

Academic R&I From H2020 to Horizon Europe

**Dr. Vasiliki KOSIAVELOU
Policy Officer, DG RTD**

**Aristotle University Research Dissemination Centre
03 June 2019**

Horizon Europe

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

#HorizonEU

Based on the Commission Proposal for Horizon Europe, the common understanding between co-legislators and the Partial general agreement, both approved in April 2019



Horizon Europe

The ambitious EU research and innovation framework programme (2021-2027)



to strengthen the EU's scientific and technological bases and the European Research Area



to boost Europe's innovation capacity, competitiveness and jobs (100K jobs)



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

The Commission proposes a budget of **€ 100 billion**

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

Council and Parliament reached a common understanding on Horizon Europe on 19 March 2019

- Common understanding confirmed by Council and Parliament
- Budget, synergies and third country association still pending
- Commission has started preparations for the implementation of Horizon Europe



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

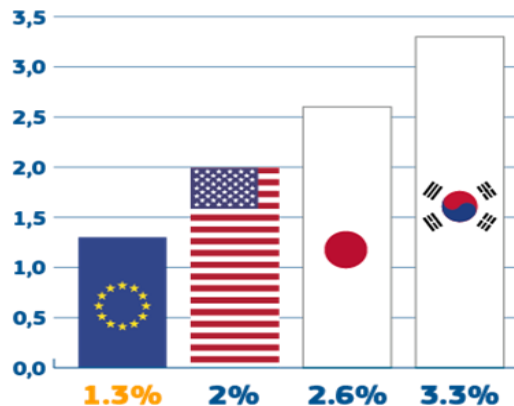


Credits: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

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

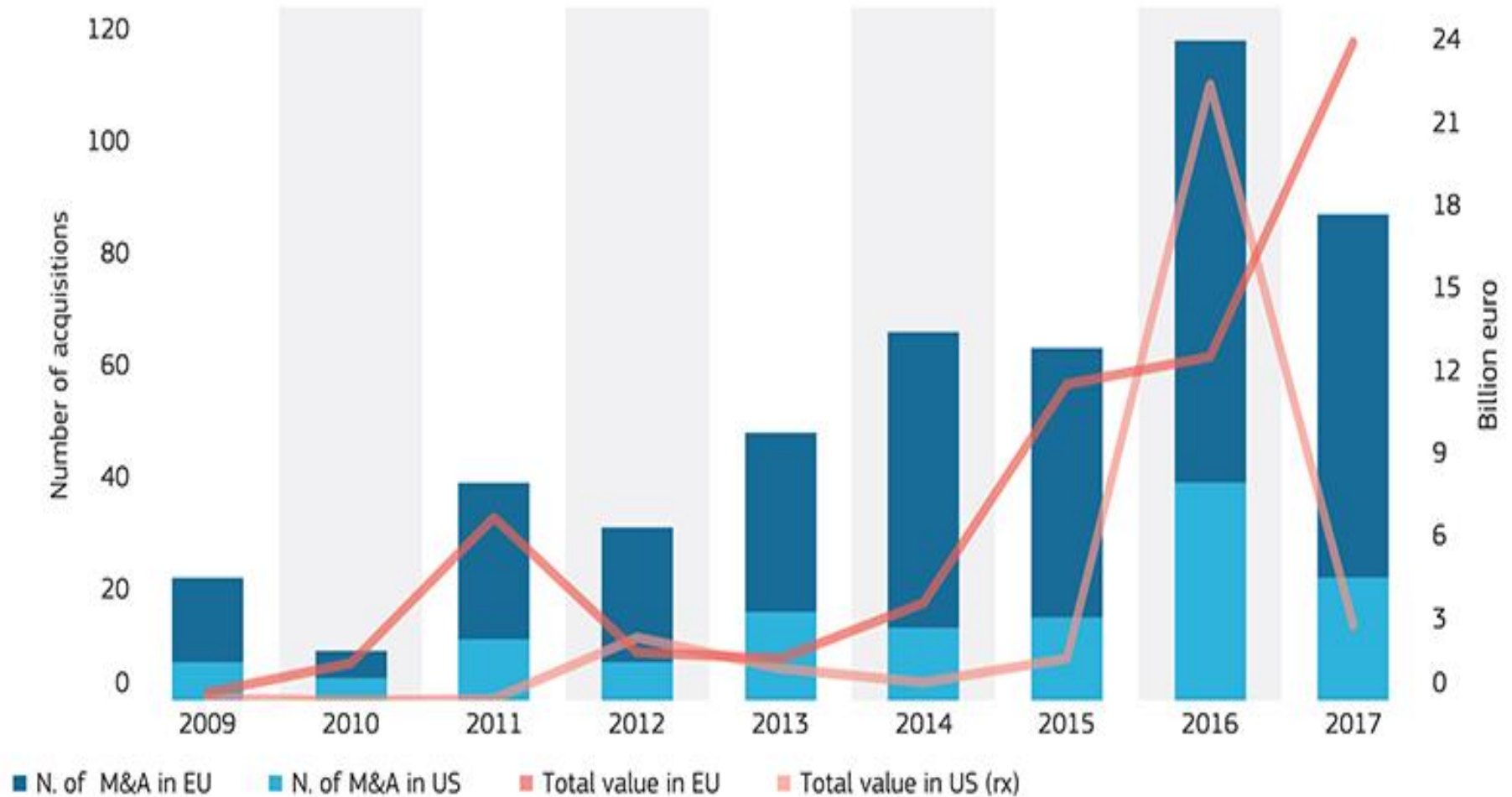


1.3%
EU business
R&D
investment

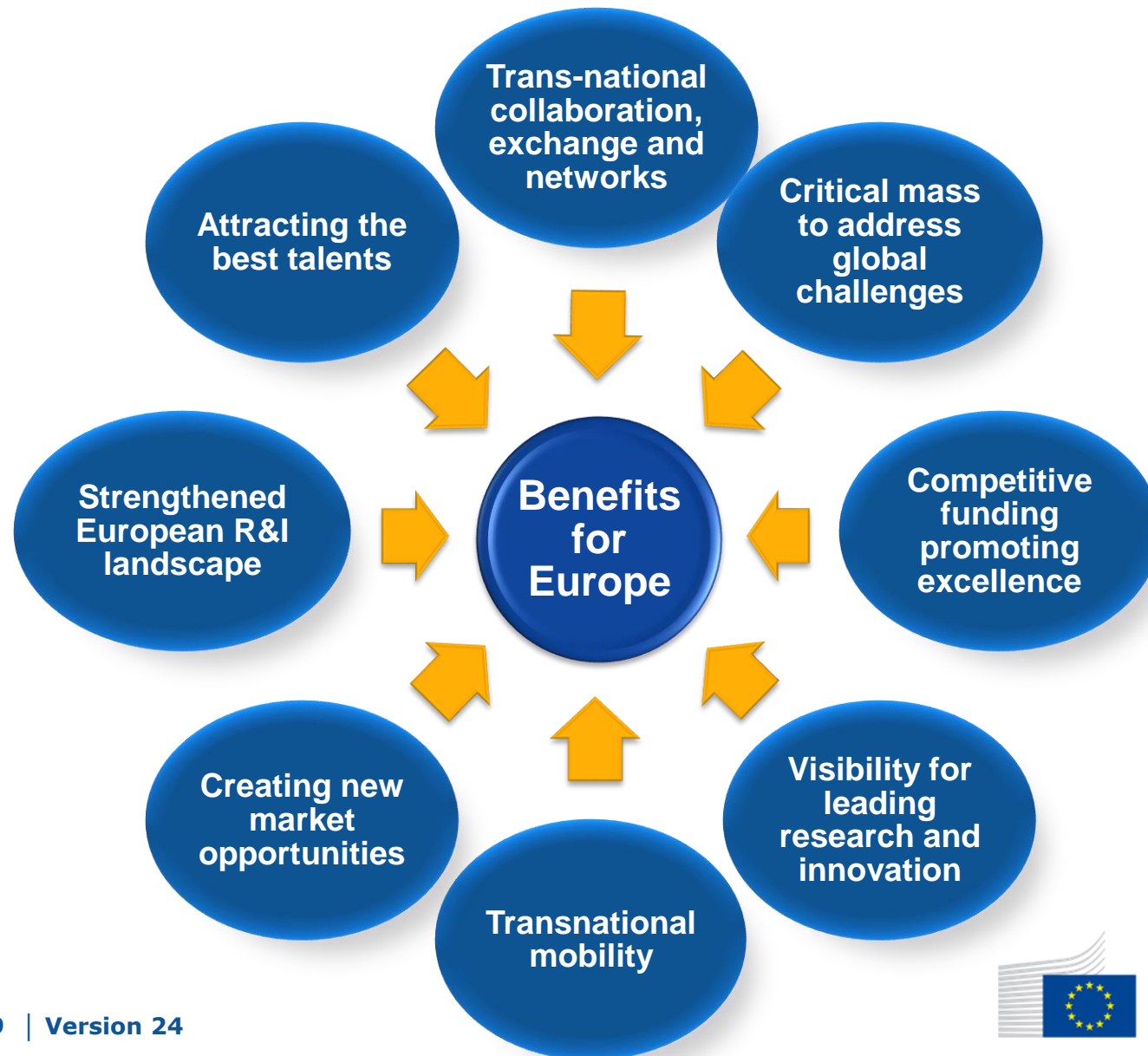
...Europe can do better at transforming this into leadership in innovation and entrepreneurship

China's mergers and acquisitions in the EU and US

A partner, a competitor or a threat?

