



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

# **R&I Missions and Partnerships**

**[#HorizonEU](https://twitter.com/HorizonEU)**

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26 November 2018



# Lessons Learned

from Horizon 2020 Interim Evaluation

# Key novelties

in Horizon Europe



Support breakthrough innovation



European Innovation Council



Create more impact through mission-orientation and citizens' involvement



R&I Missions



Strengthen international cooperation



Extended association possibilities



Reinforce openness



Open science policy



Rationalise the funding landscape



New approach to Partnerships



# R&I Missions: why?

Impact Assessment annex 8-2, Lamy advice

Building on experience and lessons of Horizon 2020 (e.g. focus areas), we need:

- Greater **scale** and **concentration of resources**
- Greater **clarity** in objective, and timeframe to achieve it
- Greater **coherence**, including through **portfolio** approach
- Greater involvement of **stakeholders, users**, and **public** awareness
- Greater possibility for **leveraging** other inputs



# R&I Missions: what do we want to achieve?

Impact Assessment annex 8-2

- Prioritise investments on global **challenges** where the EU adds most value
- Focus on areas with **transformative potential** for science, technology, industry or society
- Induce **collaboration** cross-sector and cross-discipline, including SSH
- Stimulate **demand** for innovative solutions by involving civil society
- Highlight the **contribution** of R&I to solving challenges
- **Inspire** and mobilise **citizens** around clear time-bound goals
- **Set the direction** for public and private R&I in Europe, leverage further investments, improve societal uptake of results



# R&I Missions: what?

Art. 2 of the FP/RfP Regulation: *Definitions*

A portfolio of actions 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.

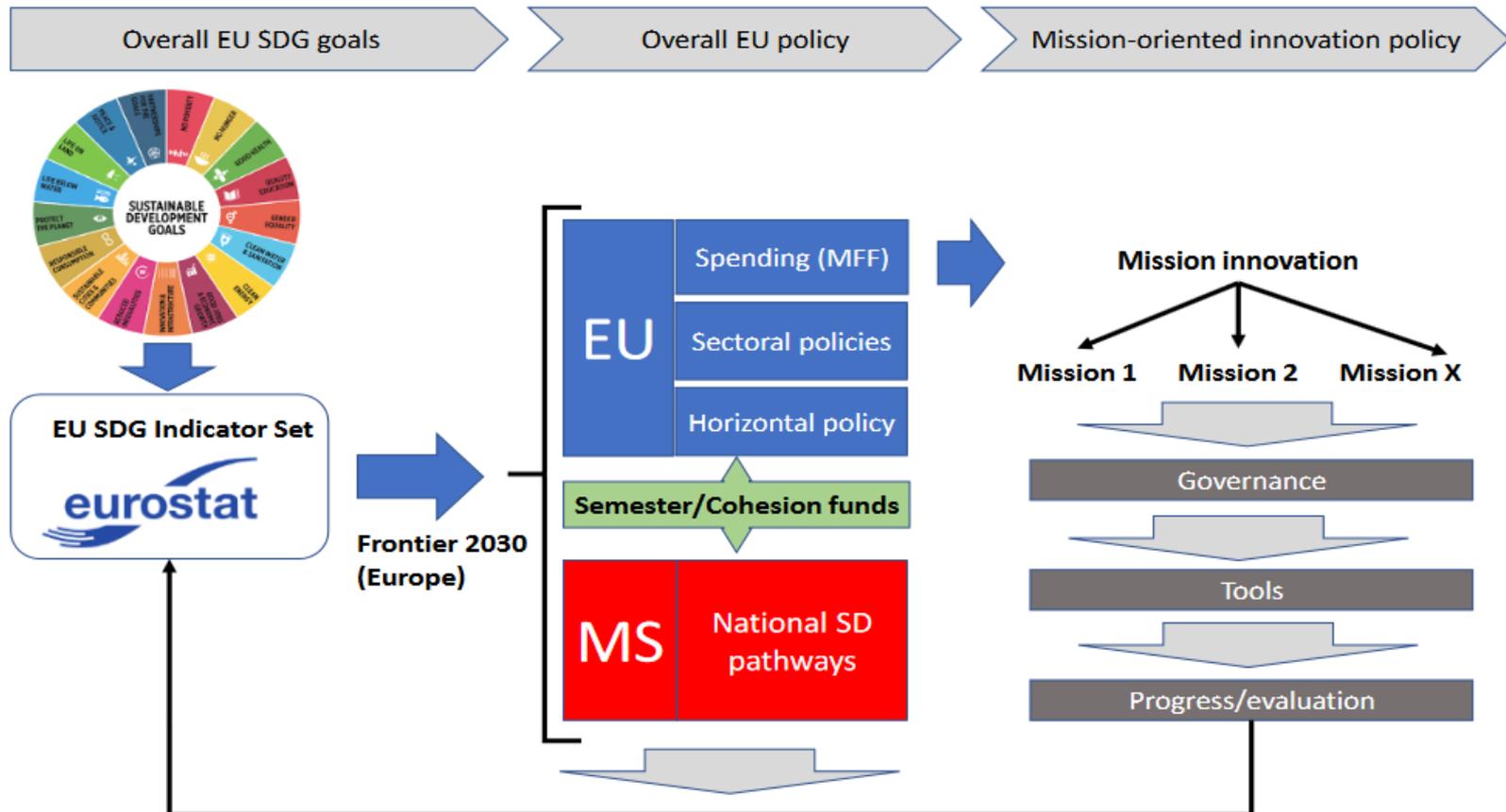
Missions are programmed within Pillar 2 but may benefit from actions carried out within other parts of the programme



