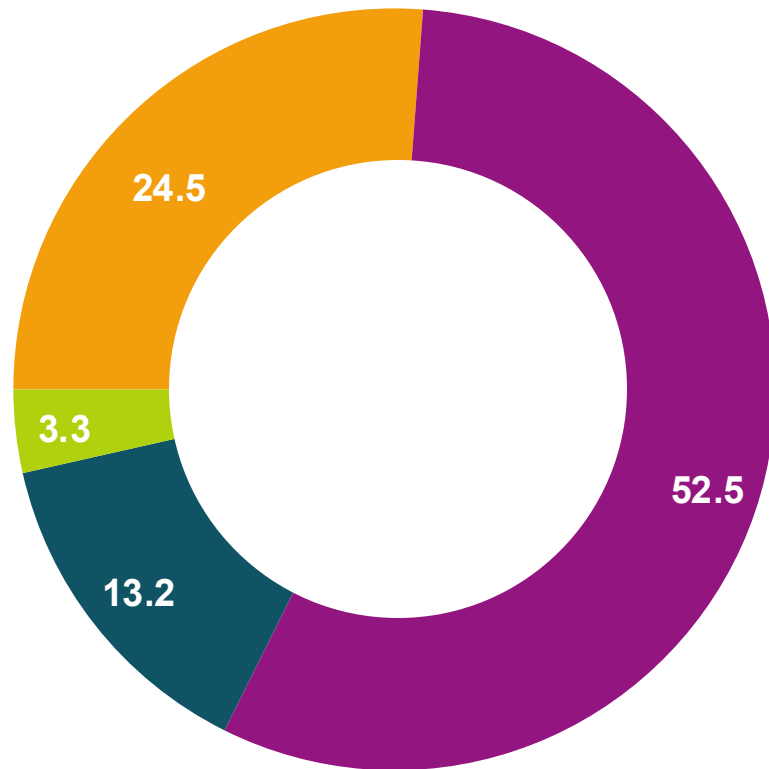


* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



Horizon Europe Budget: €93.5 billion (2021-2027)

(including €5.4 billion from NGEU – Next Generation Europe – programme of EU for Recovery from COVID-19 crisis)



MFF Mid-term review 2024

€ billion in current prices

- Excellent Science
- Global challenges and European ind. comp.
- Innovative Europe
- Widening Part and ERA



Horizon Europe

The ambitious EU research and innovation framework programme (2021-2027)



fuel EU's **scientific and technological excellence** and the strengthen the European Research Area (ERA)

**Science
& technology**



tackle policy priorities, including **green and digital transitions** and Sustainable Development Goals

Society



boost Europe's **innovation uptake, competitiveness and jobs**

Economy





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

R&I grants

(from early technology to proof of concept)

TRANSITION

R&I grants

(proof of concept to pre-commercial)

ACCELERATOR & STEP SCALE UP

Grants & investment (via EIC Fund, incl. STEP equity-only) for single SMEs, start-ups and small mid-caps (from pre-commercial to market & scale-up,)





EU Missions

R&I Missions

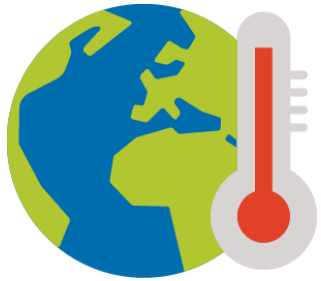
Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

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**



New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key Features

- **Strategic orientation**
- **Systemic approach**
- **Simple architecture and toolbox**
- **Common set of criteria for the life-cycle**

CO-PROGRAMMED

Based on Memoranda of Understanding/contractual arrangements; implemented independently by the partners and by Horizon Europe

CO-FUNDED

Based on a joint programme agreed and implemented by partners; commitment of partners for financial and in-kind contributions

INSTITUTIONALISED

Based on long-term dimension and need for high integration; partnerships based on Art 185/187 of TFEU and the EIT legal acts for 2021-2027

More information on europa.eu: [European partnerships webpage](#)



