Commission proposal for
Horizon Europe
THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)

#HorizonEU

Andrea Gentili
Deputy Head of Unit – Aviation, EC RTD H3
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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

€4.1 billion are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund
Some history of R&I in the EU
1958-1983
Atoms for peace: the big start

1980-1986
Beyond Nuclear

1984-1988
The Start of a success story

1987-1991
Keep Course

Coal & Steel:

1952

1990-1994
Focus on SMEs, Human Capital

1994-1998
Research without borders

1998-2002
Focus on industry

2002-2005
From here to ERA

2007-2013
Larger, smarter, further

2014-2020
A new vision
R&I in Europe – Why?
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

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

1.3% EU business R&D investment
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
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**
Added value through Horizon Europe:

- Benefits for Europe
  - Trans-national collaboration, exchange and networks
  - Critical mass to address global challenges
  - Competitive funding promoting excellence
  - Visibility for leading research and innovation
  - Strengthened European R&I landscape
  - Creating new market opportunities
  - Transnational mobility
  - Attracting the best talents
Why spending public money for industrial R&I?
Horizon Europe – What?
Horizon Europe: evolution not revolution

Specific objectives of the Programme

- Support the creation and diffusion of high-quality knowledge
- Strengthen the impact of R&I in supporting EU policies
- Foster all forms of innovation and strengthen market deployment

Optimise the Programme’s delivery for impact in a strengthened ERA

**Pillar 1**
Open Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

**Pillar 2**
Global Challenges and Industrial Competitiveness

- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources

Clusters

Joint Research Centre

**Pillar 3**
Open Innovation

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

**Strengthening the European Research Area**

- Sharing excellence
- Reforming and Enhancing the European R&I system
Budget: €100 billion*

* This envelope includes EUR 3.5 billion allocated under the InvestEU Fund.
Pillar 2

Global Challenges & Industrial Competitiveness: boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Budget (€ billion)</th>
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<tbody>
<tr>
<td>implemented through usual calls, missions &amp; partnerships</td>
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<tr>
<td>Health</td>
<td>€ 7.7</td>
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<tr>
<td>Inclusive and Secure Societies</td>
<td>€ 2.8</td>
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<tr>
<td>Digital and Industry</td>
<td>€ 15</td>
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<tr>
<td>Climate, Energy and Mobility</td>
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<tr>
<td>Food and Natural Resources</td>
<td>€ 10</td>
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<tr>
<td>Joint Research Centre</td>
<td>€ 2.2</td>
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Joint Research Centre supports European policies with independent scientific evidence & technical support throughout the policy cycle.
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

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

€ 1.7 billion
€ 0.4 billion

Budget doubled
Horizon Europe – What's new?
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
The EIC will support innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors.

Helping innovators create markets of the future, leverage private finance, scale up their companies, Innovation centric, risk taking & agile, proactive 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

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).
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 – Why supporting 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.)
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

Ongoing

Parliament and Council negotiations on Union budget 2021-2027, including budget for Horizon Europe

From 7 June

Parliament and Council negotiations on the basis of the Commission proposal for Horizon Europe

2nd half 2018/2019

Strategic planning to prepare first work programmes under Horizon Europe, including co-design of missions and setting up of partnerships

1 January 2021

Envisaged start of Horizon Europe
'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
Thank you!

#HorizonEU

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