# R&I Missions: from SDGs to missions

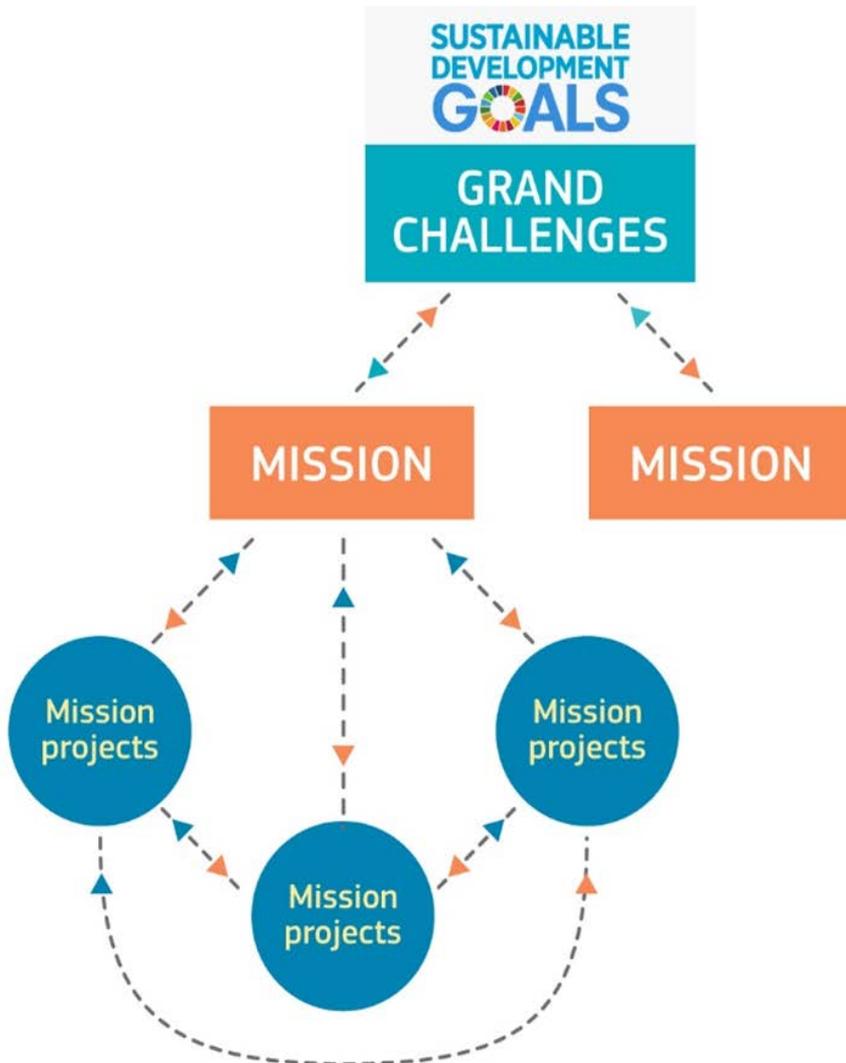
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SDGs are **point of departure** for rethinking Europe's efforts, including a mission-oriented approach