The European Partnerships portfolio

PILLAR II - Global challenges & European industrial competitiveness

PILLAR III - Innovative Europe

CLUSTER 1: Health	CLUSTER 2: Culture, Creativity, Inclusive Societies	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bio-economy, Agriculture, Env...	EUROPEAN INNOVATION ECOSYSTEMS
Innovative Health Initiative	Resilient Cultural Heritage	Chips (formerly KDT)	Clean Hydrogen	Circular Bio-based Europe	Innovative SMEs
Global Health Partnership	Social Transformations and Resilience	Smart Networks & Services	Clean Aviation	R&I in the Mediterranean Area (PRIMA, Art. 185)**	
Transformation of health systems		High Performance Computing	Single European Sky ATM Research 3	Biodiversa+	EIT
Chemicals risk assessment		European Metrology (Art. 185)	Europe's Rail	Climate Neutral, Sustainable & Productive Blue Economy	InnoEnergy
ERA for Health		AI-Data-Robotics	Connected and Automated Mobility (CCAM)	Water4All	Climate
Rare diseases*		Photonics	Batt4EU	Animal Health & Welfare	Digital
One-Health Anti Microbial Resistance*		Made in Europe	Zero-emission waterborne transport	Accelerating Farming Systems Transitions	Food
Personalised Medicine		Clean steel – low-carbon steelmaking	Zero-emission road transport	Agriculture of Data*	Health
Pandemic Preparedness*		Processes4Planet	Built4People	Safe & Sustainable Food System	Raw Materials
Brain Health		Global Competitive Space Systems*	Solar Photovoltaics	Forests and Forestry for a sustainable Future	Manufacturing
		Innovative Materials for EU (I AM for EU)	Clean Energy Transition		Urban Mobility
		Virtual Worlds	Driving Urban Transitions		Cultural and Creative Industries*
		Textiles of the Future			Water, Marine and Maritime Sectors and Ecosystem*
		Raw Materials for the Green and Digital Transition			

■ Institutionalised Partnerships (Art. 185/7)

■ Institutionalised Partnerships / EIT KICs

■ Co-programmed

■ Co-funded

□ Proposed new candidate European Partnerships under the Horizon Europe strategic plan 2025-2027

* Not yet launched

** Direct continuation of a H2020 partnership

CROSS-PILLARS I AND II

European Open Science Cloud





International Cooperation

International Cooperation

Tackling together global societal challenges; access to the world's best talents, expertise and resources; enhanced supply and demand of innovative solutions

Association to Horizon Europe

- Third countries with good capacity in science, technology and innovation
- Taking into account objective of driving economic growth in Europe through innovation
- Intensified targeted actions
- Strengthened support to multilateral cooperation
- Openness to international participation balanced with the promotion of EU strategic autonomy





Open Science across the programme

Open
Science

Mainstreaming of open science practices for improved quality and efficiency of R&I, and active engagement of society

Mandatory immediate Open Access to publications: beneficiaries must retain sufficient IPRs to comply with open access requirements;

Data sharing as ‘open as possible, as closed as necessary’: mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Reusable) research data

- Work Programmes may incentivize or oblige to adhere to **open science practices** such as involvement of citizens, or to use the **European Open Science Cloud**
- Assessment of open science practices through the **award criteria** for proposal evaluation
- Dedicated support to **open science policy actions**
- Support to **Open Research Europe** publishing platform and **EU Open Research Repository**



Horizon Europe implementation

Key Figures April 2021 – July 2025



**EUR 48.2
billion**

*EU contribution
in grants*



18 008

*signed
grants*



**EUR 2.7
million**

*average
grants*



**29 453
Billion**

*distinct
participants*



35%

*Share of SME
participants*



15.3%

*Proposal
success
rate*



**EUR 96.2
billion**

*additional funding
needed to fund all
high-quality
proposals*



EU framework programmes proved powerful for research & innovation impact

2nd largest

provider of climate science
in the world*

14-30%

expected reduction in
administrative costs for
beneficiaries of lump sum
funding

< €43 billion

already funded at Horizon
Europe's halfway point in
January 2025

80%

of projects funded by the
ERC have led to scientific
breakthroughs or major
advances