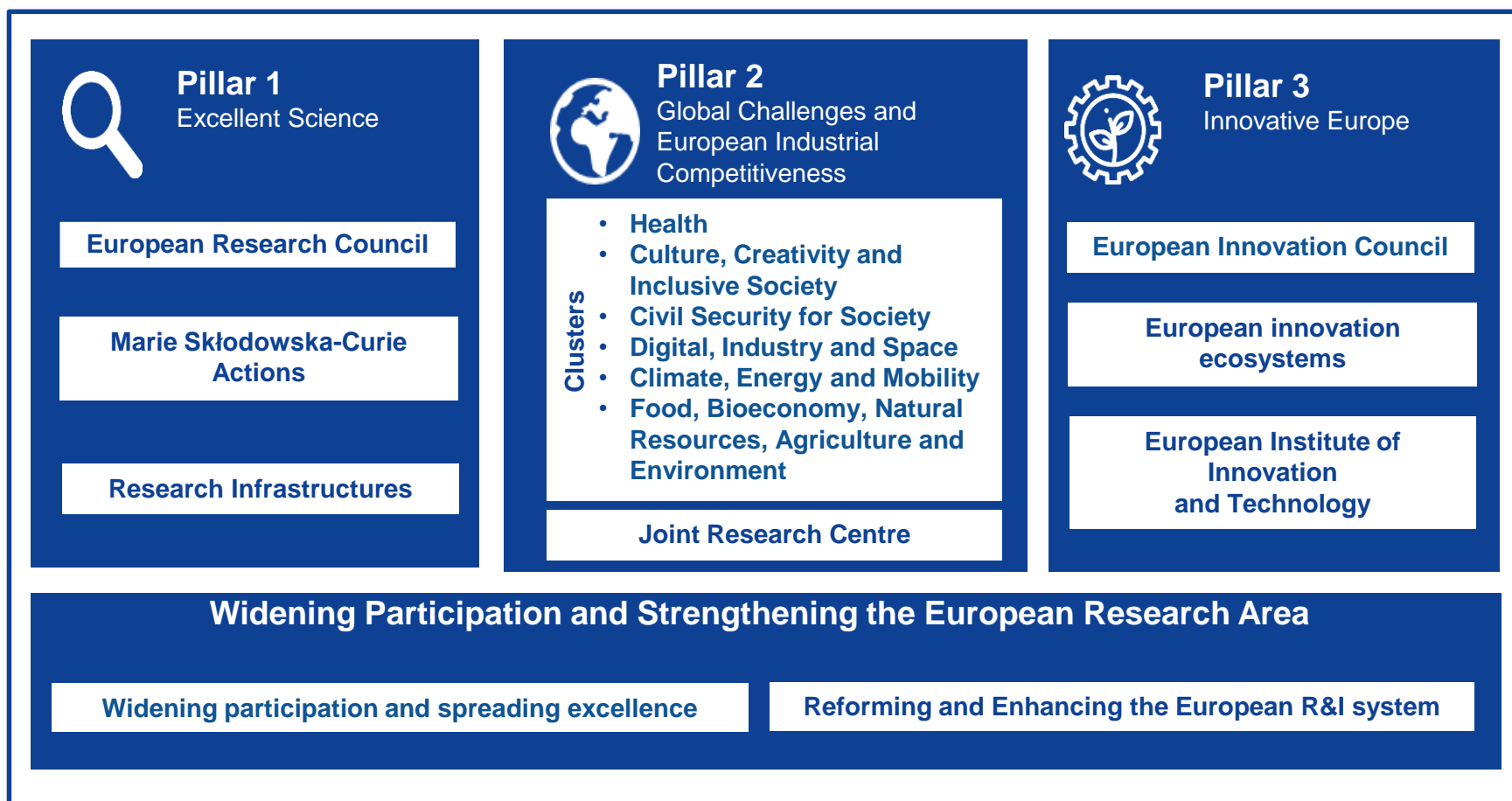


Added value through Horizon Europe

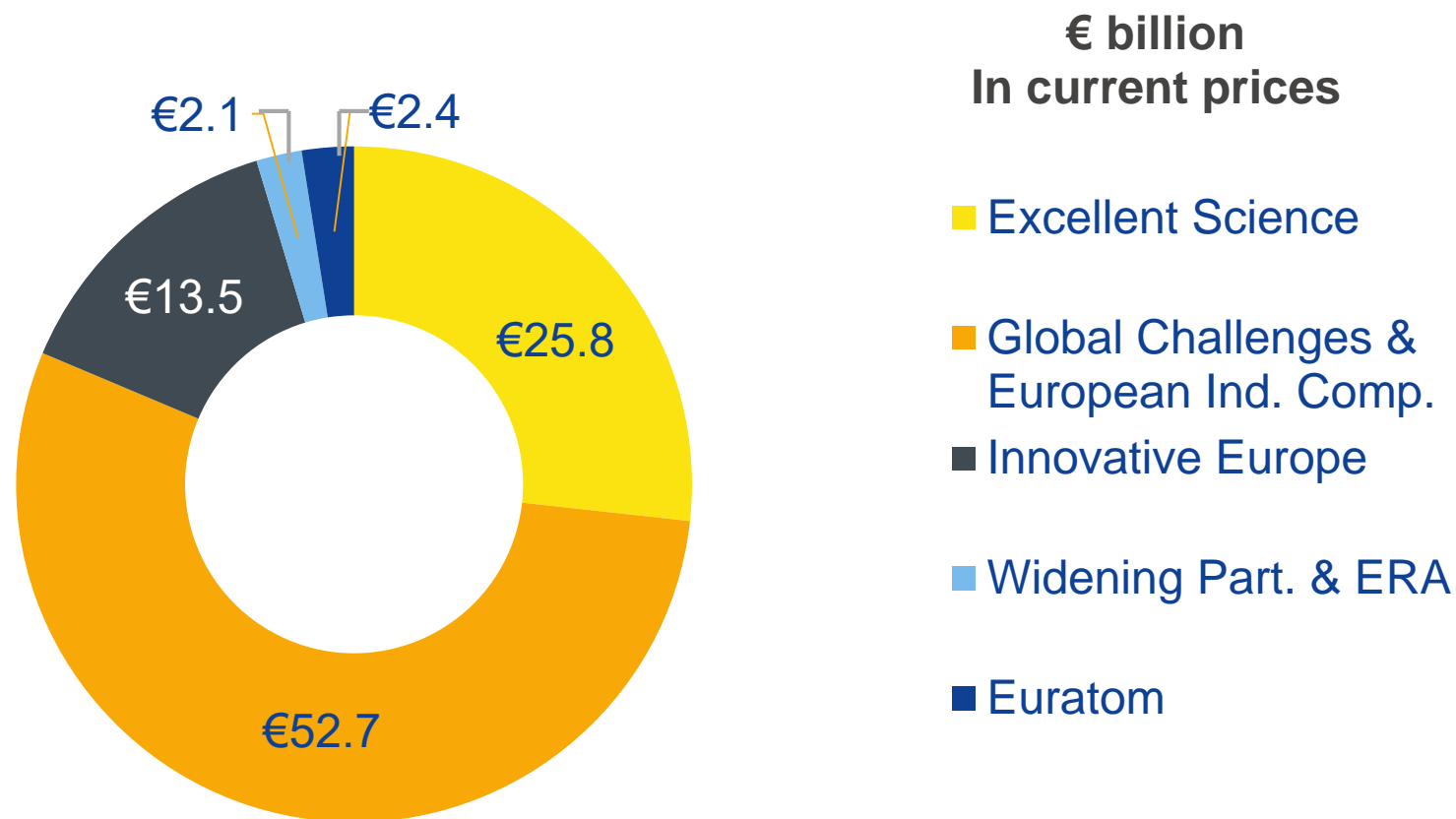


Horizon Europe – What?

Horizon Europe: structure



Commission proposal for budget: €100 billion* (2021-2027)



* 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



Encourage participation



Key Novelties

in Horizon Europe

European Innovation Council

R&I Missions

Extended association possibilities

Open science policy

New approach to Partnerships

Spreading Excellence



European Innovation Council

Support to innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors (**70% of the budget earmarked for SMEs**)

**European
Innovation Council
– a one stop shop**

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 only & blended finance
(from pre-commercial
to market & scale-up)



R&I Missions

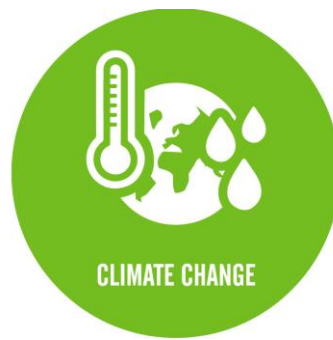
R&I Missions

Relating EU's research and innovation better to society and citizens' needs; with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines mission characteristics and elements of governance, and 5 missions areas.

