



Commission proposal for **Horizon Europe**

THE NEXT EU RESEARCH & INNOVATION
PROGRAMME (2021 – 2027)

#HorizonEU

Deputy Director General Signe Ratso
Spanish National Conference of Framework Programme
H2020

20 November 2018 Toledo

Research
and
Innovation



Spain Innovation System

Strengths:

- new doctorate graduates
- tertiary education attainment
- broadband penetration
- international scientific co-publications
- trademark applications.

Spain Innovation System

Relative weaknesses:

- Innovative SMEs,
- Public-private collaborations and finance and support.
- Shortage of ICT specialists
- Low digitisation of SME in sectors such as retail and wholesale,
- General lack of digital skills in the population.

Horizon 2020-KEY FINDINGS RELEVANCE



ITS INITIAL OBJECTIVES ARE STILL FULLY VALID

- the EU still underinvests in R&I activities
- the identified Societal Challenges are still present



IS ATTRACTIVE TO STAKEHOLDERS

- ~33,000 applications per year (vs. 20,000 in FP7)



HAS PROVEN FAIRLY FLEXIBLE

- to emerging needs and political priorities (e.g. emergency Ebola call, more funds to deal with migration)

Horizon 2020-KEY FINDINGS RELEVANCE

ROOM FOR IMPROVEMENT

Establish an impact-focused, mission-oriented approach.

The strategic challenges and objectives are not always clearly translated in specific calls and topics.

Low involvement of civil society (but improved over FP7). Need to bring R&I closer to the public.

Lessons Learned

from Horizon 2020 Interim Evaluation



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Strengthen international cooperation



Reinforce openness



Rationalise the funding landscape



Key Novelties

in Horizon Europe

European Innovation Council

R&I Missions

Extended association possibilities

Open science policy

New approach to Partnerships

Horizon Europe

is the Commission proposal for a **€100 billion** research and innovation funding programme for seven years (2021-2027)



to strengthen the EU's scientific and technological bases



to boost Europe's innovation capacity, competitiveness and jobs



to deliver on citizens' priorities and sustain our socio-economic model and values

Horizon Europe – Why?

Horizon Europe: investing in R&I to shape our future

- The vision:
" a Europe that protects,
a Europe that empowers,
a Europe that defends"
Jean-Claude Juncker
- Tackling **climate change**
(35 % budgetary target)
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's
competitiveness and growth

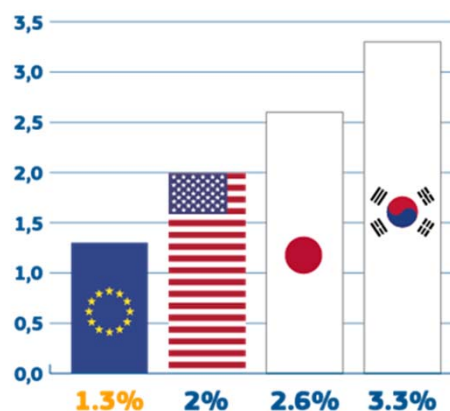


Credits: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

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

Our knowledge and skills are our main resources.

- 7% of the world's population
- 20% of global R&D
- 1/3 of all high-quality scientific publications