35

Nobel Prize winners
Funded under the EU R&I
Framework programmes
since their launch in 1984

58%

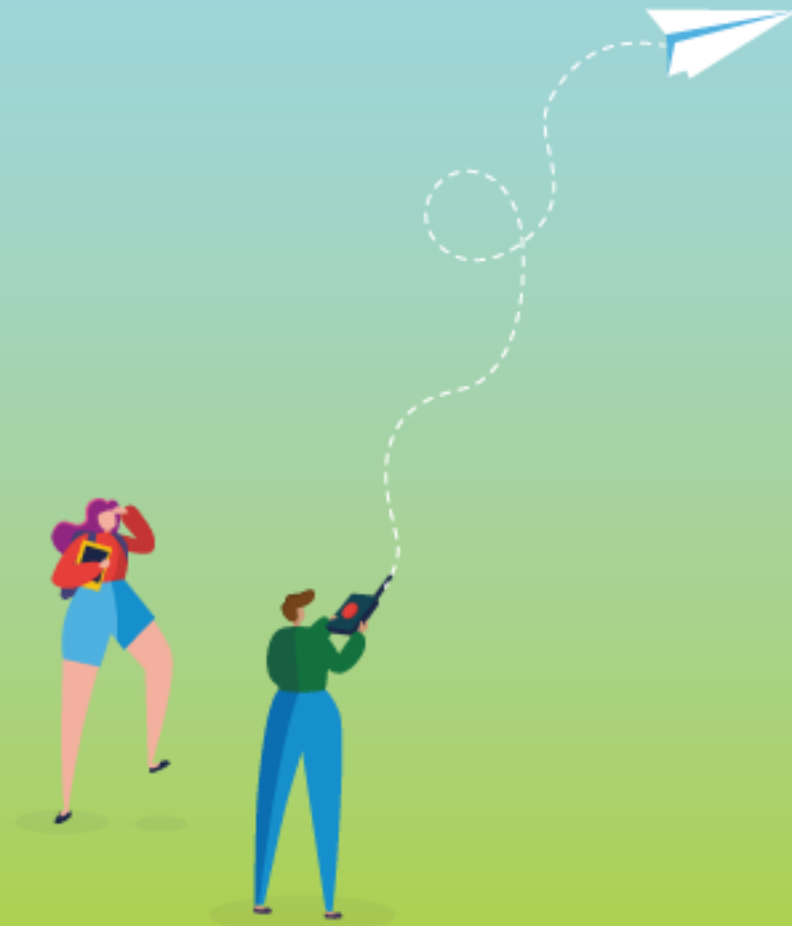
of collaborative projects
involve 'Widening'
countries (those with
lower research and
innovation performance)

*Statistics from the interim evaluation of Horizon Europe (published April 2025)
and the final evaluation of Horizon 2020 (published in January 2024)



HORIZON EUROPE

In detail



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

€15.7 billion

Marie Skłodowska-Curie Actions

Equipping researchers with new knowledge and skills through mobility and training

€6.5 billion

Research Infrastructures

Integrated and inter-connected world-class research infrastructures

€2.3 billion





European Research Council

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)



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



80+
Nationalities
(ERC grantees)



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.

“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.”

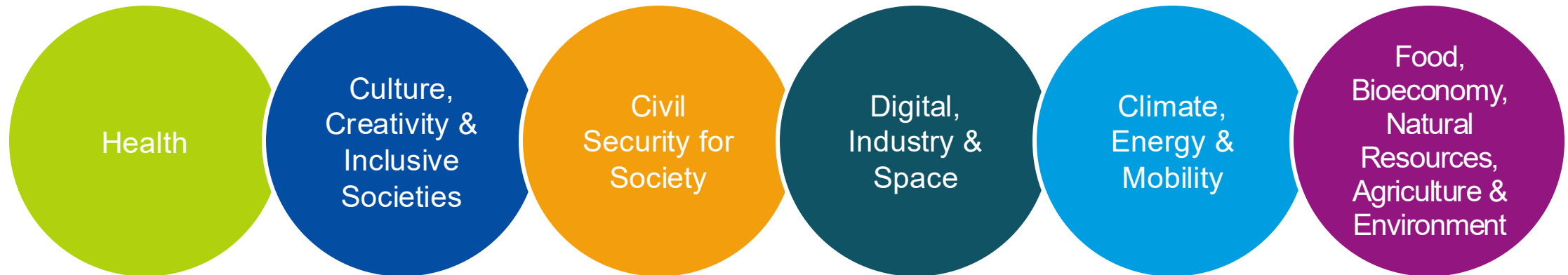
ERC Grantee Uğur Şahin, Mainz University



