



The international dimension in EU's Framework Programmes for research

MLE INCO 1ST COUNTRY VISIT PARIS 3 JUNE 2019



Dr. Efthymios SAKELLARIOU
EUROPEAN COMMISSION
DG R & I
DIRECTORATE H

Horizon 2020 – Three priorities



Policy priorities set by Commissioner Moedas

European
Commission



Open Science

Open Innovation

Open to the World

- ✓ Leading & working with multilateral initiatives & international organisations
- ✓ Better framework conditions for scientific cooperation
- ✓ Science diplomacy and synergies with the EU's external policies



Today more than ever, Europe R&I needs to open to the world

- International knowledge flows have become increasingly important in today's multipolar global R&I landscape
- New scientific and technological powerhouses have emerged during the last decades
- International cooperation increases impact
- Cooperation is crucial for tackling global challenges or advancing in big science

EU strategy for international cooperation in R&I

European
Commission

Strengthen the Union's R&I excellence and attractiveness and its economic and industrial competitiveness

International Cooperation Strategy

Enhancing and focusing EU international cooperation in research and innovation

Tackle global societal challenges

Support the Union's external policies

Research and
Innovation

Implementation in the work programme



International cooperation is a **cross-cutting** priority

- ✓ **General opening of topics**
- ✓ **Targeted opening**
 - International partners mandatory
 - International partners encouraged
 - Joint or coordinated call
 - Project twinning
 - ...

Automatically eligible for EU funding

- EU Member States incl. their overseas departments
- Overseas Countries and Territories linked to the MS
- Countries Associated to Horizon 2020
 - Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, North Macedonia, Georgia, Iceland, Israel, Norway, Montenegro, Serbia, Turkey, Moldova, Switzerland, Tunisia, Ukraine
- International European interest organisations
- Exhaustive list of countries identified in Annex A to the work programme ('developing countries')



Matching funds for international partners

- A number of non-EU/non-Associated countries make funding available for their participants in Horizon 2020 actions:
 - Australia, China, India, Japan, Mexico, Russia, South Korea, Taiwan and regions of Brazil and Canada. Some cover all topics – others selected topics, e.g. AHMRC in Australia
 - See http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/international-cooperation_en.htm#countries