1.3%
EU business
R&D
investment

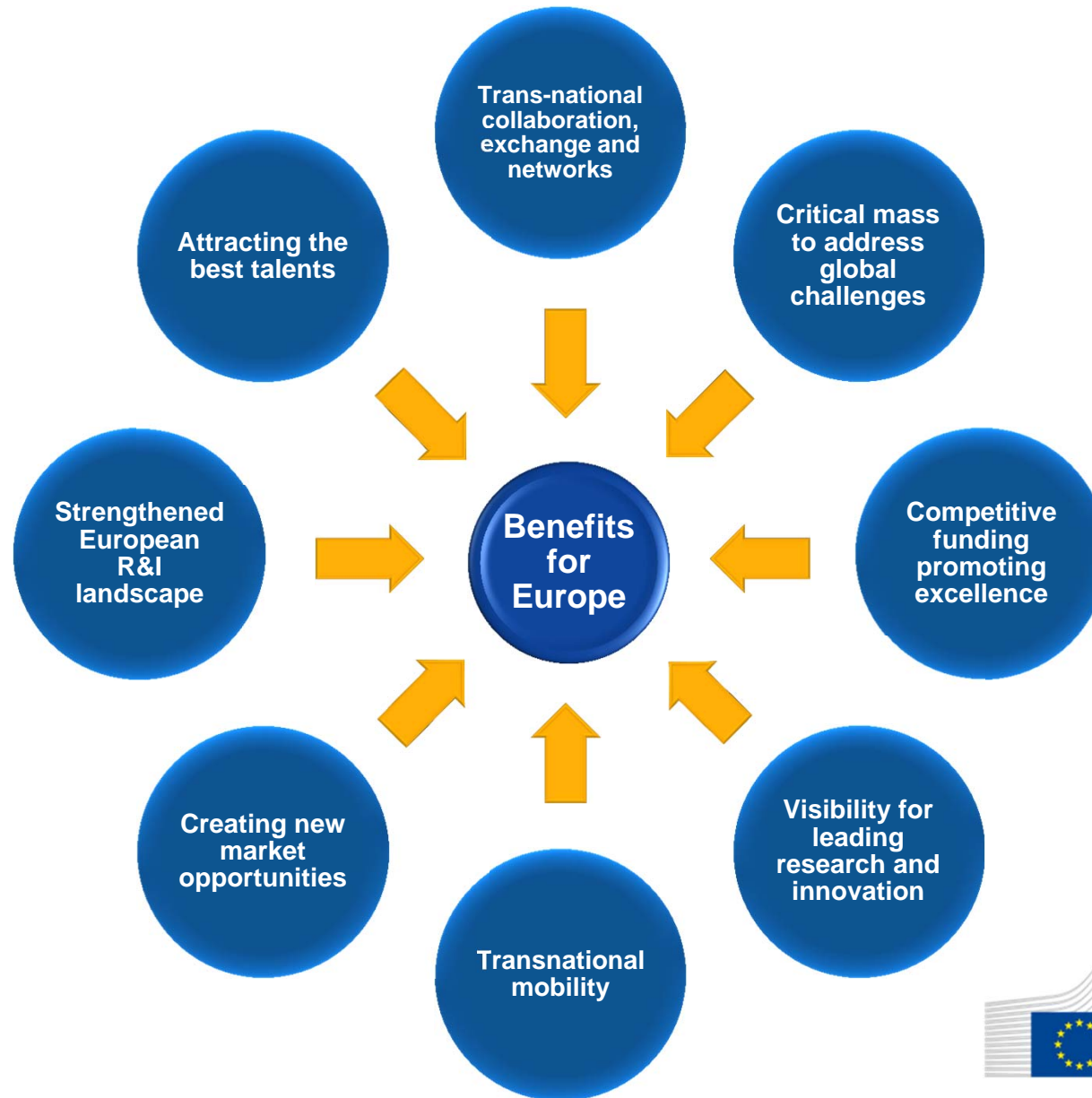
...Europe fails to transform leadership in science into leadership in innovation and entrepreneurship

We need a new level ambition and a renewed R&I agenda to be in pole position

- Ensuring essential investment and stimulating private investment
- Making regulatory frameworks fit for innovation
- Becoming a front runner in market-creating innovation
- Reconnecting R&I with citizens through EU-wide R&I missions
- Supporting the dissemination of innovation throughout the Union
- Investing in skills and empower universities to become more entrepreneurial and interdisciplinary

