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

- Excellent science
- Industrial leadership
- 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
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
Horizon 2020
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 participaton", "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:
- KET High-level Group
"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."

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
Thank you for your attention!

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