



Horizon Europe: Challenges and Instruments

**European Networking Event
«Successful R&I in Europe 2019»
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Horizon Europe – Part of the EU's next long term budget 2021 – 2027

- A modern, fair and pragmatic EU budget for a Union that protects, empowers and defends (€1135 Billion, 1,11% of BIP)
- More means for new priority areas such as security and defence, border management, digital economy... and research and innovation
- Means for research and innovation under Horizon Europe increase significantly from about €77 Billion for EU 28 to €100 Billion for EU 27
- Research and Innovation funding also plays an important role in other funding programs such as Digital Europe, European Defence Fund, investment instruments and cohesion policy



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



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



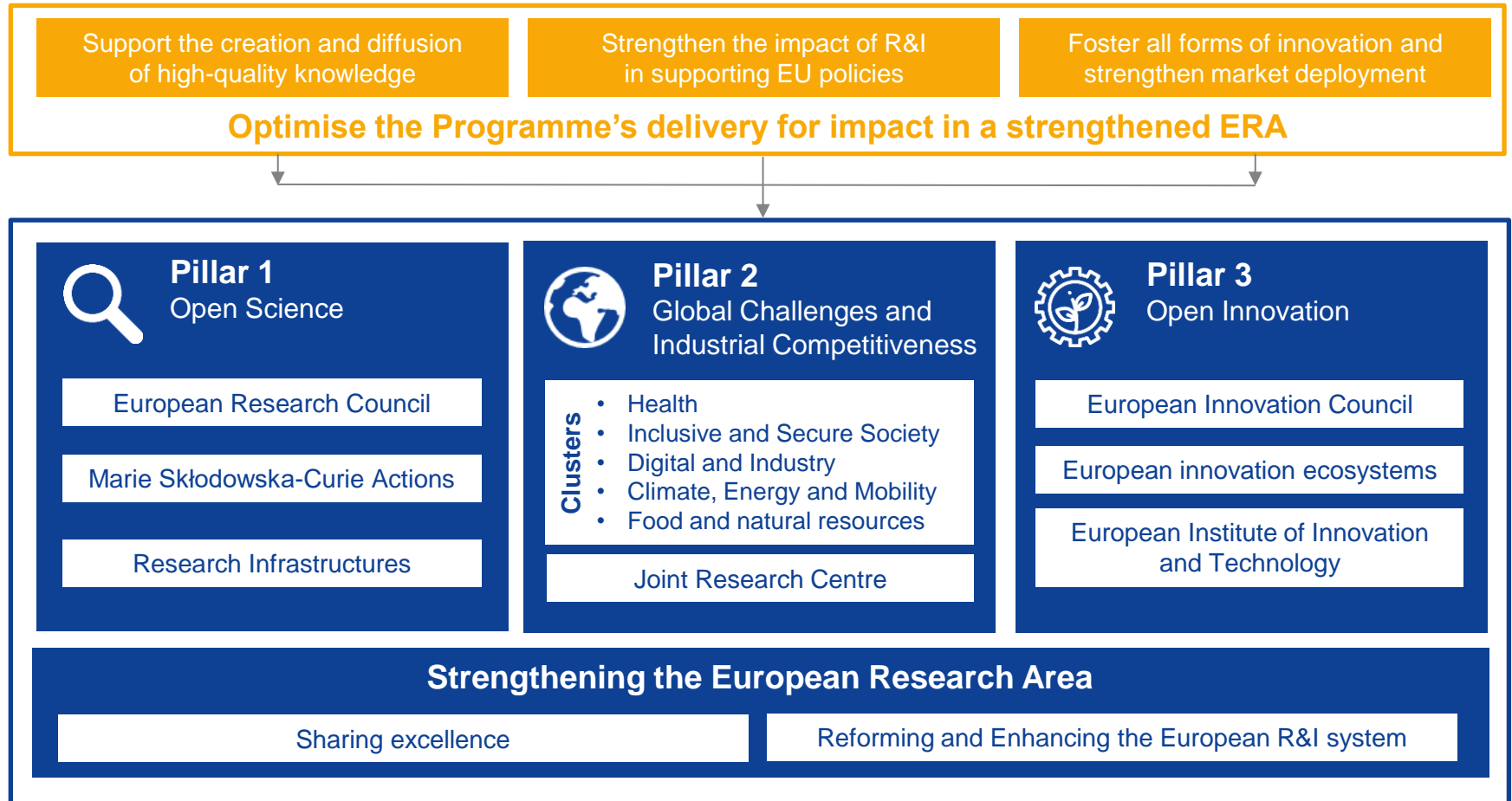
to deliver on citizens' priorities and sustain our socio-economic model and values