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)



€52.5 billion



Pillar II

Budget for clusters & for JRC

in current prices

Cluster 1	Health	€8.2 billion (including €1.4 billion from NGEU)
Cluster 2	Culture, Creativity & Inclusive Societies	€2.2 billion
Cluster 3	Civil Security for Society	€1.5 billion
Cluster 4	Digital, Industry & Space	€15.0 billion (including €1.4 billion from NGEU)
Cluster 5	Climate, Energy & Mobility	€14.8 billion (including €1.4 billion from NGEU)
Cluster 6	Food, Bioeconomy, Natural Resources, Agriculture & Environment	€8.8 billion
	JRC (non-nuclear direct actions)	€2.0 billion

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



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

The budget: **€10.4 billion**, incl. up to **€522 million** for ecosystems (including NGEU – Recovery Fund parts dedicated to EIC).

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

€2.8 billion



Part

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

Widening Participation and Spreading Excellence

- Teaming
- Twinning
- ERA Chairs & ERA Research Managers
- European Excellence Initiative
- Excellence Hubs
- ERA Fellowships
- ERA Talents
- Hop-on Facility
- EIC Pre.accelerator
- European Cooperation in Science and Technology (COST)
- Boosting National Contact Points' (NCPs) activities, pre-proposal checks and advice

€2.9 billion

Reforming and enhancing the EU R&I system

- Supporting the implementation of the Pact for R&I and the ERA Policy Agenda 2022-2024 and 2025-2027
- Strengthening the evidence base for R&I policy
- 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
- Foresight
- Ethics and integrity
- Support to international cooperation

€429 million



EURATOM research and training programme (2021-2025)

Objective

Research and training activities to reduce risks in nuclear safety and security, development of safe nuclear technologies and optimal radiation protection.

Key novelties

- Increased focus on non-power applications of radiation (medical, industrial, space)
- Opening mobility opportunities for nuclear researchers through inclusion in Marie Skłodowska-Curie Actions

Budget for years 2021-27

€2.0 billion



Strategic plan



Describes how Horizon Europe R&I funding contributes to EU policy priorities



Helps align EU- with national policies, gathering views from stakeholders and citizens



Acts as an intermediate step towards the work programme by defining key strategic orientations and expected impacts

Strategic plan implementing Horizon Europe



Multiannual strategic plan

The Horizon Europe Strategic Plan 2021-2024

Adopted in March 2021



[Horizon Europe strategic plan 2021-2024 - Publications Office of the EU \(europa.eu\)](https://publications.europa.eu/en/publication-detail/-/publication/11111111-1111-1111-1111-111111111111)

The Horizon Europe Strategic Plan 2025-2027

Adopted in March 2024



[Horizon Europe strategic plan 2025-2027 - Publications Office of the EU \(europa.eu\)](https://publications.europa.eu/en/publication-detail/-/publication/11111111-1111-1111-1111-111111111111)

What is new for 2025-2027?