# R&I Missions: projects, missions, SDGs



Political Agenda  
Setting and  
Civic Engagement



Clear  
Targeted  
Missions



Portfolio of  
projects and  
bottom-up  
experimentation

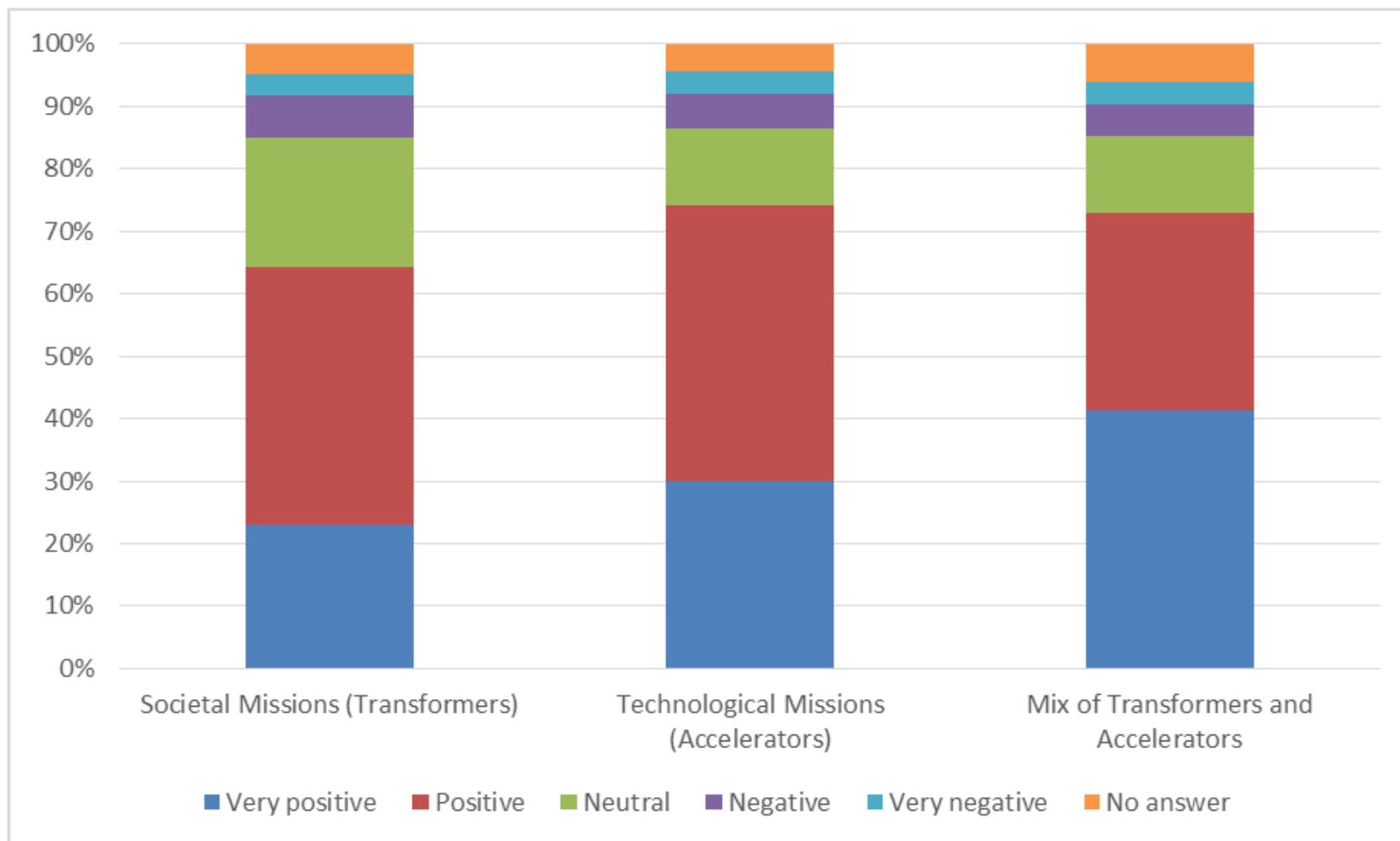


# Stakeholders support a mission-oriented approach

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- Stakeholders support missions:
  - with potential **societal relevance**
  - to improve the **impact and visibility** of EU R&I
- Missions should be **limited in number**, easy to communicate, with a concrete budget and timeline, offering breakthrough potential and a clear EU added value
- **Cross-disciplinary**, non-prescriptive calls, citizen involvement

## Q: How do you assess the potential of a mission-oriented R&I funding for increasing the impact on investment?



Source: Online survey to all Horizon 2020 participants, December 2017. Based on 1.863 respondents



# R&I Missions: criteria

Art. 7 of the FP/RfP Regulation: *Missions*

- have a clear **EU-added value** and contribute to reaching Union priorities
- **be bold** and inspirational, and hence have wide societal or economic relevance
- indicate a **clear direction** and be targeted, measurable and time-bound
- be centered on ambitious but realistic **research and innovation** activities
- spark activity **across disciplines** (incl. SSH), sectors and actors
- be open to **multiple, bottom-up solutions**



# R&I Missions: how?

Art. 6(7) of the FP/RfP Regulation: **Implementation and forms of funding**

Art. 11 of the SP Decision: **Work Programme**

Annex I to the SP Decision: **Strategic Planning**

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- **Mission areas** will be identified in the draft Strategic Plan for consultation with Member States and stakeholders
- Specific missions will be **co-designed** with Member States, the Parliament, stakeholders, end-users and citizens
- Missions will be implemented through dedicated **calls for proposals** in the Work Programmes
- Calls will be **non-prescriptive** and open to new solutions and newcomers



# R&I Missions: how?

Art. 26 of the FP/RfP Regulation: ***Evaluation***

Art. 5 of the SP Decision: ***Missions***

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- A **mission board** may be established for each mission: around 15 members including end-users