Areas of Action



International cooperation in Horizon 2020



Expanding global multilateral initiatives



Reinforcing the partnership with Member States



Intensifying synergies with EU external policies



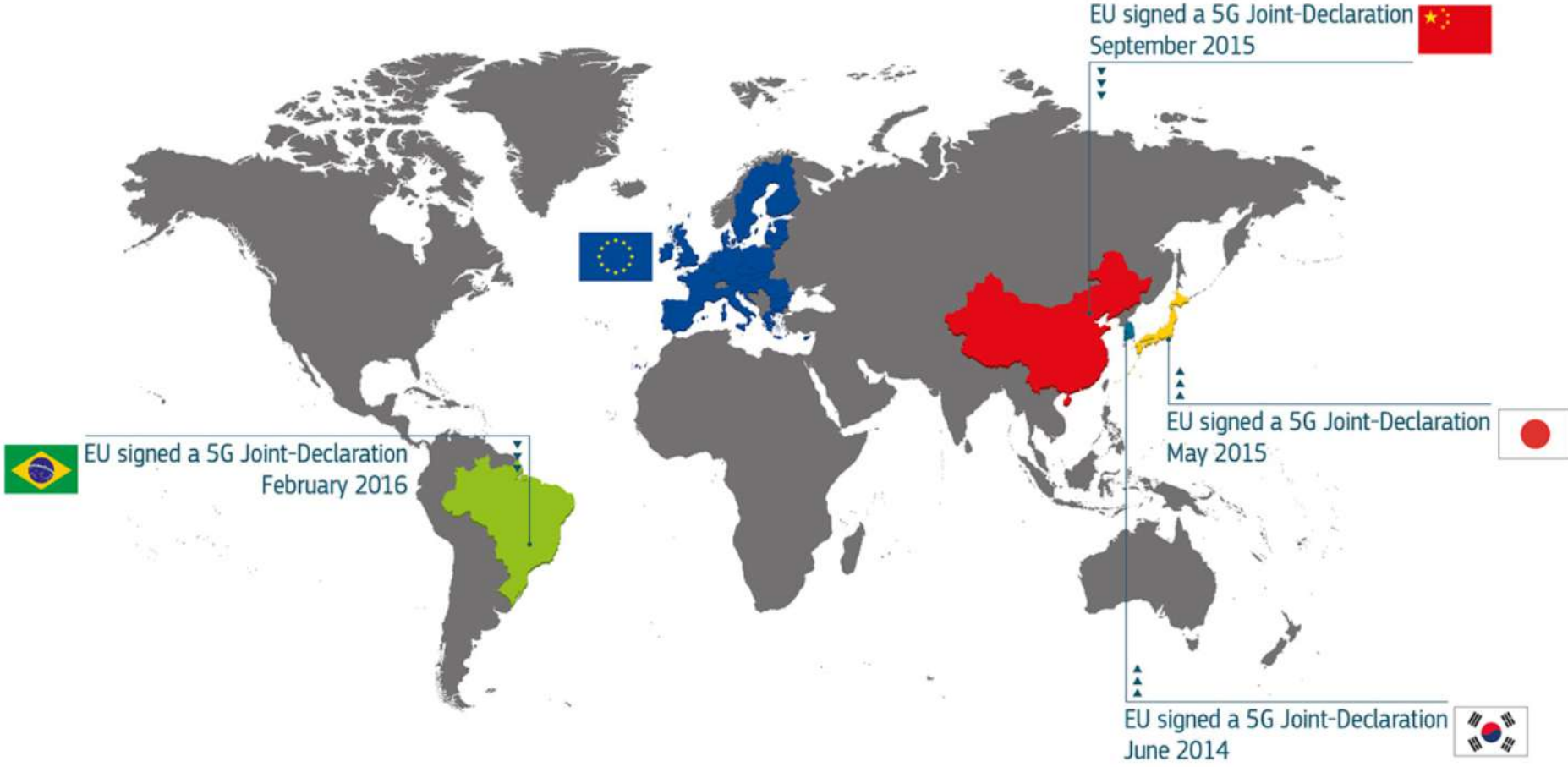
Improving framework conditions



Multi-annual roadmaps

Example

5G International Cooperation





Global Research Collaboration for infectious Disease Preparedness



Multilateral initiatives expanded



THE ATLANTIC: OUR SHARED RESOURCE
Making the Vision Reality

Synergies with EU external policies intensified



Science Diplomacy

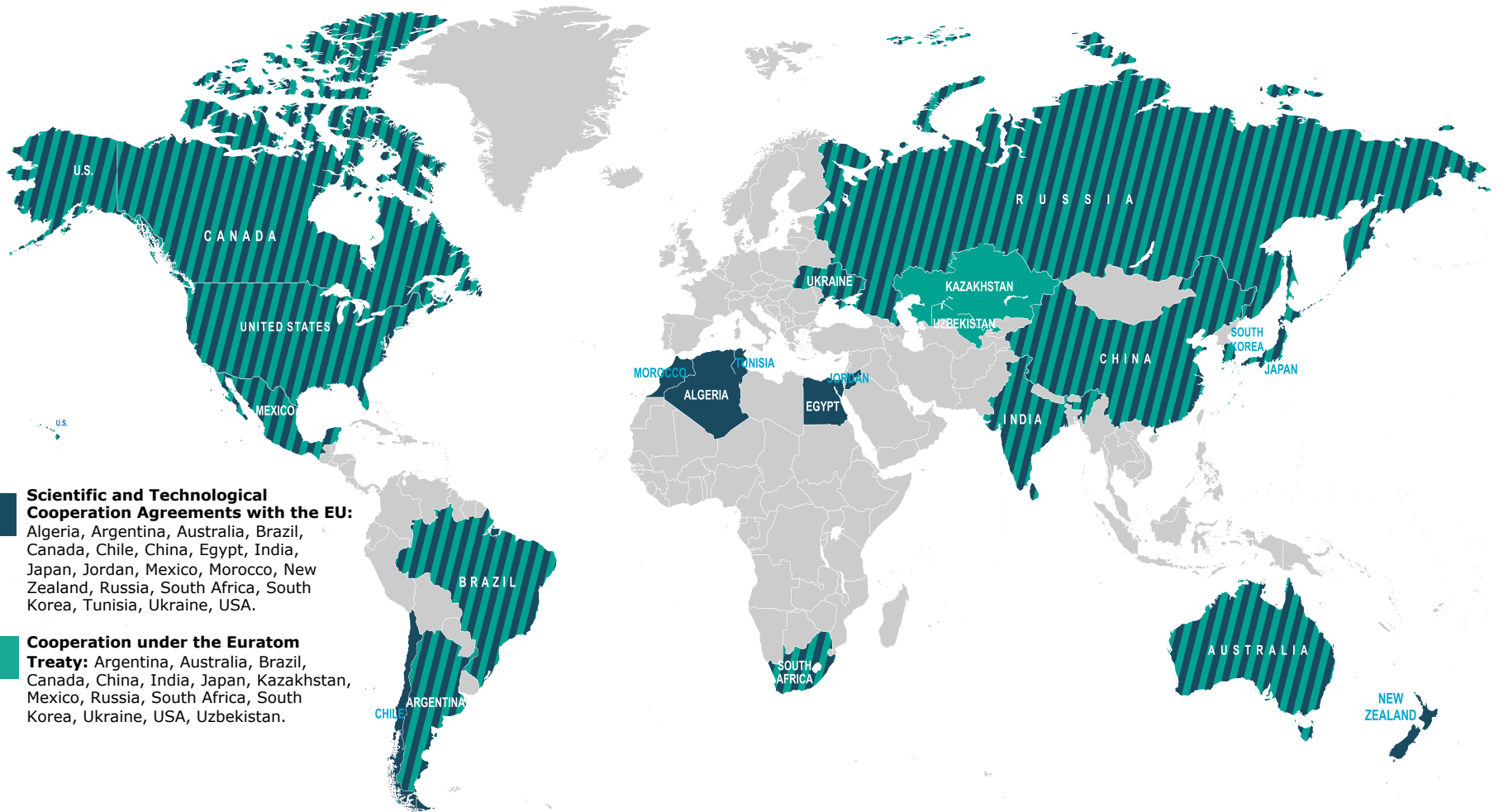
Multi-annual roadmaps for R&I cooperation with third countries