The Horizon Europe Strategic Plan 2021-2024	The Horizon Europe Strategic Plan 2025-2027
Key strategic orientations for research and innovation and their expected impacts	Simplified key strategic orientations and their expected impacts
Identification of European co-funded and co-programmed partnerships	Second batch of European co-funded and co-programmed partnerships
Identification of EU missions	Results of the review of missions
Approach to international cooperation	Update in line with Global Approach Communication and new section on Research security
Spending targets on climate, biodiversity and digital	More ambitious spending target on biodiversity
Orientations on cross-cutting issues like gender, open science, dissemination and exploitation	Updated specific issues including more focus on synergies and balance between research and innovation
Detailed cluster-specific annexes	Updated cluster-specific impact summaries



Horizon Europe 'main' work programme

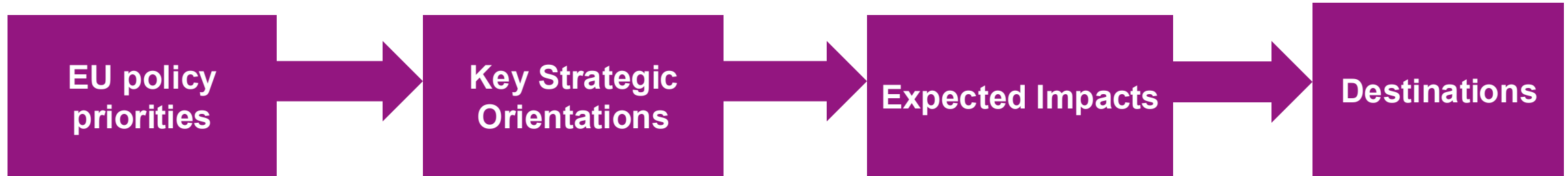
Horizon Europe supports research and innovation through work programmes, which set out the different funding opportunities.

The 'main' work programme covers the following components of Horizon Europe:

- Marie Skłodowska-Curie actions and research infrastructures (Pillar I);
- All Clusters and Missions (Pillar II);
- The European innovation ecosystems (Pillar III);
- Widening participation and spreading excellence, and reforming and enhancing the European R&I system (Widening Participation and Strengthening the European Research Area part);
- The New European Bauhaus Facility (as defined in the Horizon Europe strategic plan 2025-2027);
- Horizontal Activities (novelty in work programme 2026-2027).



From policy priorities to the 'main' work programme



- The work programme parts are structured in sections called 'Destinations'.
- Each 'Destination' in the Cluster work programme parts should mirror a specific expected impact of the strategic plan (while also contributing to other expected impacts).
- The expected impacts of the strategic plan 2025-2027 cover the 3-year period 2025-2027, and are reflected in the 'Destinations' of the 'main' work programmes for 2025 and 2026-2027.



Other Horizon Europe work programmes

Separate work programmes cover:

- The European Research Council (ERC)
- The Joint Research Centre (JRC)
- The European Innovation Council (EIC)

The activities of the EIT are set out in separate programming documents. In addition, a significant part of Pillar II of Horizon Europe will be implemented through institutionalised partnerships, particularly in the areas of Mobility, Energy, Digital and Bio-based economy, which will have their separate Work Programmes.

Horizon Europe is also implemented through the other Specific Programme (the European Defence Fund) and is complemented by the Euratom Research and Training Programme (each having a separate Work Programme).



InvestEU for Research and Innovation (R&I)

Stimulates more investment in research and innovation, notably by the private sector; leverages and complements national/regional initiatives

No market distortion: intervention only to address financing gaps in the R&I delivery chain (notably due to high risk)

Support through:

- InvestEU Fund
- InvestEU Assistance
- InvestEU Portal

With an EU budgetary guarantee of **€6.6 billion**, the Research, Innovation and Digitisation is expected to leverage an estimated **€90 billion** of investments into R&I; **market-based finance** for the exploitation and scale-up of European R&I.



Implementation. Simple & fit for purpose rules

- **Ensuring continuity and consistency for beneficiaries by maintaining**
 - Attractive Horizon 2020 funding model, including up to 100% funding rate of direct costs
 - Single set of rules principle
- Further alignment to the Financial Regulation
- Increased use of **simplified forms of funding** where appropriate (building on the H2020 lump sum pilot experience)
- Broader acceptance of **usual cost accounting practices**
- Enhanced **cross-reliance on audits** benefiting beneficiaries taking part in several Union programmes



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



Co-design



Public consultations

For example, public consultation on the past, present and future of the EU's Horizon research and innovation programmes 2014-2027



Citizen engagement

For example, citizens' engagement event on Horizon Europe strategic plan 2025-2027