- Mission Boards have an **advisory role** in designing the mission and its implementation
- Missions will be implemented through a coherent **portfolio** of projects
- Missions will be implemented **through existing executive agencies** according to the content of the mission



# R&I Missions: alternatives considered

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- replace the **7 societal challenges** in Horizon 2020 by missions: too broad, difficult to measure,
- continue with the **focus areas** in Horizon 2020: too many (> 20), little involvement of users
- **accelerator-missions only**: would lack broader impact on challenges
- **transformer-missions only**: complex, stakeholders might find it difficult to see their role
- **missions-only**: would put an end to many current R&I areas that may also lead to future missions



# R&I Missions: what is expected ?

Competitiveness Council on 28 September Member States

Non paper ideas (caveat: no agreement and only for discussion, and as leaked by Science Business)

- Missions and partnerships will only form a relatively minor part of the Horizon Europe in budgetary terms
- The largest part of the 'Global Challenges and Industrial Competitiveness' pillar of Horizon Europe will be decided through normal work programmes, following strategic planning (missions and partnerships in it)
- "man on the moon" approach – Missions to reconnect EU research with citizens with inspirational goals
- Missions should connect with stakeholders and citizens



# R&I Missions: what is expected ?

Broad stakeholder consultation carried out by the Commission:

- 1190 responses for 2074 proposed concrete missions
- Areas of digitisation/artificial intelligence (16%), health and well-being (10%), socio-economic transformation (10%) and sustainable production (7%)
- four areas of high potential for missions, and 10 areas of high potential for institutional partnerships
- Call for expressions of interest for a transparent composition of Mission Boards, one for each mission area (kick off in 2019), to validate (or invalidate) the mission with stakeholders, and advise on objectives, research and innovation tasks and specific requirements (societal aspects, international dimension etc.).



