



EU International Strategy for Research & Innovation

- Global Challenges
- International Science
- Innovation Opportunities

International cooperation in Horizon 2020: A preview

FP7 funding to date...

- 19,000 projects funded (signed contracts)
- 79,000 participations of which 13,691 are SMEs (signed contracts - universities, research organisations, businesses)
- 25.3 billion EU contribution as of 16/02/2012 (signed contracts)
- An estimated 50,000 (Marie Skłodowska-Curie) and 5,000 (ERC) individual researchers' directly funded by the end of FP7





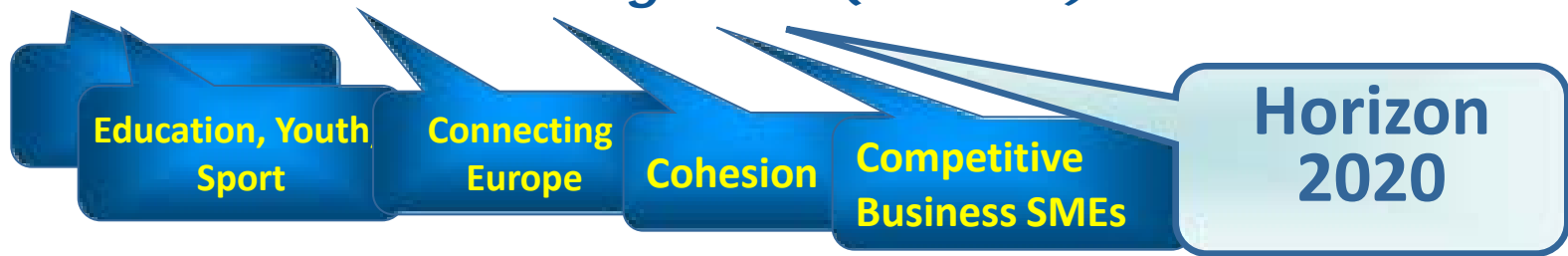
1. Horizon 2020 - General



The Multiannual Financial Framework (MFF) 2014-2020: Commission's proposals 29 June 2011

Key challenge: stabilise the financial and economic system while taking measures to create economic opportunities

1. Smart & inclusive growth (€491bn)



2. Sustainable growth, natural resources (€383bn)

3. Security and citizenship (€18.5bn)

4. Global Europe (€70bn)

5. Administration (€62.6bn)

**Total:
€ 1,025bn**



What is Horizon 2020

- **Commission proposal for a € 80 billion research and innovation funding programme (2014-2020)**
- **A core part of Europe 2020, Innovation Union & European Research Area:**
 - **Responding to the economic crisis** to invest in future jobs and growth
 - **Addressing people's concerns** about their livelihoods, safety and environment
 - **Strengthening the EU's global position** in research, innovation and technology



What's new

- **A single programme** bringing together three separate programmes/initiatives*
- **Coupling research to innovation** – from research to retail, all forms of innovation
- **Focus on societal challenges** facing EU society, e.g. health, clean energy and transport
- **Simplified access**, for all companies, universities, institutes in all EU countries and beyond.

* the 7th Framework Programme for Research & Technological Development (FP7), the innovation aspects of Competitiveness & Innovation Framework Programme (CIP), the EU contribution to the European Institute of Innovation and Technology (EIT).



Three priorities in Horizon 2020:

- 1. Excellent science**
- 2. Industrial leadership**
- 3. Societal challenges**

Horizon 2020 - Priority 1. Excellent science (€ 28 billion)

Why:

- World class science is the foundation of tomorrow's technologies, jobs and well-being
- Europe needs to develop, attract and retain research talent
- Researchers need access to the best infrastructures

European Research Council <i>Frontier research by the best individual teams</i>	13 268
Future and Emerging Technologies <i>Collaborative research to open new fields of innovation</i>	3 100
Marie Curie actions* <i>Opportunities for training and career development</i>	5 752
Research infrastructures (including e-infrastructure) <i>Ensuring access to world-class facilities</i>	2 478



Horizon 2020 - Priority 2. Industrial leadership (€ 20 billion)

Why:

- Strategic investments in key technologies (e.g. advanced manufacturing, micro-electronics) underpin innovation across existing and emerging sectors
- Europe needs to attract more private investment in research and innovation
- Europe needs more innovative SMEs to create growth and jobs