Feedback collection

For example, feedback opportunity for the Horizon Europe 'main' work programme 2025



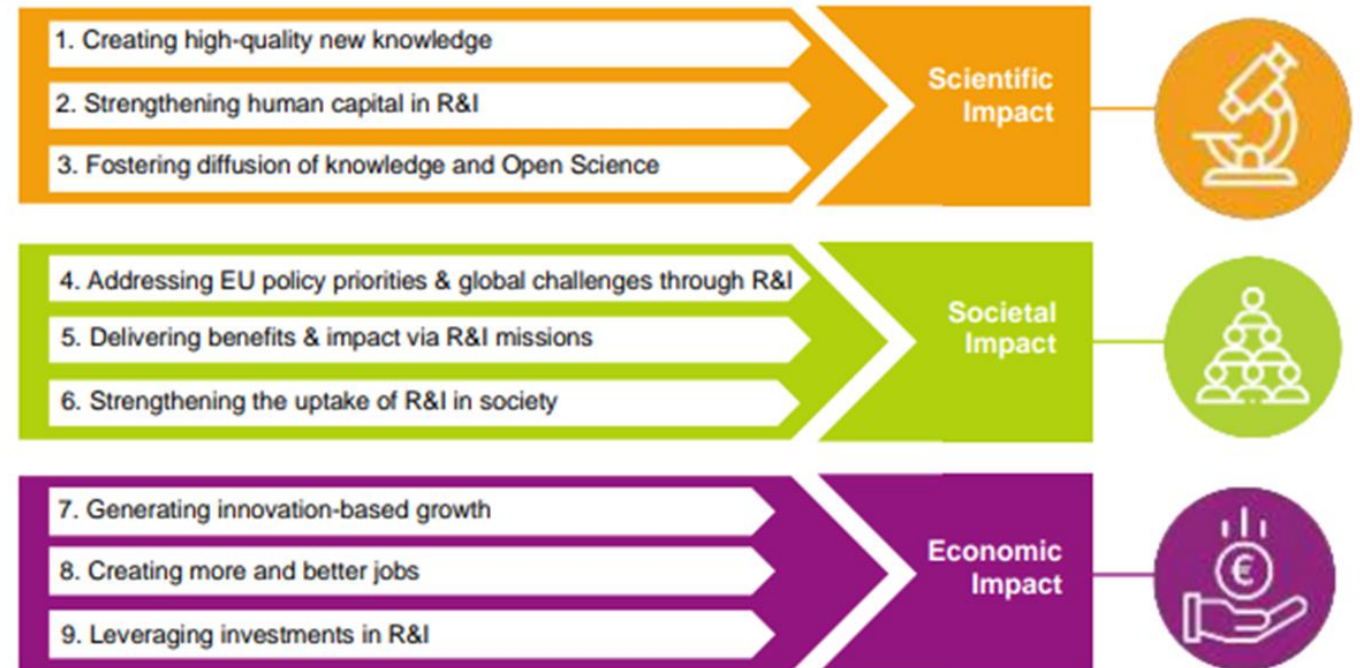
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Impact and flexibility