European Commission



EU regular S&T cooperation dialogues

European
Commission



Scientific and Technological Cooperation Agreements with the EU:

Algeria, Argentina, Australia, Brazil, Canada, Chile, China, Egypt, India, Japan, Jordan, Mexico, Morocco, New Zealand, Russia, South Africa, South Korea, Tunisia, Ukraine, USA.

Cooperation under the Euratom Treaty:

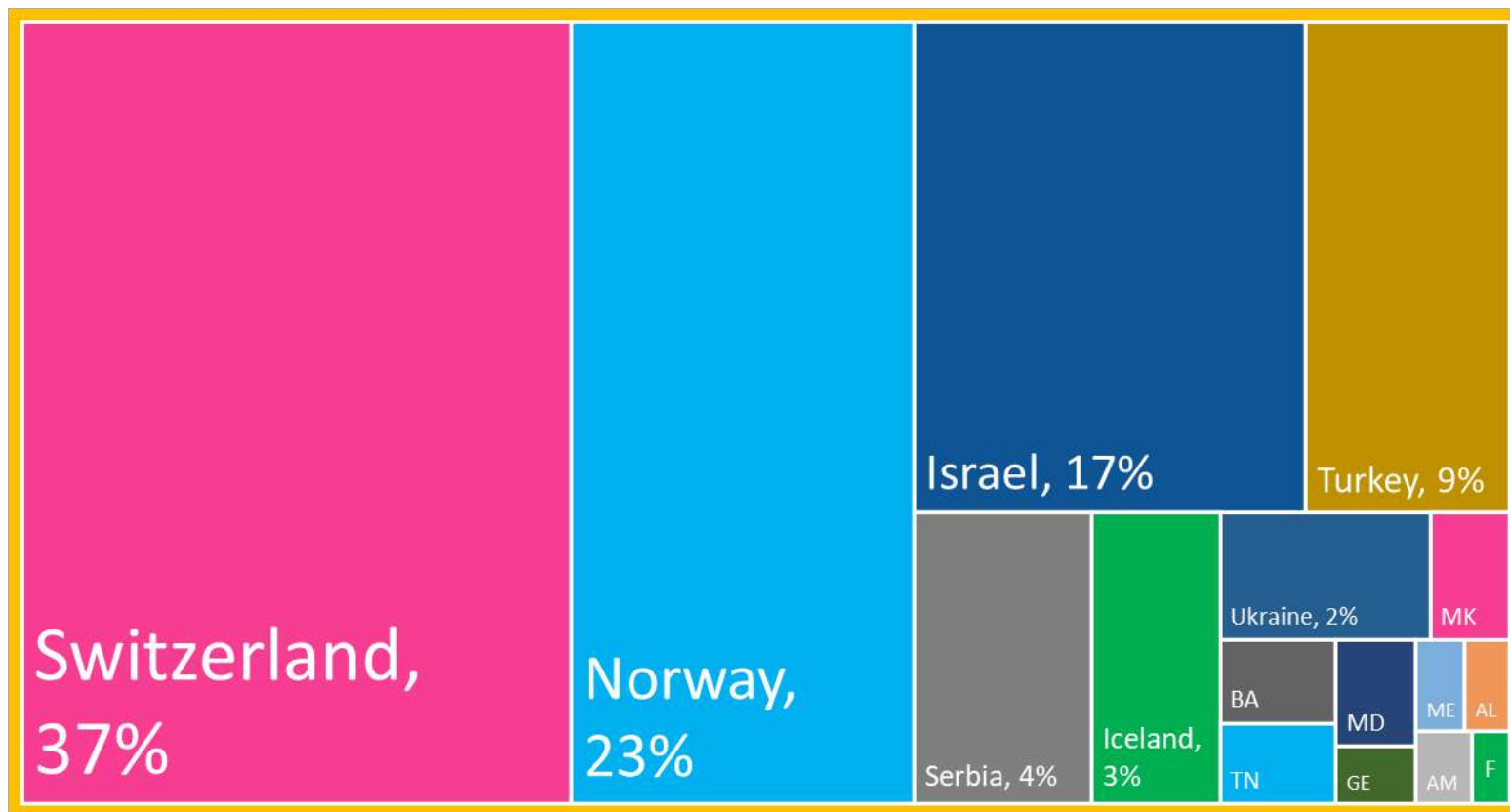
Argentina, Australia, Brazil, Canada, China, India, Japan, Kazakhstan, Mexico, Russia, South Africa, South Korea, Ukraine, Uzbekistan.