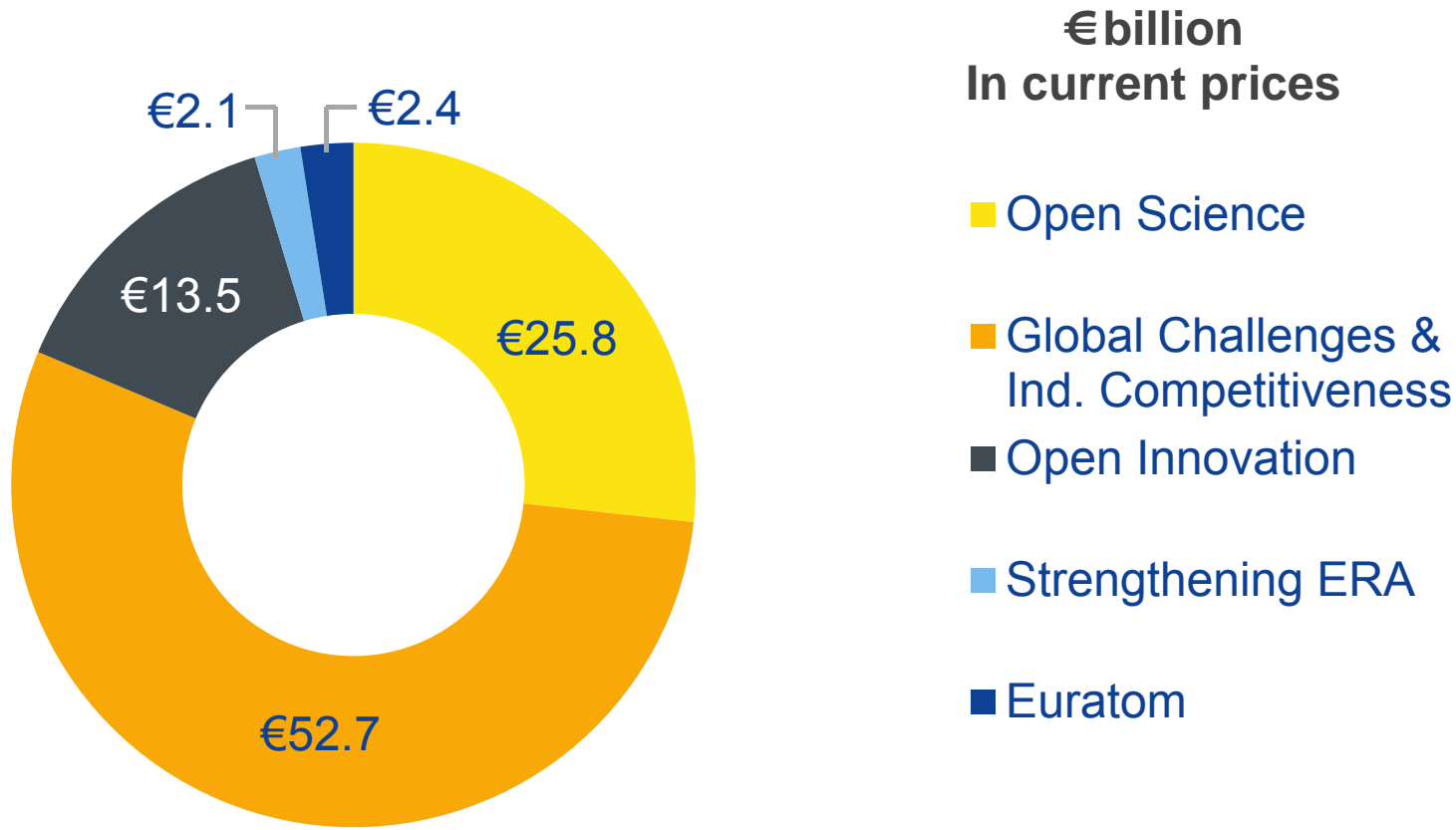


Added value through Horizon Europe:



Horizon Europe – What?