Specific missions will be programmed within the Global Challenges and European Industrial Competitiveness pillar (drawing on inputs from other pillars)



**Adaptation to climate change,
including societal
transformation**



**Healthy oceans,
seas, coastal and
inland waters**

Areas for possible missions



Cancer



**Soil
health
and
food**



**Climate-neutral
and smart cities**



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 and implemented by partners; commitment of partners for financial and in-kind contributions

Institutionalised

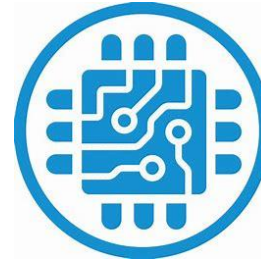
Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe



Innovative SMEs



Health innovations



**Key digital and
enabling
technologies**



**Sustainable
energy
storage
technologies**

**Areas for
possible
Institutionalised
European
partnerships
(based on Article
185/7 TFEU)**



Metrology



**Clean, connected
mobility**



**Sustainable bio-
based solutions**



**EU air traffic,
aviation and
rail**



**European
Commission**



International Cooperation

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.)



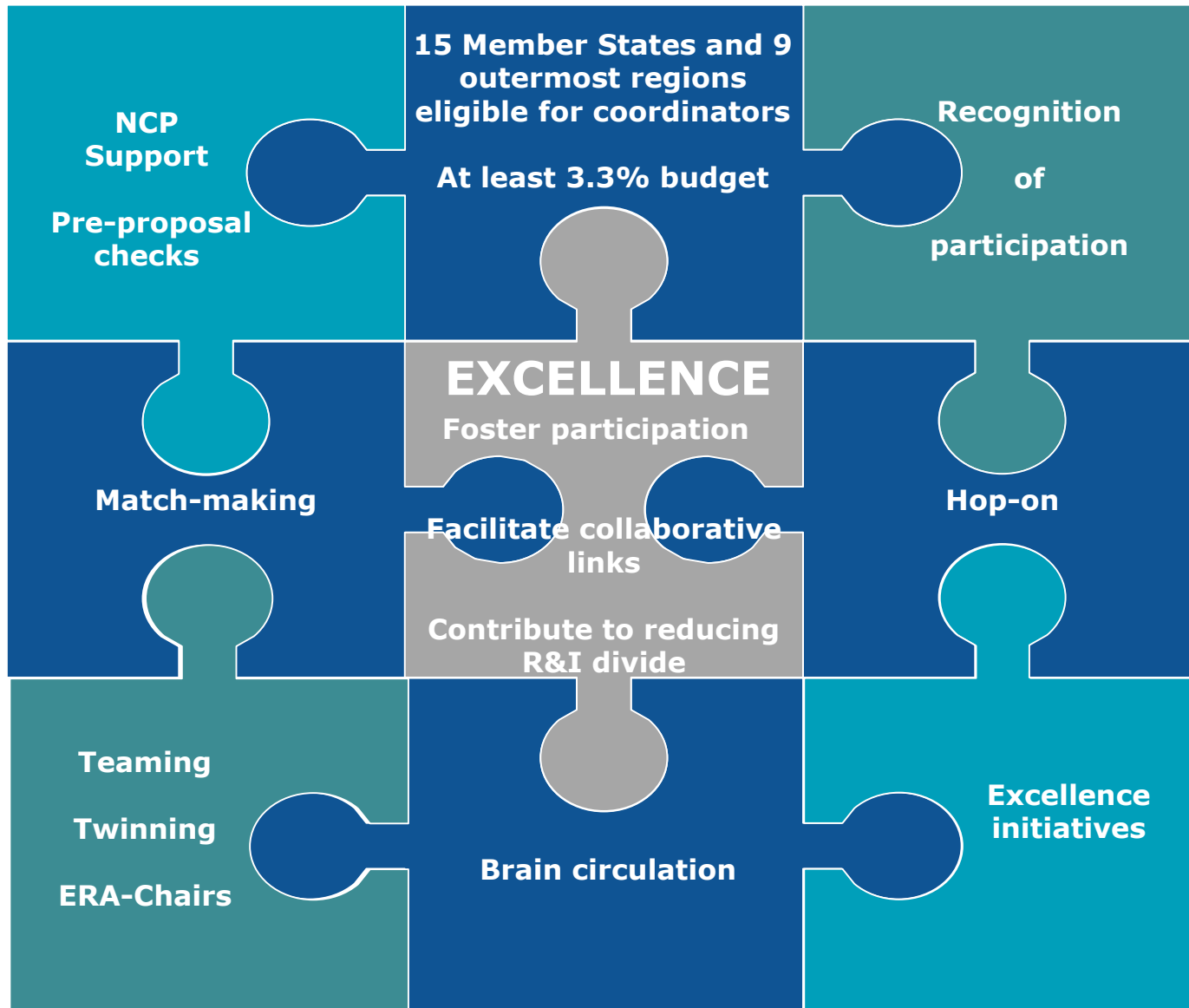
Open Science across the programme

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
- **Open Access to research data ensured:** in line with the principle "as open as possible, as closed as necessary"; **Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data**
- Support to researcher skills in and reward systems for open science
- Use of European Open Science Cloud

Widening participation/spreading excellence



Horizon Europe – In detail

Pillar 1

EXCELLENT SCIENCE:

reinforcing and extending the excellence of the Union's science base

European Research Council

- Frontier research by the best researchers and their teams

Commission proposal:
€ 16.6 billion

Marie Skłodowska-Curie Actions

- Equipping researches with new knowledge and skills through mobility and training

Commission proposal:
€ 6.8 billion

Research Infrastructures

- Integrated and inter-connected world-class research infrastructures

Commission proposal:
€ 2.4 billion

Pillar 3

INNOVATIVE EUROPE:

stimulating market-creating breakthroughs and ecosystems conducive to innovation