International Cooperation in Horizon 2020

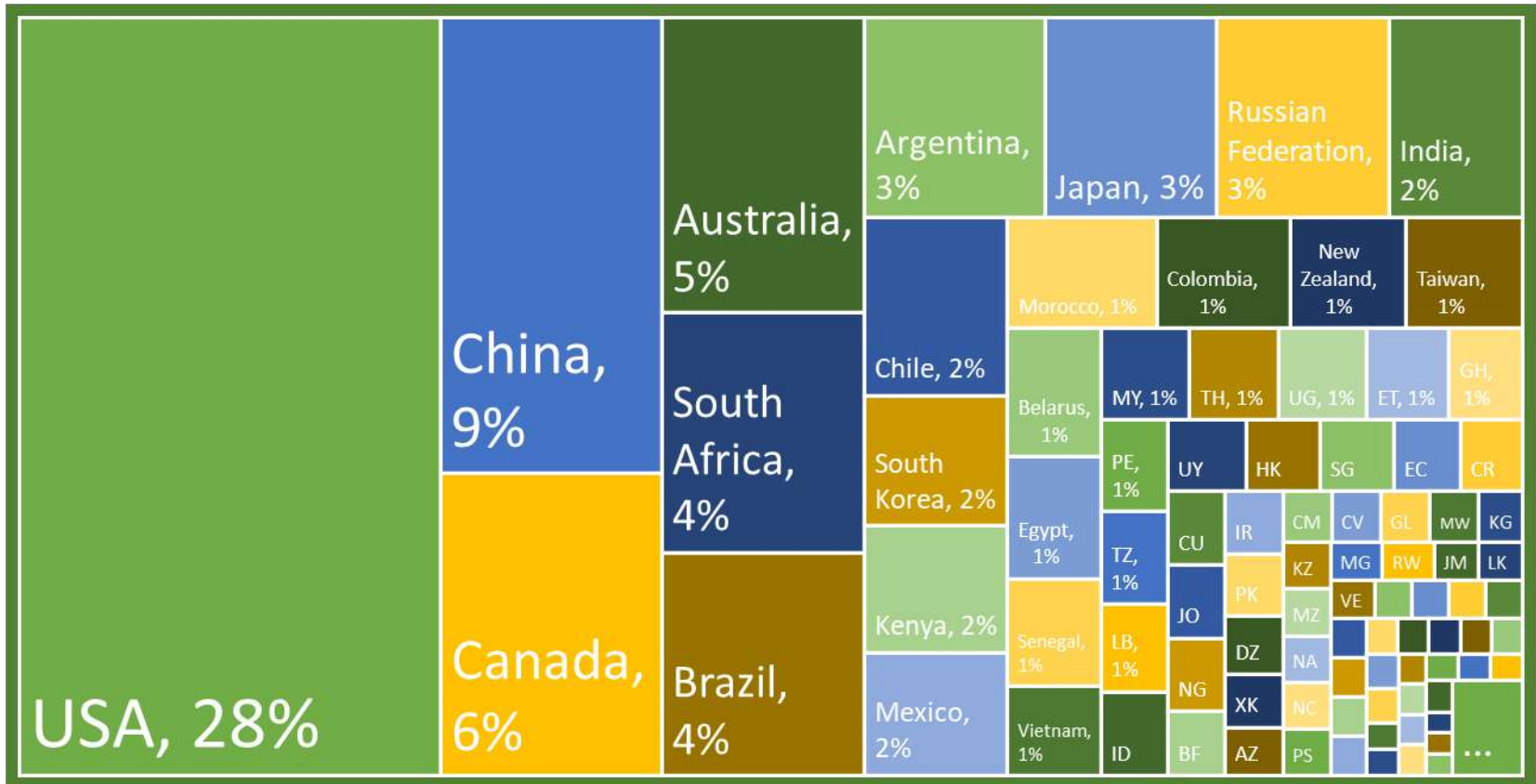
State of play

| Cooperation level | Instrument | Input |
|------------------------------|---|---|
| Researcher to researcher | <ul style="list-style-type: none"> • MSCA • ERC | <ul style="list-style-type: none"> • Incoming MSCA fellows 18% in H2020, similar to FP7 • Incoming ERC fellows 3% in H2020, similar to FP7 |
| Organisation to organisation | <ul style="list-style-type: none"> • Collaborative projects • Coordinated calls • Twinning of projects | <ul style="list-style-type: none"> • Participations of third-country entities 2.6% in H2020, 4.3% in FP7 (+0.6% in H2020, +0.7% in FP7 if coordinated calls are included) |