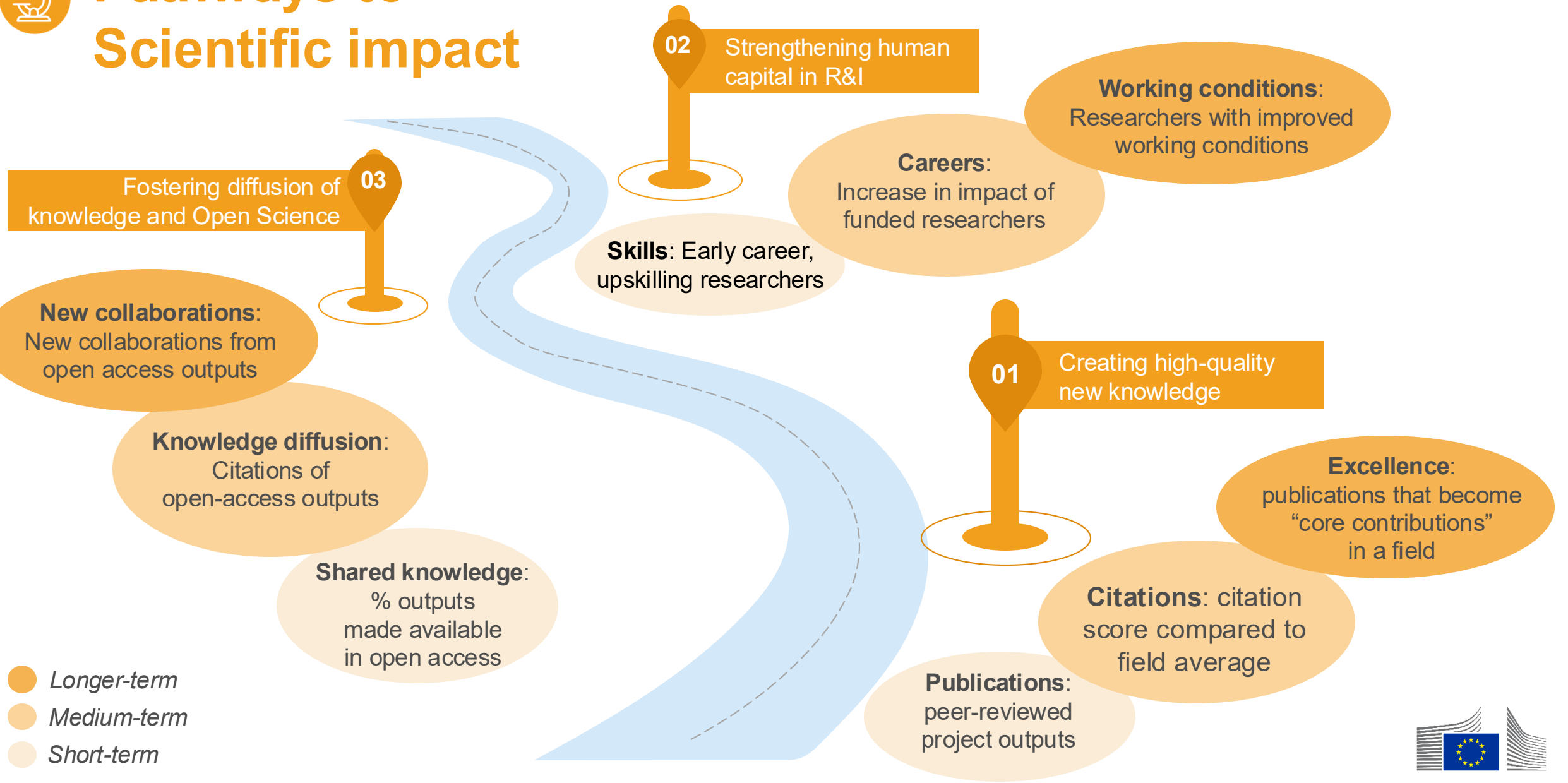
Horizon Europe legislation defines three types of impact tracked through **Key Impact Pathways**

- Annex V of Horizon Europe regulation; concept of “pathway to impact, from outputs to longer-term effects
- Moving beyond logic of “counting and accounting” publications, patents, activities...
- Follow outputs progress in **medium and long-term**
- Linking reporting data to external data sources, continuously updated





Pathways to Scientific impact



- Longer-term
- Medium-term
- Short-term





Pathways to Societal impact

Delivering benefits & impact via R&I missions

05

Mission targets achieved:
Progress towards Mission targets

Mission outcomes:
R&I outcomes addressing Mission objectives

Mission results:
publications, innovative outputs, co-creation activities...