European Innovation Council

- Support to innovations with breakthrough and market creating potential

Commission proposal: € 10.5 billion, incl. up to € 500 million for ecosystems

European innovation ecosystems

- Connecting with regional and national innovation actors

European Institute of Innovation and Technology (EIT)

- Bringing key actors (research, education and business) together around a common goal for nurturing innovation

Commission proposal: € 3 billion

Widening Participation and Strengthening the European Research Area: Optimising strengths & potential for a more innovative Europe

Spreading Excellence, e.g.

- Teaming & twinning
- ERA Chairs
- COST
- Support to NCPs
- Brain circulation and excellence initiatives

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

Common understanding: At least 3.3 % of Horizon Europe budget

Euratom research and training programme (2021-2025)

■ Objective

Research and training activities to reduce nuclear safety and security risks, development of safe nuclear technologies and optimal radiation protection.

■ Key novelties

- Increased focus on non-power applications of radiation (medical, industrial, space)
- Opening mobility opportunities for nuclear researchers through inclusion in Marie Skłodowska-Curie Actions
- Simplification: Specific objectives from currently 14 to 4, covering both direct actions (implemented by JRC) and indirect actions

■ Commission proposal for budget: € 2.4 billion (2021-2027)

InvestEU for Research and Innovation (R&I)

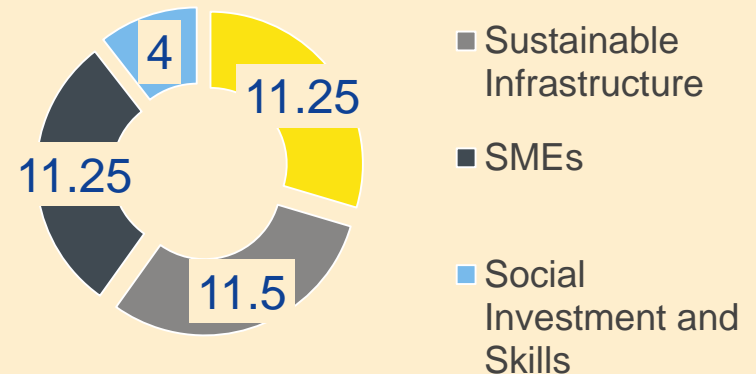
Stimulates more investment in research and innovation, notably by the private sector; leverages and complements national/regional initiatives

No market distortion: intervention only to address financing gaps in the R&I delivery chain (notably due to high risk)

Support through:

- **InvestEU Fund**
- **InvestEU Assistance**
- **InvestEU Portal**

Proposal for Invest EU's 4 investment windows: budgetary guarantees in billion €



➔ leverages an estimated **€ 200 bn** of investments into R&I; **market-based finance** for the exploitation and scale-up of European R&I

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 of direct costs
- Single set of rules principle