| Programme to programme | <ul style="list-style-type: none"> • Multilateral initiatives • Art. 185 | <ul style="list-style-type: none"> • Investment in multilaterals €150-200m/year • Leveraged investment of third countries 3-4 times the EU investment • Contribution to EDCTP and to PRIMA €683m + €220m |
| EU to third country | <ul style="list-style-type: none"> • Associations • Co-funding mechanisms | <ul style="list-style-type: none"> • Number of associated countries 16 in H2020, 12+HR in FP7 • Number of co-funding mechanisms 10 in H2020, 2 in FP7 |

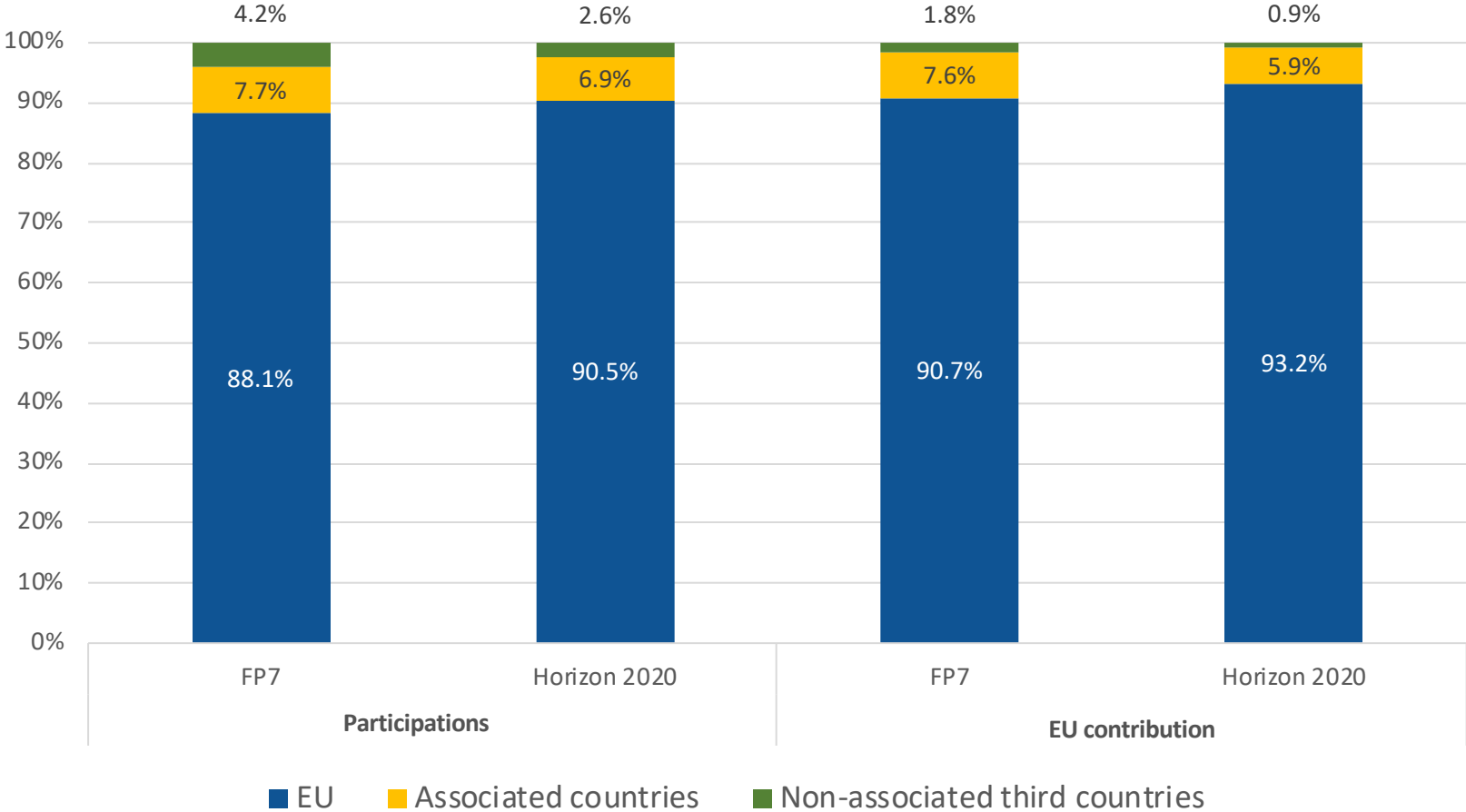
Associated countries: participations in Horizon 2020