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

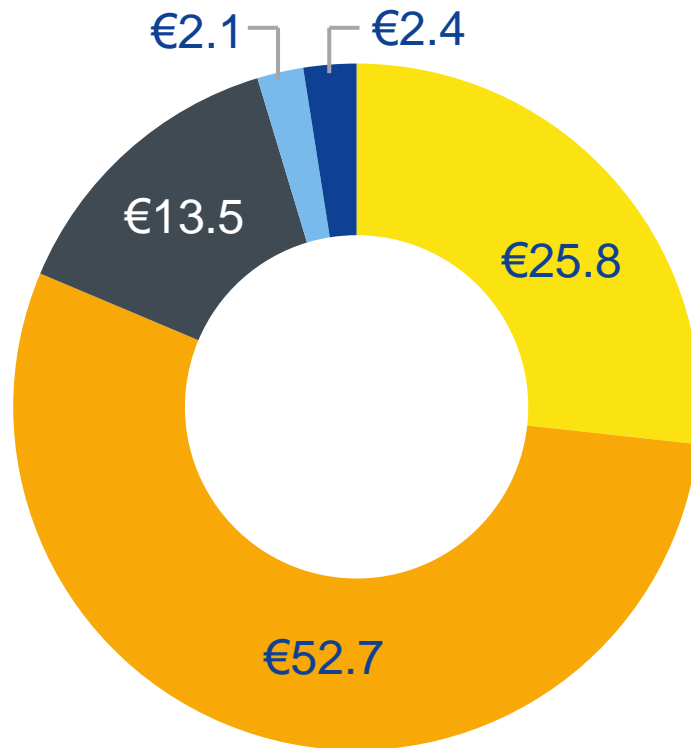
Horizon Europe – What?

Horizon Europe: evolution not revolution

Specific objectives of the Programme



Budget: €100 billion*



€ 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.

Pillar 2

Global Challenges & Industrial Competitiveness:

boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

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

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



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)

Missions: state of play

5 possible areas for missions:

- Adaption to Climate change and Societal Transformation
- Cancer
- Healthy Oceans and Natural Waters
- Carbon-Neutral and Smart Cities
- Soil Health for sustainable food



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

Institutionalised partnerships: state of play

9 areas for possible institutionalised partnerships:

- Faster development and safer use of health innovation for European patients and global health
- Advancing key digital and enabling technologies and their use, including novel technologies such as Artificial Intelligence and Quantum technologies
- European Leadership in Metrology including and integrated Metrology system
- Accelerate competitiveness, safety and environmental performance of EU air traffic, aviation and rail
- Sustainable, inclusive and circular bio-based solutions
- Clean hydrogen and sustainable energy storage technologies with lower environmental footprint and less energy-intensive production
- Clean, connected, cooperative, autonomous and automated solutions for future mobility demands of people and goods
- Innovative and R&D intensive small and medium-sized enterprises

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

State of Play: Negotiations

Horizon Europe: Council changes 30 November 2018

(Partial General Approach, PGA)

- Overall **support** for the Commission proposal:
 - Pillar I with ERC and MSCA
 - Pillar II with clusters of global challenges, missions and partnerships
 - Pillar III with EIC
 - Part on ERA and spreading excellence
 - Rules for participation, funding model, open access
 - Strategic planning to bridge from legal texts to the calls for proposals
- Some highlights on **content adaptations**:
 - Split Secure and Inclusive Society cluster
 - Mobility as separate cluster, next to Climate and energy
 - Areas for possible missions and partnerships to be included in an Annex to the SP
 - Ceiling on the budget for partnerships (< 50% of pillar II)
 - EIC: also grants-only support, next to blended finance (grants with equity)
 - Advancing Europe: Additional measures to help low participation (e.g. hop-on)

Horizon Europe: changes by the European Parliament

December 2018

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 - Pillar III with EIC
 - Part on ERA and spreading excellence
 - Rules for participation, funding, open access
 - Strategic planning to bridge from legal texts to the calls for proposals
- Some highlights on **content adaptations**:
 - Split Secure and Inclusive Society cluster
 - Ceiling on the budget for missions (< 10% of pillar II, first 2 years)
 - SME Instrument for incremental innovation (70% of EIC budget to SMEs)
 - Seals of Excellence extended
 - +25% on salary costs for widening countries
- EUR 120 billion (prices-2018)

Horizon Europe: some hot potatoes for Council and European Parliament

- Co-decision by the EP on the Specific Programme?
- Strategic planning, missions and partnerships: involvement of the EP?
- Clusters (mobility)?
- Spreading excellence measures?
- EIC: SME instrument?
- Fast track to research and innovation?
- For later:
 - association of countries outside the EU
 - synergies with other EU programmes
 - budgets

Important that the co-legislators reach a political agreement soon – without that, the implementation of Horizon Europe cannot start. The Work Programme has to be ready by mid-2020, for projects to start in 2021

Next steps





Thank you!

#HorizonEU

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