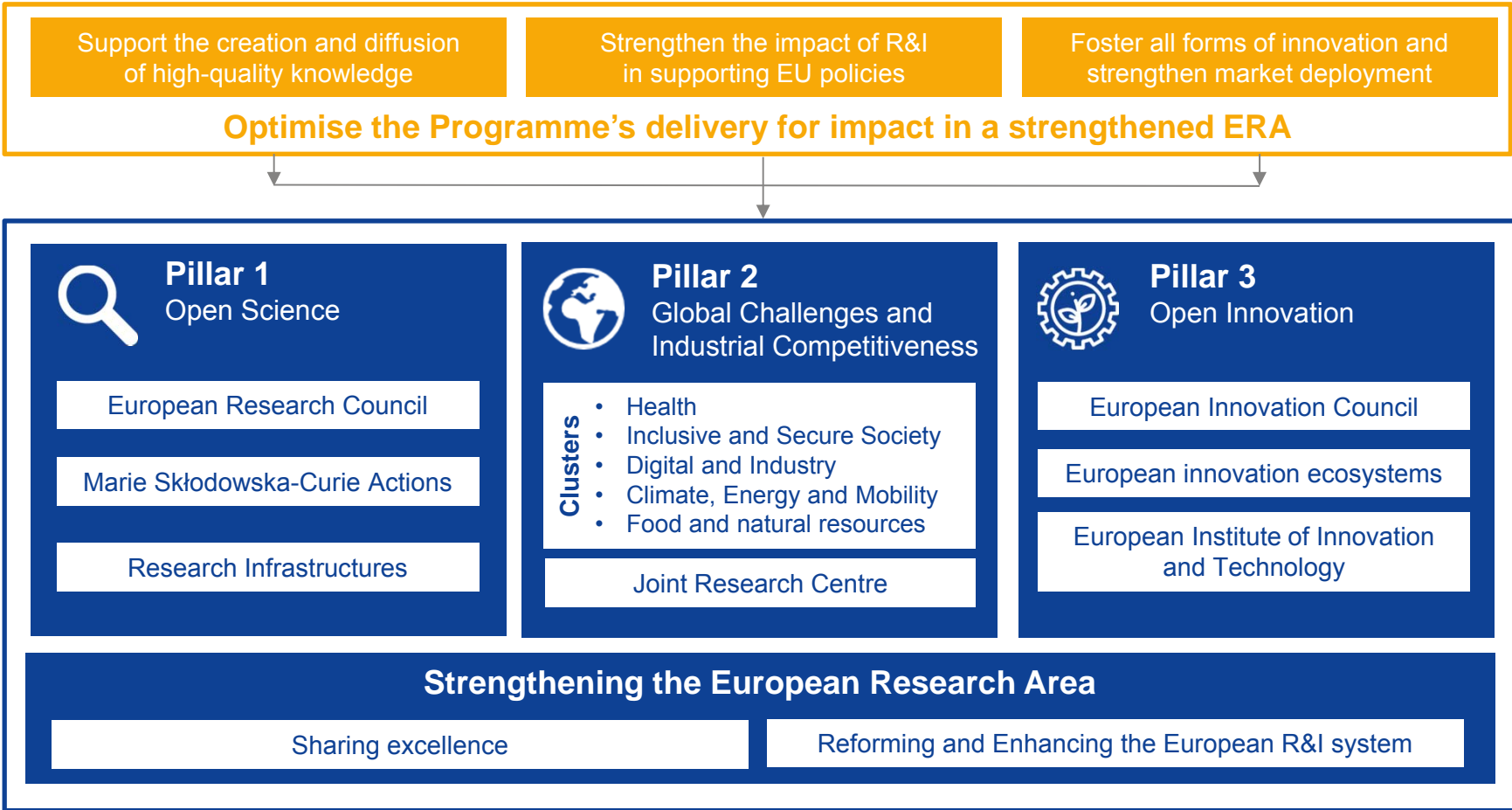
Budget: €100 billion*



* This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.

Horizon Europe: evolution not revolution

Specific objectives of the Programme



Strengthening the European Research Area:

optimising strengths & potential for a more innovative Europe

Sharing Excellence

- Teaming
(institution building)
- Twinning
(institutional networking)
- ERA Chairs bringing excellence to institutions
- COST

€1.7 billion



Reforming and enhancing the European R&I system

- Scientific evidence & foresight
- Open Science
- Policy Support Facility
- Attractive researcher careers
- Citizen science
- Responsible Research & Innovation; gender equality

€0.4 billion

Horizon Europe – What's new?



European Innovation Council

The EIC will support innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors.