Non-associated third countries: participations in Horizon 2020



Evolution from FP7 to Horizon 2020 (collaborative projects only)





International Cooperation in H2020

- Early signals of positive effect of international cooperation flagships launched in WP 2018 and of efforts to extend dedicated H2020 co-funding mechanisms:

Non-associated third country entities' participation in collaborative actions:

| 2014 | 2015 | 2016 | 2017 | (40% of) 2018 |
|-------------|-------------|-------------|-------------|----------------------|
| 2.05% | 2.66% | 2.57% | 2.31% | 3.58% |

Non-associated third countries' contributions to entities in collaborative actions:

| 2014 | 2015 | 2016 | 2017 | (40% of) 2018 |
|-------------|-------------|-------------|-------------|----------------------|
| 26 | 47 | 65 | 113 | € 56 million |

- EU funding of international participants stable at around 1%:

EU contribution to non-associated third country entities in collaborative actions:

| 2014 | 2015 | 2016 | 2017 | (40% of) 2018 |
|-------------|-------------|-------------|-------------|----------------------|
| 1.0% | 0.9% | 0.9% | 0.7% | 1.0% |

International Cooperation in H2020

- Contributions to Global Multilateral Initiatives, notably in the areas of health, food, energy and the environment (€ 150-200 million per year)
- Article 185 Initiatives with significant international cooperation dimension: EDCTP2 (€ 683 million), PRIMA (€ 220 million)
- 11% of participations in Marie Skłodowska-Curie Actions are from non-associated third countries
 - Highest in Research and Innovation Staff Exchange part: 29%
 - 18% of all (5367) grantees of Individual Fellowships are incoming fellows applying from non-associated third countries (2014-17)
 - 542 Global Fellowships (2014-17)
- While only 12% of H2020 collaborative actions include entities from non-associated third countries, 30% of the publications produced by H2020 collaborative actions include authors from a non-associated third country – and these are on average more highly-cited than H2020 publications without third country authors

Draft WP 2020: International Cooperation

- International participation strongly encouraged in an increasing number of topics calling for collaborative action as an important means to maximise impact
- Notable target topics and countries:
 - Africa: global health, food and nutrition security
 - China: food production, biotech, energy, natural resources, urbanisation
 - Series of bilateral cooperation (US, Canada, Japan etc.) on Clean Energy
 - Targeted, multi-lateral cooperation on:
 - Seas & Oceans
 - Automated Driving (US, Japan, Korea etc.)
 - Aviation (Russia, US, Japan, Canada, Brazil etc.)
 - Arctic
 - Research Infrastructures: Integrating Activities
- International cooperation policy actions, including extension of the ENRICH network with focus on innovation in India and in Africa