Commission proposal for synergies with other Union programmes

Horizon Europe



Other Union Programmes, including

Common Agricultural Policy
ERDF
External Instrument
Maritime & Fisheries Fund
InvestEU
LIFE
Connecting Europe Facility
ESF+
Digital Europe
Space Programme
Erasmus
Innovation Fund
Internal Security Fund
Single Market Programme



Enhanced synergies

Compatibility

Harmonisation of funding rules;
flexible co-funding schemes;
pooling resources at EU level

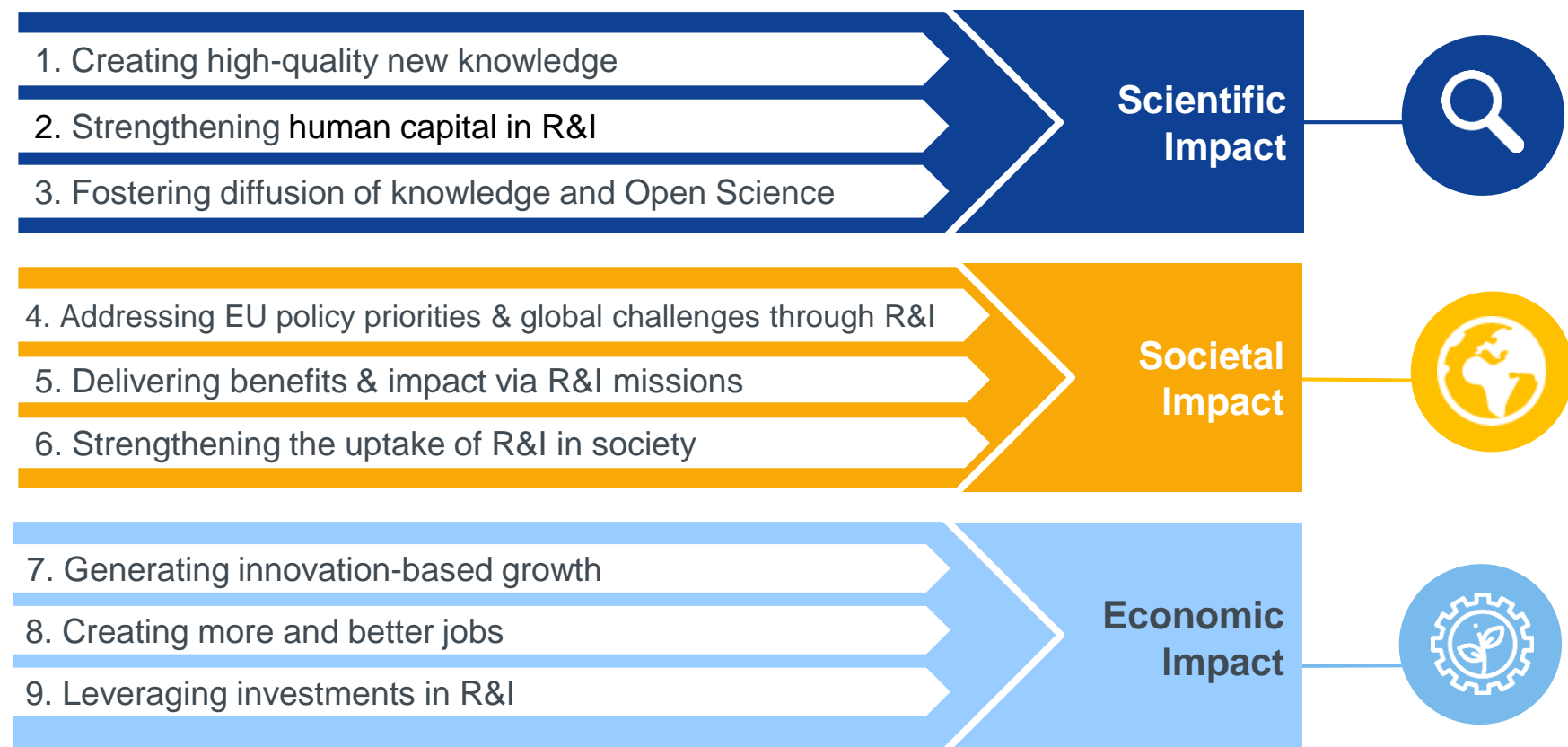
Coherence and complementarity

Alignment of strategic priorities in
support of a common vision



European
Commission

Key impact pathways to track progress



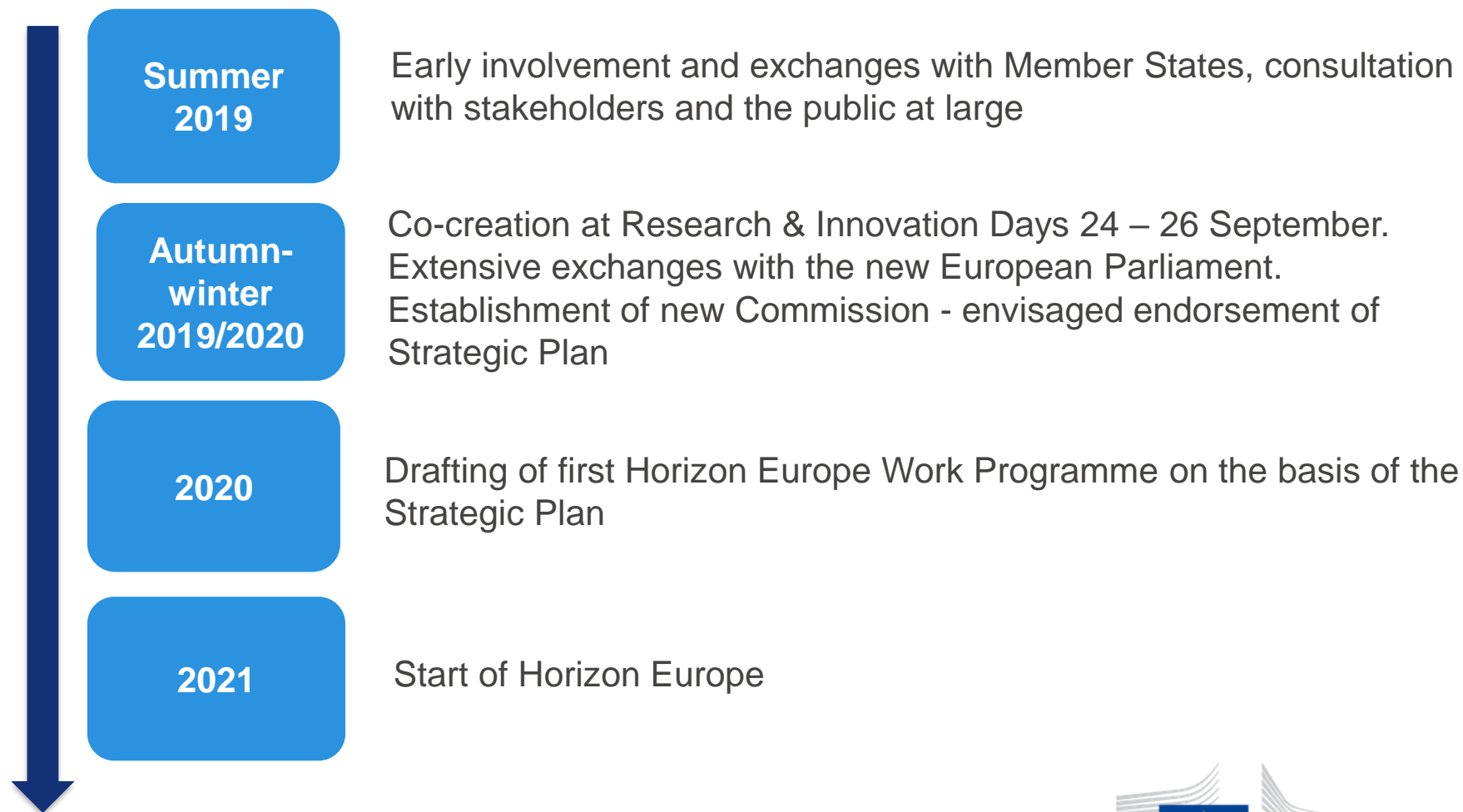
Strategic plan gives direction to the work programme



Main Features

1. Early involvement and extensive exchanges with Member States
1. Extensive exchanges with the European Parliament
2. Consultations with stakeholders and public at large

Steps towards the first Horizon Europe work programme



Timeline for 2019

- **June:** Opening of web-based consultation
- **September:** European R&I Days 24-26 September, Brussels
- **October:** Web-based feedback on consultation document
- **Beginning of 2020:** Adoption of the Implementing Act for the Strategic Planning
- **2020:** Preparation of Horizon Europe Work Programme

EUROPEAN RESEARCH & INNOVATION DAYS

24 → 26
SEPTEMBER

20
19

KANAL  CENTRE POMPIDOU
Brussels, BELGIUM

#RiDaysEU
@EUScienceInnov

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



”

'We are now on track to launch the most ambitious ever European research and innovation programme in 2021, shaping the future for a strong, sustainable and competitive European economy and benefiting all regions in Europe.'

Carlos Moedas, Commissioner, 20/3/2019





Thank you!

#HorizonEU

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