Commission proposal for Horizon Europe

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

#HorizonEU

Dr Karim Berkouk
Deputy Head of Unit
Non Communicable Diseases & the Challenge of Healthy Ageing
Horizon Europe – Why?
Added value through Horizon Europe:

- Benefits for Europe
  - Attracting the best talents
  - Trans-national collaboration, exchange and networks
  - Critical mass to address global challenges
  - Competitive funding promoting excellence
  - Strengthened European R&I landscape
  - Creating new market opportunities
  - Visibility for leading research and innovation
  - Transnational mobility

European Commission
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
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
- Joint Research Centre

Clusters

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.

In current prices:

- **Open Science**
- **Global Challenges & Ind. Competitiveness**
- **Open Innovation**
- **Strengthening ERA**
- **Euratom**
OPEN SCIENCE: € 25.8 billion
reinforcing and extending the excellence of the Union's science base

European Research Council
- Frontier research by the best researchers and their teams

€ 16.6 billion

Marie Skłodowska-Curie Actions
- Equipping researches with new knowledge and skills through mobility and training

€ 6.8 billion

Research Infrastructures
- Integrated and inter-connected world-class research infrastructures

€ 2.4 billion
Global Challenges & Industrial Competitiveness: boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals € 52.7 billion

<table>
<thead>
<tr>
<th>Clusters</th>
<th>2021-24</th>
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<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>
<td>€ 15</td>
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<tr>
<td>Food and Natural Resources</td>
<td>€ 10</td>
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| Joint Research Centre                        | 2021-27         |
| supports European policies with independent scientific evidence & technical support throughout the policy cycle | € 2.2           |
OPEN INNOVATION: € 13.5 billion stimulating market-creating breakthroughs and ecosystems conducive to innovation

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<tr>
<th>European Innovation Council</th>
<th>European innovation ecosystems</th>
<th>European Institute of Innovation and Technology (EIT)</th>
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<td>Support to innovations with breakthrough and market creating potential</td>
<td>Connecting with regional and national innovation actors</td>
<td>Bringing key actors (research, education and business) together around a common goal for nurturing innovation</td>
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<td>€ 10.5 billion</td>
<td>€ XXXX billion</td>
<td>€ 3 billion</td>
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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
Health Cluster
Six main areas of intervention

- Health throughout the Life Course
- Environmental and Social Health Determinants
- Non-communicable and Rare Diseases
- Infectious diseases
- Tools, Technologies and Digital Solutions for Health and Care
- Health Care Systems
People in vulnerable stages of life have specific health needs, that require better understanding and tailored solutions.

- Early development and the aging process
- Maternal and child health
- Health needs of adolescents
- People with disabilities and injuries
- Active life for the elderly
- Health education and digital health literacy
#2 Environmental and Social Health Determinants

We need to better understand how the social, economic and physical environment impacts our health and mitigate health risks and threats.

- Health hazards of chemicals, pollutants and environmental stressors
- Capacity and infrastructure to collect, share and combine exposure data with health and diseases
- Environmental, occupational, social and behavioural factors impacting physical and mental health
- Risk assessment, management and communication
- Health promotion and prevention
#3 Non-Communicable and Rare Diseases

Non-communicable diseases remain a major health and societal challenge requiring personalized approaches.

- Earlier and more accurate diagnoses
- Prevention and screening programmes
- Treatments and cures
- Palliative care
- Comparative effectiveness of interventions
- Scale up of health interventions
#4 Infectious Diseases

We must protect people in the world from the threats of infectious diseases and AMR.

- Drivers for the emergence and re-emergence of infectious diseases and their spread
- Prediction, early detection and surveillance of infectious diseases and AMR pathogens
- Vaccines, diagnostics, treatments and cures
- Emergency preparedness, response and recovery measures
- Uptake of medical interventions in clinical practice, health systems
- Specific challenges in low- and middle-income countries (LMICs)
#5 Tools, Technologies and Digital Solutions for Health and Care

New technologies are vital for public health and the competitiveness of European Heath related industries.

- Tools and technologies for medical indications
- Integrated solutions for health incl. mobile and telehealth
- Piloting and large-scale deployment of healthcare technologies and tools in real-life settings
- Innovative processes for development, manufacturing and rapid delivery
- Safety, efficacy, quality and ethical and social impact
- Regulatory science
#6 Health Care Systems

Health systems are a key asset of the EU social system. We shall keep them accessible, resilient and sustainable and harness the potential of data-driven and digital innovation.

- Reforms in public health systems and policies
- New models for health and care and future workforce
- Improving health technology assessment
- Use of health data respecting security, privacy and interoperability
- Health systems resilience – crises and disruptive innovation
- Patient empowerment, self-monitoring, user-centered integrated care
Horizon Europe – How?
**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
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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