Horizon Europe

The ambitious European research and innovation programme for 2021-2027



to strengthen the EU's scientific and technological bases
(EU: one-third of high-quality science world-wide)



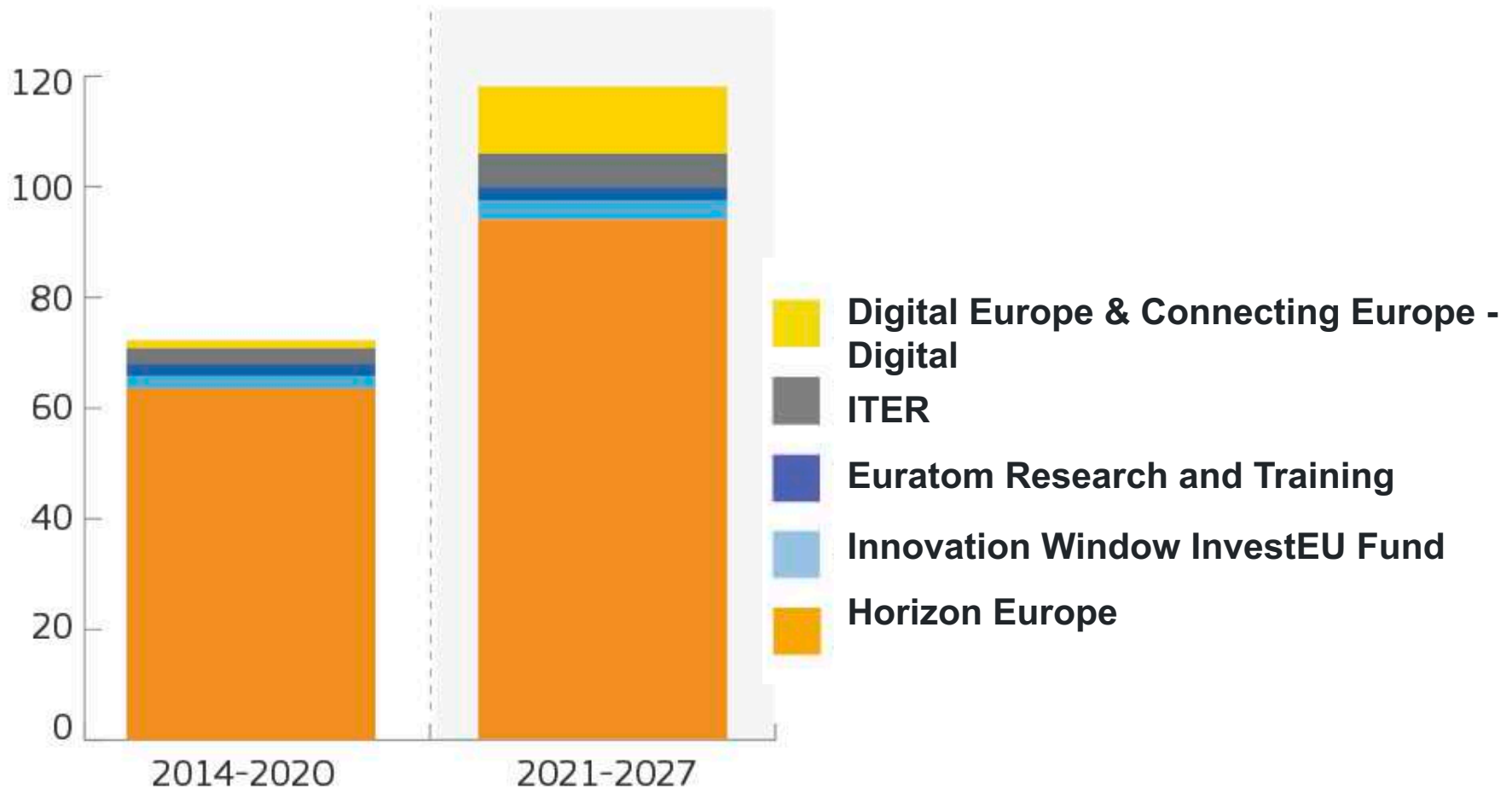
to boost Europe's innovation capacity, competitiveness and jobs (€ 1 EU R&D triggers up to € 11 GDP growth later on)



to deliver on citizens' priorities (such as the 17 SDGs)

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

Investing in the future (MFF proposal)