Leadership in enabling and industrial technologies <i>{ICT, nanotechnologies, materials, biotechnology, manufacturing, space}</i>	13 781
Access to risk finance <i>Leveraging private finance and venture capital for research and innovation</i>	3 538
Innovation in SMEs <i>Fostering all forms of innovation in all types of SMEs</i>	619



Horizon 2020 - Priority 3. Societal challenges (€ 36 billion)

Why:

- Concerns of citizens and society/EU policy objectives (climate, environment, energy, transport etc) cannot be achieved without innovation
- Breakthrough solutions come from multi-disciplinary collaborations, including social sciences & humanities
- Promising solutions need to be tested, demonstrated and scaled up

Health, demographic change and wellbeing	8 033
Food security, sustainable agriculture, marine and maritime research & the bioeconomy	4152
Secure, clean and efficient energy*	5 782
Smart, green and integrated transport	6 802
Climate action, resource efficiency and raw materials	3 160
Inclusive, innovative and secure societies	3819



Horizon 2020

Strategic Programme 2014-2016

- **Strategic Programme** is a novelty of Horizon 2020
- Guidance for implementation of first 3 years of Horizon 2020 by **focusing resources on those areas where maximum impact can be achieved**
- **Top priority:** exiting the crisis and tapping into new sources of growth
- **Elements of Strategic Programme:**
 - Focus areas (pooling resources on key areas for future jobs and growth)
 - Leverage and boost engagement of industry (PPPs, dedicated SME instrument, Eurostars)
 - Access to finance
 - Knowledge and skills (Marie Curie, ERC)
 - Enabling technologies
 - Other: research and innovation divide, partnership with MS, INCO



Strategic Programme 2014-2016: focus areas

- Personalising health and care for quality of life
- Sustainable food security
- Blue growth: unlocking the potential of oceans
- Smart cities technologies
- Competitive low-carbon energy
- Resource efficient transport
- Waste: a resource to recycle and reuse
- Water innovation: boosting its value for Europe
- Overcoming the economic, financial, political and social crisis: new strategies and governance structures
- Disaster-resilience: safeguarding society
- Digital security



Work programme preparation

- Work Programme development guided by **Strategic Programme**
- Most likely: **one focus area = one dedicated call**, complemented by other calls to cover parts of Horizon 2020 which are not in focus areas
- **Two-year** work programmes
- First draft work programmes by **summer 2013**



2. INCO in Horizon 2020: General



International cooperation (i.e. cooperation with 'third countries') – summary (1)

- *International cooperation is crucial to address many Horizon 2020 objectives.*
- *Principle of general openness: the programme will remain to be the most open funding programme in the world.*
- *Horizon 2020 shall be open to the association of: acceding countries, EU candidate countries and potential candidates; countries or territories associated to FP7; and selected third countries that fulfil all relevant criteria (good STI capacity, good track record of participation in EU R&I programmes, close economic & geographical links to EU, are EFTA members or are countries / territories covered by European Neighbourhood Instrument).*



International cooperation (i.e. cooperation with 'third countries') – summary (2)

- *Compared to previous FPs, revision to list of countries which receive 'automatic funding': **BRIC + Mexico will no longer receive automatic funding** from EU for their participation in H2020*
- *Proceeding on multi-annual plans for international cooperation by each societal challenge and enabling technology, **development of multi-annual roadmaps for cooperation with each key partner country or region.***
- *In addition to mainstreaming 'international cooperation' in key enabling technologies and societal challenges, **dedicated 'horizontal international cooperation measures'** in the 'Inclusive, innovative and secure societies' challenge).*



International cooperation - overall approach

- **General opening:**
 - Horizon 2020 open to participation from across the world
 - Revision to the list of countries which receive automatic funding: BRIC + Mexico will no longer receive automatic funding

 - **Mainstreaming of INCO in challenges/technologies through targeted actions:**
 - Common interest and mutual benefit
 - S&T capabilities of partners and market opportunities
 - Expected impact
 - Taking into account: reciprocal access, coordination with MS, possible deficiencies in third country IPR systems

 - Supported by **horizontal international cooperation activities** (in H2020 Challenge 6 (IISS): follow-up to FP7 Capacities INCO programme)
- ➔ More detail in Commission's INCO strategy (see later)



Association to Horizon 2020

For the first time, Horizon 2020 provides **criteria for association** in Article 7 of Horizon 2020 Regulation. Eligible for association are:

- Countries acceding to the EU, EU candidate countries and potential candidates
- Selected third countries that fulfil all relevant criteria:
 - Good capacity in science, technology and innovation;
 - Good track record of participating in EU research and innovation programmes;
 - Close economic and geographic links with the European Union;
 - EFTA members, countries or territories listed in the European Neighbourhood Instrument;
 - Fair and equitable treatment of IPR.
- Countries or territories associated to FP7



3. Implementation of the EU strategy for international cooperation in research & innovation



General

- Communication **adopted** on 14 September 2012 (COM(2012) 497)
- **Inter-institutional** debate:
 - Commissioner's presentation to EP ITRE committee on 09/10/2012
 - Presentation and orientation debate at Competitiveness Council 11/12/2012
 - Committees of Regions and EESC preparing opinions
 - Council Conclusions expected in May 2013
- **Implementation** of strategy – close alignment with Horizon 2020:
 - Mainstreaming through multi-annual plans for international cooperation by each challenge/technology (resulting in roadmaps for cooperation with each key partner)
 - Horizontal international cooperation activities as part of Challenge 6 ('IISS')
 - Complementing: common principles, information gathering, partnership with Member States, stronger governance



Roadmaps: thematic targeting first

- Starting point: **prioritisation of international cooperation topics** within each Horizon 2020 societal challenge and enabling technology
 - Guiding questions: Why are we cooperating on a certain topic? Why is this in the EU interest?
 - Identify areas based on analysis of a **set of criteria** of the EU and potential partners:
 - research and innovation excellence
 - framework conditions / access to markets
 - contribution to international commitments of EU
 - willingness to engage in cooperation and lessons learned from the past
 - Use of **objective information** to feed the analysis
- => Development of **multi-annual plans** for international cooperation by each societal challenge and enabling technology

Differentiation by countries/regions

- **Three groupings**
 - ✓ Enlargement and neighbourhood countries, and EFTA
 - ✓ Industrialised countries and emerging economies
 - ✓ Developing countries
- Provides **additional focus** to activities: different activities with different country groupings
 - ✓ e.g. cutting edge research/competitiveness with industrialised countries
 - ✓ e.g. technology transfer/adaptation with developing countries
- Countries can belong to different groupings depending on topic
- ➔ Based on the thematically based multi-annual plans for international cooperation by each societal challenge and enabling technology, **development of multi-annual roadmaps** for cooperation with each key partner country or region.



Instruments in Horizon 2020

- **Collaborative projects** (third country participation may be required and/or be taken into account in evaluation)
- **Networking** between existing projects
- **Joint initiatives** by the EU and third countries:
 - bilateral coordinated/joint calls
 - multi-lateral initiatives
 - EU financial contribution to third country / international (research-funding) organisations
 - ERA-Net / Art185
- also in support of programme-level cooperation



Horizontal international cooperation activities

- **Horizontal international cooperation activities** (Challenge 6 ('IISS')):
 - bilateral, multi-lateral and bi-regional policy dialogues
 - networking and twinning activities
 - coordination of EU and national cooperation policies and programmes, as well as joint actions of EU Member States / FP Associated Countries with third countries
 - Strengthening and consolidation European 'presence' in third countries
- Large degree of **continuity** with respect to FP7 Capacities INCO programme
- But at the same time:
 - More **selective** by focusing on key partners
 - **Reducing number of instruments used**
 - Stronger **innovation dimension**
 - Further developing actions to strengthen **European presence** and **information gathering**



Other aspects

- With EU Member States, working towards **common principles** for engaging in international STI cooperation
- Strengthening **partnership with EU Member States** ('Strategic Forum for International S&T Cooperation')
- Improved **information gathering**
- Use of 'Year of Science': **EU-Russia Year of Science 2014**



Next steps in adoption of H2020: inter-institutional debate

- Commission published H2020 proposals on 30/11/2011
- Council agreed 'Partial General Approaches' on Regulation in May 2012; on the Rules in October 2012; and the Specific Programme in December 2012
- The ITRE Committee of Parliament proposed amendments in November 2012
- 'Trilogue' process underway (Commission, Council, EP)
- The budgets for Horizon 2020 will be finalised following agreement by the European Council on the Multi-Annual Financial Framework (MFF) – EP needs to give consent
- Final legislative acts expected at end of the year 2013
- First H2020 calls: expected mid-December 2013



**Thank you for your
attention!**

Find out more:

www.ec.europa.eu/research/horizon2020