



Horizon 2020

*The EU Framework Programme for
Research and Innovation 2014-2020*

The Multiannual Financial Framework 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 euro 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 Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)



Three priorities:

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



Priority 1. Excellent science

Why:

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



Proposed funding (million euro, 2014-2020)

<i>European Research Council</i> Frontier research by the best individual teams	<i>13 268</i>
<i>Future and Emerging Technologies</i> Collaborative research to open new fields of innovation	<i>3 100</i>
<i>Marie Curie actions</i> Opportunities for training and career development	<i>5 572</i>
<i>Research infrastructures (including e-infrastructure)</i> Ensuring access to world-class facilities	<i>2 478</i>



Priority 2. Industrial leadership

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

Proposed funding (million euro, 2014-20)

<p><i>Leadership in enabling and industrial technologies</i> (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)</p>	<p><i>13 781</i></p>
<p><i>Access to risk finance</i> Leveraging private finance and venture capital for research and innovation</p>	<p><i>3 538</i></p>
<p><i>Innovation in SMEs</i> Fostering all forms of innovation in all types of SMEs</p>	<p><i>619</i> complemented by <i>6 829</i> (expected 15% of societal challenges + LEIT) and <i>'Access to risk finance'</i> <i>with strong SME focus</i></p>

Priority 3. Societal challenges

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

Proposed funding (million euro, 2014-2020)

<i>Health, demographic change and wellbeing</i>	<i>8 033</i>
<i>Food security, sustainable agriculture, marine and maritime research & the bioeconomy</i>	<i>4 152</i>
<i>Secure, clean and efficient energy*</i>	<i>5 782</i>
<i>Smart, green and integrated transport</i>	<i>6 802</i>
<i>Climate action, resource efficiency and raw materials</i>	<i>3 160</i>
<i>Inclusive, innovative and secure societies</i>	<i>3 819</i>

***Additional €1 788m for nuclear safety and security from the Euratom Treaty activities (2014-2018). Does not include ITER.**



Horizon 2020 and partnering

Public private partnerships:

- Trough Joint Technology Initiatives or other formal structures (Art. 187)
- Trough contractual agreements, which provide inputs for work programmes
- Only when criteria met, e.g. clear commitments from private partners

Public public partnerships:

- Trough « ERA-Nets » for topping up individual calls/actions (replacing current ERA-Net, ERA-Net Plus, Inco-Net, Inno-net)
- Trough participation in joint programmes between Member States (Art. 185)
- Supporting agendas of Joint Programming Initiatives when in line with Horizon 2020
- Only when criteria met, e.g. financial commitments of participating countries

European Innovation Partnerships:

- Not funding instruments, but for coordination with broader policies and programmes

Role of the EIT and JRC in Horizon 2020

<i>European Institute Technology (EIT)</i> Combining research, innovation & training in knowledge and Innovation Communities	1 360+ 1 440*
<i>Joint Research Centre (JRC)**</i> Providing a robust, evidence base for EU policies	1 962

****Second tranche pro rata from LEIT and Societal challenges (subject to review)***

*****Additional €656 m for the JRC to be funded from the Euratom Treaty activities***

Simplification: summary

- **Single set of** simpler and more coherent participation **rules**
- New **balance between trust and control**
- Moving from several **funding rates** for different beneficiaries and activities to just two
- Replacing the four methods to calculate overhead or «indirect costs» with a **single flat rate**
- Major simplification under the **forthcoming financial regulation**
- **Successful applicants to get working more quickly:** reduction of average time to grant by 100 days (current average of around 350 days under FP7)



Contributing to the European Research Area (ERA)

- ERA framework proposal in 2012 to create a single market for knowledge research and innovation
- Complemented by Horizon 2020:
 - Boosting support to ERA priorities – mobility, infrastructures, knowledge transfer, policy learning
 - Stronger partnerships with Member States and private sector to invest more efficiently
 - Taking account of gender, ethical issues, researcher careers and open access to results



Strong participation by SMEs

- **Integrated approach** - around 15% of the total budget for societal challenges and LEITs to go to SMEs.
- **Simplification** of particular benefit to SMEs (e.g. single entry point).
- A **new SME instrument**, building on the SBIR model, will be used across all societal challenges as well as for the LEITs
- A dedicated activity for research-intensive SMEs in '**Innovation in SMEs**'.
- '**Access to risk finance**' will have a strong SME focus (debt and equity facility)



Widening participation

- **Principle of excellence:** continue to allocate funding on the basis of competitive calls, selecting only the best projects.
- **Clear division of labour** between cohesion policy and Horizon 2020.
 - Cohesion policy: support for regions in building up their research and innovation capacity.
 - Horizon 2020: widen participation, better coordination between the two Union funding programmes, support policy learning reforms.
- **Accompanying measures in Horizon 2020** to ensure that excellence prevails wherever it exists, including: twinning, ERA chairs, support for access to international networks, development of smart specialisation strategies.



International cooperation

- **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, candidate countries and potential candidates and selected third countries that fulfil the relevant criteria (capacity, track record, close economic and geographical links to the Union, etc.).
- Targeted actions to be implemented taking a **strategic approach to international cooperation** (dedicated measures in the 'Inclusive, innovative and secure societies' challenge).



Next steps

- Ongoing:** Parliament and Council negotiations on the basis of the Commission proposals
- Ongoing:** Parliament and Council negotiations on EU budget 2014-2020 (including overall budget for Horizon 2020)
- Mid 2012:** Final calls under 7th Framework Programme for research to bridge gap towards Horizon 2020
- Mid 2013:** Adoption of legislative acts by Parliament and Council on Horizon 2020
- 1/1/2014:** **Horizon 2020 starts, launch of first calls**



Thank you for your attention!

Find out more:

www.ec.europa.eu/research/horizon2020

*Research and
Innovation*