Horizon 2020
The EU Framework Programme for Research and Innovation
2014-2020
The Multiannual Financial Framework
2014-2020: Commission’s proposals of 29 June 2011

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

- Smart & inclusive growth (€491bn)
  - Education, Youth, Sport
  - Connecting Europe
  - Cohesion
  - Competitive Business SMEs
  - Horizon 2020

- Sustainable growth, natural resources (€383bn)
- Security and citizenship (€18.5bn)
- Global Europe (€70bn)
- Administration (€62.6bn)

**TOTAL:** €1.025bn
Investment in R&D is part of the solution to exit from the economic crises
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
Active involvement of stakeholders

- **EU Presidencies**: **Sweden** (societal challenges-based approach), **Spain** (integration of research and innovation), **Hungary** (FP7 interim evaluation), **Poland** (widening participation), **European Council conclusions** from 4.2.2011 (Common Framework to bring together all EU research and innovation funding)

- **European Parliament** reports: Merkies (Innovation Union), Audy (FP7 evaluation), Matias (Horizon 2020) and Carvalho (simplification)

- Overwhelming response to the public consultation on Horizon 2020 (more than 2000 contributions)

- **Survey on administrative costs for participants in FP7**

- **25 workshops on the content** of Horizon 2020
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)

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

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

<table>
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<th>Category</th>
<th>Funding (million euro)</th>
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<tbody>
<tr>
<td>Health, demographic change and wellbeing</td>
<td>8 033</td>
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<tr>
<td>Food security, sustainable agriculture, marine and maritime research &amp; the bioeconomy</td>
<td>4 152</td>
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<tr>
<td>Secure, clean and efficient energy*</td>
<td>5 782</td>
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<tr>
<td>Smart, green and integrated transport</td>
<td>6 802</td>
</tr>
<tr>
<td>Climate action, resource efficiency and raw materials</td>
<td>3 160</td>
</tr>
<tr>
<td>Inclusive, innovative and secure societies</td>
<td>3 819</td>
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*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:

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

Public public partnerships:

- Through « ERA-Nets » for topping up individual calls/actions (replacing current ERA-Net, ERA-Net Plus, Inco-Net, Inno-net)
- Through 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

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

*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**
Euratom Programme 2014-2018

Budget: TOTAL: € 1665 million, including Fission €336m; Fusion €673m; JRC €656m.

Programme for 5 years, in line with the Euratom Treaty (art.7)

What is new?
- Stronger focus on nuclear safety and nuclear training
- A single Euratom programme bringing together three separate decisions
- The same rules for participation as in the Horizon 2020 - simplified access
- Programme contributes to the implementation of priorities of the 'Horizon 2020'
- Fusion research programme will be restructured

Funding for ITER outside MFF in a separate supplementary programme: € 2573 million for 2014-2018
Simplification: Rules for Participation

1. A single set of rules
   - Adapted for the whole research and innovation cycle
   - Covering all research programmes and funding bodies
   - Aligned to the Financial Regulation, coherent with other new EU Programmes

2. One project – one funding rate
   - Maximum of 100% of the total eligible costs (except for actions close to market, where a 70% maximum will apply)
   - Indirect eligible costs: a flat rate of 20% of direct eligible costs

3. Simple evaluation criteria
   - Excellence – Impact – Implementation (Excellence only, for the ERC)

4. New forms of funding aimed at innovation: pre-commercial procurement, inducement prizes, dedicated loan and equity instruments

5. International participation: facilitated but better protecting EU interests
Simplification: Rules for Participation

6. Simpler rules for grants: broader acceptance of participants accounting practices for direct costs, flat rate for indirect costs, no time-sheets for personnel working full time on a project, possibility of output-based grants

7. Fewer, better targeted controls and audits
   - Lowest possible level of requirements for submission of audit certificates without undermining sound financial management
   - Audit strategy focused on risk and fraud prevention

8. Improved rules on intellectual property
   - Balance between legal security and flexibility
   - Tailor-made IPR provisions for new forms of funding
   - A new emphasis on open access to research publications

Beyond the Rules: further simplified provisions in the Grant Agreement and implementing procedures to facilitate access to Horizon 2020 (e.g. common IT platform).
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)
Links to COSME

*Horizon 2020 and COSME are complementary programmes to generate growth and jobs*

**Different focus:**

- Horizon 2020 = innovation driven growth
- COSME = support to create favourable business environment and competitiveness

**Closely coordinated, for instance:**

- Integrated financial instruments (debt and equity), with facilities in both programmes serving complementary objectives
- Enterprise Europe Network set up under COSME, but support to SMEs for EU funding
Socio-economic sciences and humanities

- **Integrated approach**: SSH included as an integral part of the activities, working beyond 'silos' (e.g. understanding the determinants of health and optimising the effectiveness of healthcare systems).

- The *Inclusive, Innovative and Secure Societies' challenge*: issues such as smart and sustainable growth, social transformations, social innovation and creativity, the position of Europe as a global actor as well as the social dimension of a secure society (*SSH have the tools to contribute to addressing security challenges, enhancing the societal dimension of security policy and research*).

- **Bottom-up funding**: ERC, MCA, Research Infrastructures.
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