Commission proposal for
Horizon Europe

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

#HorizonEU

This presentation does not engage the European Commission. Please refer to official documents.
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

Additional €4.1 billion are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund
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**
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
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:

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
- Transnational mobility
- Creating new market opportunities
- Strengthened European R&I landscape
- Attracting the best talents
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

Reforming and Enhancing the European R&I system
Sharing excellence

Strengthening the European Research Area
Budget: €100 billion* (2021-2027)

€ billion
In current prices

- Open Science
- Global Challenges & Ind. Competitiveness
- Open Innovation
- Strengthening ERA
- Euratom

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

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

Tackling together 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

Open Science

Better dissemination and exploitation of R&I results and support to active engagement of society

- **Mandatory Open Access to publications**: beneficiaries must ensure the existence of sufficient rights to comply with open access requirements

- **Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data**: for all research data with possibilities to opt-out from open access requirements

- Support to researcher skills in and reward systems for open science

- Use of European Open Science Cloud
## 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>
</tr>
</thead>
<tbody>
<tr>
<td>implemented through usual calls, missions &amp; partnerships</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>€ 7.7</td>
</tr>
<tr>
<td>Inclusive and Secure Society</td>
<td>€ 2.8</td>
</tr>
<tr>
<td>Digital and Industry</td>
<td>€ 15</td>
</tr>
<tr>
<td>Climate, Energy and Mobility</td>
<td>€ 15</td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>€ 10</td>
</tr>
</tbody>
</table>

**Joint Research Centre**
supports European policies with independent scientific evidence & technical support throughout the policy cycle

€ 2.2
## Clusters in 'Global Challenges and Industrial Competitiveness'

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Areas of intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>* Health throughout the life course</td>
</tr>
<tr>
<td></td>
<td>* Non-communicable and rare diseases</td>
</tr>
<tr>
<td></td>
<td>* Tools, technologies and digital solutions for health and care</td>
</tr>
<tr>
<td></td>
<td>* Environmental and social health determinants</td>
</tr>
<tr>
<td></td>
<td>* Infectious diseases</td>
</tr>
<tr>
<td></td>
<td>* Health care systems</td>
</tr>
<tr>
<td>Inclusive and Secure Societies</td>
<td>* Democracy</td>
</tr>
<tr>
<td></td>
<td>* Social and economic transformations</td>
</tr>
<tr>
<td></td>
<td>* Protection and Security</td>
</tr>
<tr>
<td></td>
<td>* Cultural heritage</td>
</tr>
<tr>
<td></td>
<td>* Disaster-resilient societies</td>
</tr>
<tr>
<td></td>
<td>* Cybersecurity</td>
</tr>
<tr>
<td>Digital and Industry</td>
<td>* Manufacturing technologies</td>
</tr>
<tr>
<td></td>
<td>* Advanced materials</td>
</tr>
<tr>
<td></td>
<td>* Next generation internet</td>
</tr>
<tr>
<td></td>
<td>* Circular industries</td>
</tr>
<tr>
<td></td>
<td>* Space</td>
</tr>
<tr>
<td></td>
<td>* Key digital technologies</td>
</tr>
<tr>
<td></td>
<td>* Artificial intelligence and robotics</td>
</tr>
<tr>
<td></td>
<td>* Advanced computing and Big Data</td>
</tr>
<tr>
<td></td>
<td>* Low carbon and clean industry</td>
</tr>
<tr>
<td>Climate, Energy and Mobility</td>
<td>* Climate science and solutions</td>
</tr>
<tr>
<td></td>
<td>* Energy systems and grids</td>
</tr>
<tr>
<td></td>
<td>* Communities and cities</td>
</tr>
<tr>
<td></td>
<td>* Industrial competitiveness in transport</td>
</tr>
<tr>
<td></td>
<td>* Smart mobility</td>
</tr>
<tr>
<td></td>
<td>* Energy supply</td>
</tr>
<tr>
<td></td>
<td>* Buildings and industrial facilities in energy transition</td>
</tr>
<tr>
<td></td>
<td>* Clean transport and mobility</td>
</tr>
<tr>
<td></td>
<td>* Energy storage</td>
</tr>
<tr>
<td>Food and Natural Resources</td>
<td>* Environmental observation</td>
</tr>
<tr>
<td></td>
<td>* Agriculture, forestry and rural areas</td>
</tr>
<tr>
<td></td>
<td>* Food systems</td>
</tr>
<tr>
<td></td>
<td>* Circular systems</td>
</tr>
<tr>
<td></td>
<td>* Biodiversity and natural capital</td>
</tr>
<tr>
<td></td>
<td>* Sea and oceans</td>
</tr>
<tr>
<td></td>
<td>* Bio-based innovation systems</td>
</tr>
</tbody>
</table>
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
Follow us and keep up to date via:

#HorizonEU

@Moedas @EUScienceInnov @EU_H2020 @HorizonMagEU

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!

#HorizonEU

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