**European
Innovation
Council**

**Helping innovators create markets of the future,
leverage private finance, scale up their
companies,
Innovation centric, risk taking & agile, pro-
active management and follow up**

Two complementary instruments bridging the gap from idea to investable project

Pathfinder: grants
(from early technology
to pre- commercial)

Accelerator:
grants & blended finance
(from pre-commercial
to market & scale-up)



R&I Missions

R&I Missions

Connecting to citizens: Missions will relate EU's research and innovation to society and citizens' needs, with strong visibility and impact

A mission will consist of a portfolio of actions intended to achieve **a bold and inspirational as well as measurable goal** within a set timeframe, with impact for science and technology, society and citizens that goes beyond individual actions

Horizon Europe proposal defines mission characteristics and criteria

Specific missions will be **co-designed with Member States, stakeholders and citizens** and programmed within the Global Challenges and Industrial Competitiveness pillar (drawing on inputs from other pillars)



International Cooperation

International Cooperation

Will ensure effective tackling of global societal challenges; access to the world's best talents, expertise and resources; enhanced supply and demand of innovative solutions

Extended openness to association

- Third countries with good capacity in science, technology and innovation
- Taking into account objective of driving economic growth in Europe through innovation
- General opening for international participation
- Intensified targeted actions (flagship initiatives, joint calls, etc.)



Open Science across the programme

- Encouraging uptake of **Open Science practices** through earmarked funding, including to enhance **researcher skills** in Open Science and support **reward systems** that promote it
- **FAIR (findable, accessible, interoperable, re-usable) and Open Data:** research data is open by default (with opt-out possibilities) and a data management plan is obligatory
- **Open Access** to publications: no reimbursement of article processing charge (APC) for publications in hybrid journals
- **Monitoring system** to ensure compliance with Horizon Europe provisions



New approach to European Partnerships

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

Key features

- **Simple architecture and toolbox**
- **Coherent life-cycle approach**
- **Strategic orientation**

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 by partners; commitment of partners for financial and in-kind contributions & financial contribution by Horizon Europe

Institutionalised

Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe

Horizon Europe – How?

Simple and fit for purpose rules

- Further alignment to the Financial Regulation
- Increased use of **simplified forms of grants** 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

while ensuring continuity and consistency for beneficiaries by maintaining

- Attractive H2020 funding model, including up to 100% funding rate
- Single set of rules principle

Strategic planning

to define multiannual work programmes and calls for proposals

- Transparency and stakeholder involvement
- Prioritisation and flexibility to align to political priorities
- Internal programme coherence & synergies with other programmes

Multiannual Strategic R&I Plan

* Multiannual orientations and priorities in one document

* Areas for partnerships and missions

Strategic discussions with Member States and European Parliament

Consultation with stakeholders

Work Programmes

Next steps





SUCCESS STORIES

Initiative Towards sustainable Kerosene for Aviation

ITAKA project is expected to support the development of aviation biofuels in an economically, socially, and environmentally sustainable manner, improving the readiness of existing technology and infrastructures. This will be achieved through the first of its kind collaborative project in the EU.



País: Spain

Nombre del proyecto: ITAKA

Financiación: 9 378 083 EUR

Para más información: <http://europa.eu/!Hu48mY>





SUCCESS STORIES

High quality clothes made from marine plastic litter

The main objective of the UPCYCLING THE OCEANS project is to produce and sell fabrics and clothes made from marine plastic litter, by recycling and industrial methods to convert these plastics into high properties textiles.

European seas contain many tons of waste, mainly plastic (around 400 kg per km²). This plastic litter has a very negative impact in the marine environment even affecting the food chain (potentially triggering endocrine and/or carcinogenic processes).

Para más información: <http://europa.eu/!xt74RF>



País: Spain

Nombre del proyecto:
UPCYCLINGTHEOCEANS

Financiación: 50 000 EUR



'With growing international competition, Europe needs to act urgently on research and innovation.

The proposed €100 billion for the next EU research and innovation programme would be a huge boost.'

Carlos Moedas, Commissioner, 15/05/2018



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<https://www.facebook.com/EUScienceInnov/>

<https://www.facebook.com/cmoedas/>

Horizon Europe dedicated website

<http://ec.europa.eu/horizon-europe>

European Innovation Council

<http://ec.europa.eu/research/eic>

EU budget for the future

http://ec.europa.eu/budget/mff/index_en.cfm





Thank you!

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<http://ec.europa.eu/horizon-europe>