



HORIZON 2020

The New EU
Framework Programme for
Research and Innovation

2014-2020

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HORIZON 2020



The context: Europe 2020 strategy

Objectives of smart, sustainable and inclusive growth

*Headline targets, including **3% of GDP** invested in R&D*

*Includes the **Innovation Union Flagship initiative***

- **A strategic and integrated approach to research and innovation**
- **Putting in place the key conditions to make Europe attractive for research and innovation**
- **Focus on major challenges and aiming at competitiveness and jobs**



What is Horizon 2020

- **European Commission ~€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 compared to FP7

- **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





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**



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 small and medium-sized enterprises (SMEs) to create growth and jobs**



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**



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Total indicative budget: 77.0 billion €*

Excellent science

- *European Research Council*
- *Future and Emerging Technologies*
- *Marie Curie actions*
- *Research infrastructures*

Indicative Budget:
24.4 billion €*

Industrial leadership

- **Leadership in enabling and industrial technologies**
- **Access to risk finance**
- **Innovation in SMEs**

Indicative Budget:
17.0 billion €*

Societal challenges

- *Health, demographic change and wellbeing*
- *Food security, sustainable agriculture, marine and maritime research and the bioeconomy*
- *Secure, clean and efficient energy*
- *Smart, green and integrated transport*
- *Climate action, resource efficiency and raw materials*
- *Inclusive, innovative and reflective societies*
- *Secure societies*

Indicative Budget:
29.7 billion €*

* 2014-20, actual budget (indicative)
Includes 5.9 billion € for "widening participation",
"science with and for society", JRC and EIT
– not shown in three priorities above



Industrial Leadership (in H2020)

- *Activities primarily developed through relevant **industrial research agendas**, roadmaps and value chains (ETPs, PPPs)*
- *Contractual **Public-Private Partnerships** (cPPPs) will be used extensively for the implementation and deployment of the KETs*
- *They will **allow industry to directly participate** in the definition and implementation of **research and innovation priorities***
- *Involvement of **industrial participants and SMEs** to maximise expected impact → key aspect of proposal evaluation*
- *Funded projects will be **outcome oriented**, developing key technology building blocks and bringing them closer to the market (e.g. pilots and demonstrators)*

Industrial Leadership

- To be achieved through development of European Key Enabling Technologies (KETs) and support to industry
- Strong focus on the contribution of Key Enabling Technologies to societal challenges
 - Mobility
 - Healthy aging
 - Energy
 - Environment
 - etc.
- Emphasis on R&D and innovation with strong industrial dimension





Mastering and industrial deployment of Key Enabling Technologies (KETs)

What are KETs?

- Six strategic technologies
- Driving competitiveness and growth opportunities
- Contributions to solving societal challenges
- Knowledge- and Capital-intensive
- Cut across many sectors

- **Nanotechnologies**
- **Advanced Materials**
- **Micro- and nano-electronics**
- **Photonics**
- **Biotechnology**
- **Advanced Manufacturing**

European KET Strategy:

- **EC Communications**
(2009)512 & (2012)341
- **KET High-level Group**

Horizon 2020



"As a result it is expected that at least 60% of the overall Horizon 2020 budget should be related to sustainable development.

It is also expected that climate-related expenditure should exceed 35% of the budget, including mutually compatible measures improving resource efficiency."

COM(2011) 810 final

Proposal for a **REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down the rules for the participation and dissemination in 'Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)**

MAIN CALL PRIORITIES Horizon 2020

- ❑ Focus on technology development with industrial deployment of Key Enabling Technologies (KETs)
- ❑ Based on strategic research agendas, roadmaps and value chains (with applications in several sectors and societal challenges)
- ❑ Support for further innovation, through e.g. project clusters and links to other funding (e.g. smart specialisation)
- ❑ Contributions to objectives of selected focus areas, *within LEIT calls - with enabling character: personalising health care, decarbonising energy, waste as a resource*



European
Commission



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**Thank you
for your attention!**

Find out more:
www.ec.europa.eu/horizon2020

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