06

Strengthening the uptake of R&I in society

Co-creation:
Projects engaging citizens/end users

Engagement:
Citizen, end-user activities continuing after project end

Societal uptake: Uptake of co-created R&I solutions in society

04

Addressing EU policy priorities & global challenges through R&I

Results: Outputs addressing EU policy priorities

Solutions: R&I outcomes addressing EU priorities and SDGs

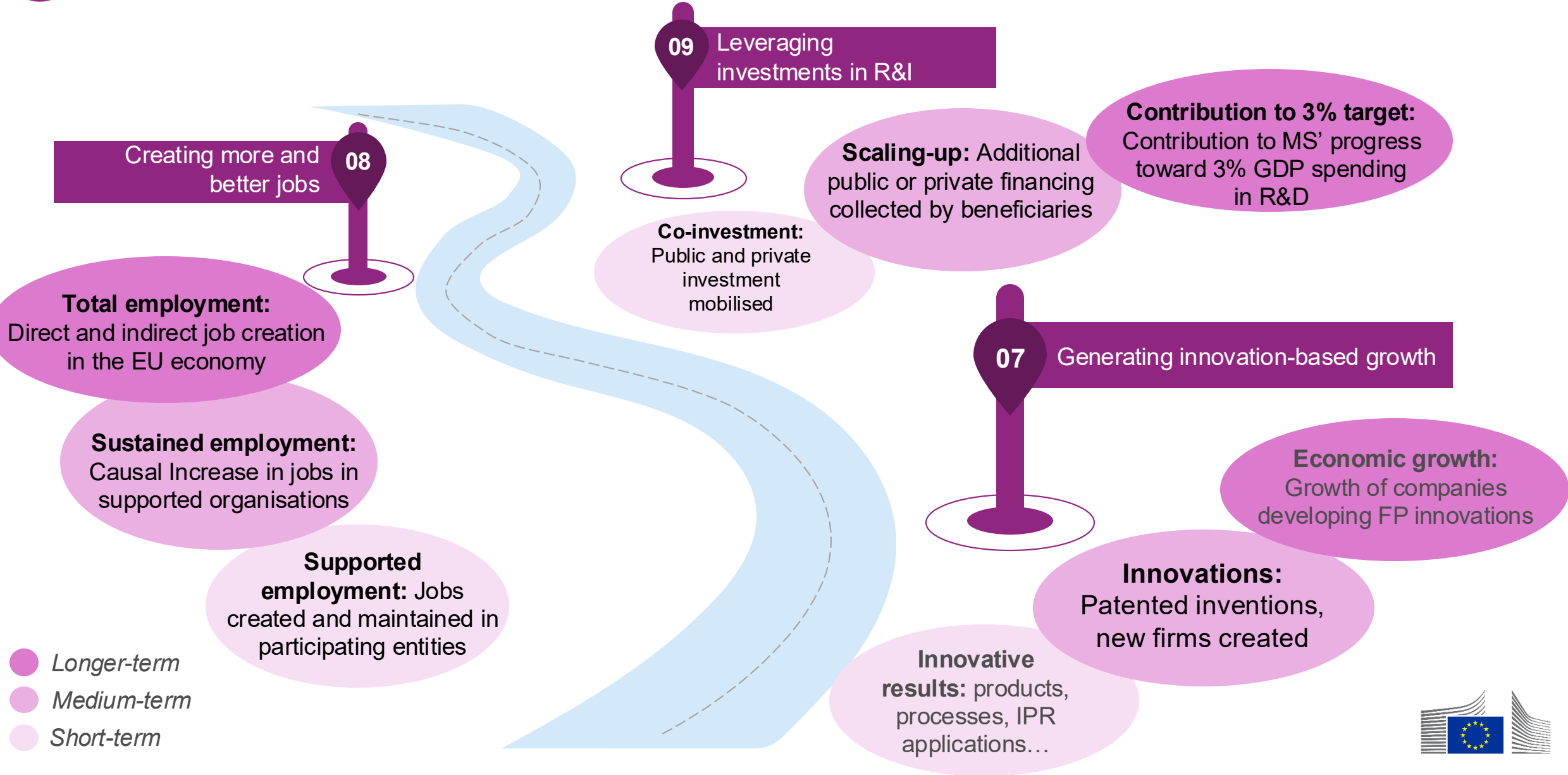
Benefits:
Aggregated effects of FP results on EU priorities and SDGs

- Longer-term
- Medium-term
- Short-term





Pathways to Economic/Technological impact



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