Compared to the Multiannual Financial Framework 2014-2020 at EU-27 (estimate)

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

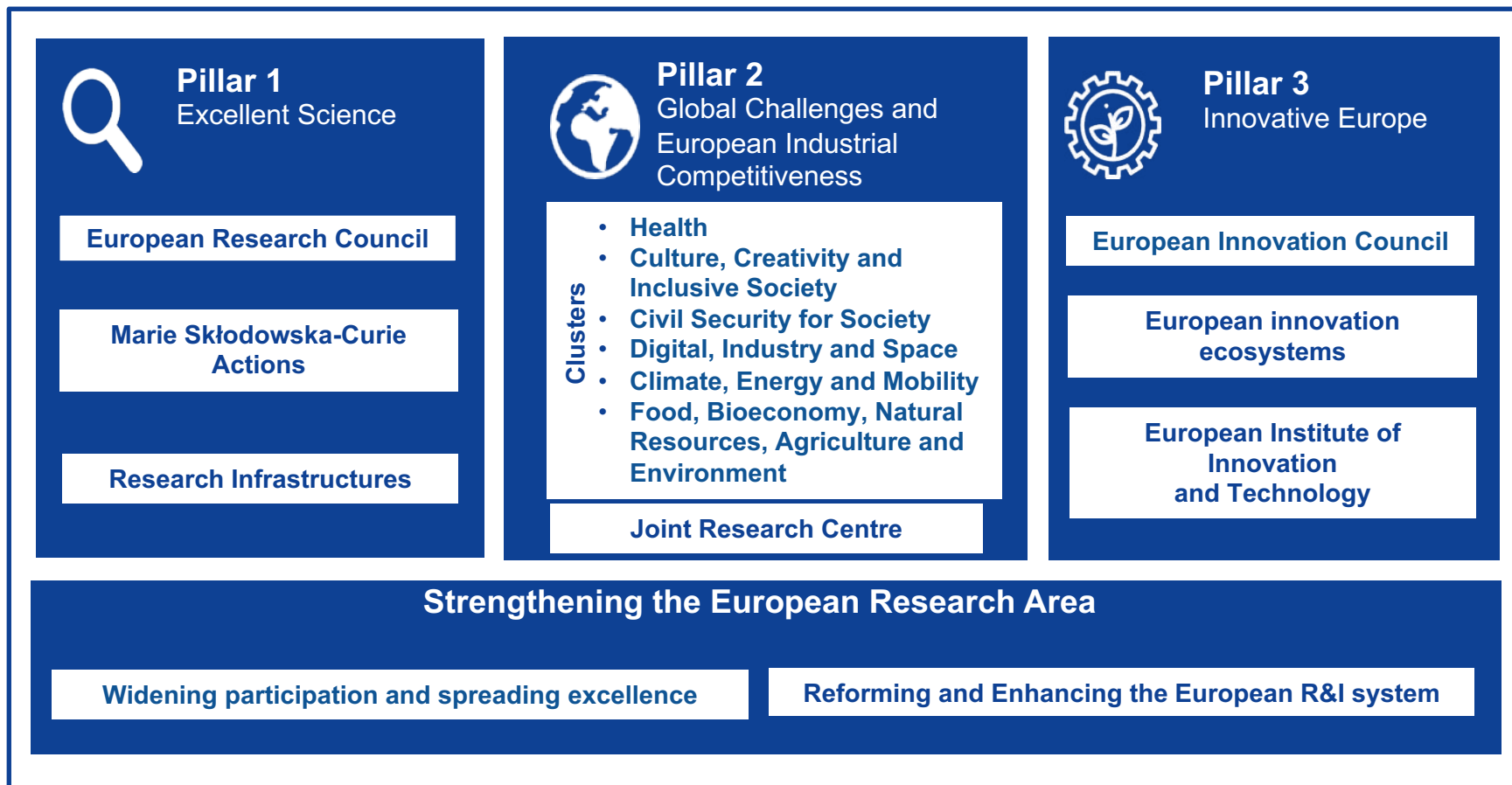
R&I Missions

Extended association possibilities

Open science policy

New approach to Partnerships

Horizon Europe: structure





International cooperation

International Cooperation

Tackling together global societal challenges with the world's best talents and resources

Extended openness to association

- Third countries with good capacity in science, technology and innovation
- Objective of driving economic growth in Europe through innovation

“

**THANK YOU !
QUESTIONS?**

”

Dr. Efthymios Sakellariou

DG R&I

DIR. H-International Cooperation



European
Commission