# R&I Missions: what is expected ?

- Co-design with stakeholders and, as appropriate, the public at large
- Mission Boards would also have a continuing role throughout the life of the missions, to advise the Commission on their implementation and to report to Member States, the Parliament and the public on their progress
- Potential Mission areas based on the consultation:
  - Digitisation (Build the first universal quantum computer in Europe)
  - Health (Beating cancer: Cure paediatric cancer)
  - Clean Europe (Healthy Oceans: Eliminating plastic waste in rivers and seas)
  - Food/Agriculture (Sustainable land)



# R&I Partnerships: what is expected ?

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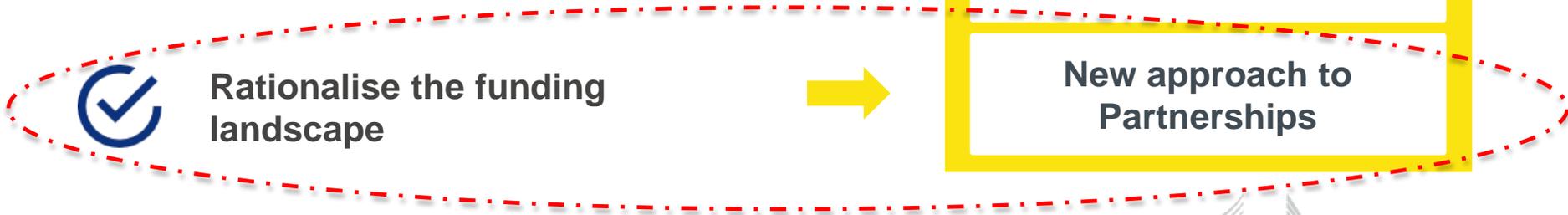
Open science policy



Rationalise the funding landscape



New approach to Partnerships





# New approach to partnerships: why?

Impact Assessment annex 8-5

- Need to **rationalise** the European R&I partnerships landscape
- Need to improve the **openness** and transparency of R&I partnerships
- Need to **link** the R&I partnerships to future EU R&I missions and/or strategic priorities



# New approach to European partnerships: overview

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





# R&I Partnerships: what is expected ?

Competitiveness Council on 28 September Member States

Non paper ideas (caveat: no agreement and only for discussion, and as leaked by Science Business)

- European partnerships aim at boosting the impact of public intervention at EU level by leveraging and integrating other sources of funding (public, private, foundations...)
- Partnership as a way foster industrial modernisation and societal transformation
- Areas for partnerships, i.e. stronger EU added value, substantial modernisation, changes in membership, and clear termination dates
- Industrial partnerships should have more ambitious objectives on climate and energy (e.g. carbon neutral production of steel, concrete, etc.) and give EU leadership in digitisation (e.g. in health, transport)



# R&I Partnerships: what is expected ?

- Portfolio of institutionalised partnerships for MS before the Impact Assessment exercise and after that MS invited to provide feedback
- To work with relevant private and public sector partners to develop partnerships that meet expectations, ambitions and conditions set out in the Horizon Europe proposal
- Potential areas of institutional partnerships:
  1. Health innovation (medical treatments, devices and technologies)
  2. Global health (national health research systems + philanthropy funding)
  3. Key digital technologies, including AI
  4. Metrology (speed, accuracy and cost of measurement)
  5. Air traffic management, including for novel avionics, drones
  6. Aviation, CO2 emissions and noise (electric/alternative systems)
  7. Rail, including automation and digitisation
  8. Bio-based solutions (including biomass and maritime resources)
  9. Fuel cells and hydrogen storage technologies
  10. Connected, autonomous mobility



# Thank you

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