



Horizon 2020

*Climate Action,
Resource Efficiency and
Raw Materials Challenge*

2014-2020

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HORIZON 2020

A graphic for Horizon 2020. It features a globe of the Earth in the center, with a bright light source behind it creating a lens flare effect. The globe is positioned on a horizon line that curves across the bottom of the frame. The background is a deep blue gradient with some light rays and a subtle pattern of dots.

The future: 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)

Horizon 2020 priorities

Three Priorities ("Pillars")

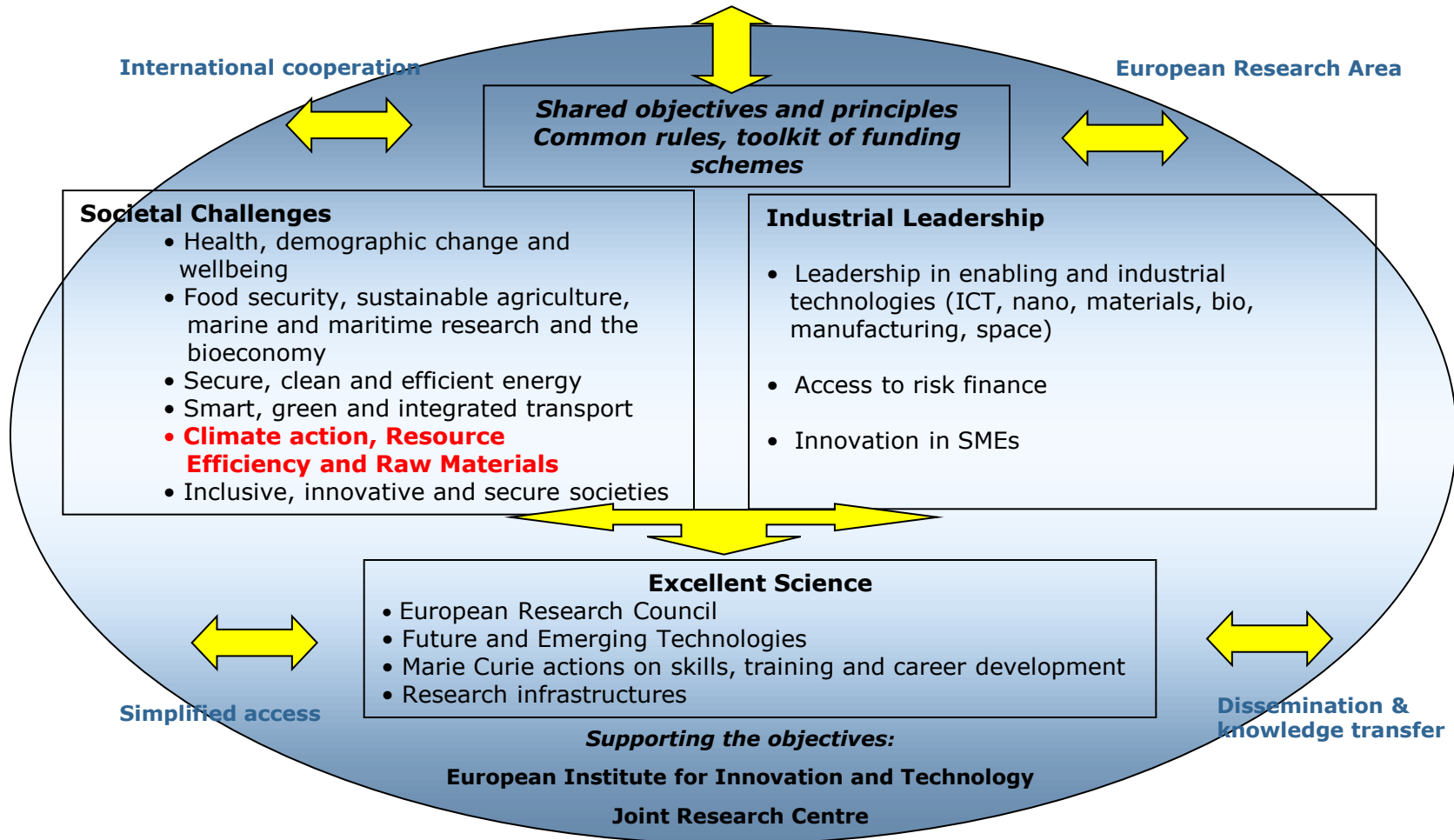
1. Excellent Science

2. Industrial Leadership

3. Societal Challenges

Horizon 2020 proposal

Europe 2020 priorities



International cooperation

European Research Area

**Shared objectives and principles
Common rules, toolkit of funding
schemes**

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 secure societies

Industrial Leadership

- Leadership in enabling and industrial technologies (ICT, nano, materials, bio, manufacturing, space)
- Access to risk finance
- Innovation in SMEs

Excellent Science

- European Research Council
- Future and Emerging Technologies
- Marie Curie actions on skills, training and career development
- Research infrastructures

Simplified access

Dissemination &
knowledge transfer

Supporting the objectives:

European Institute for Innovation and Technology

Joint Research Centre

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 proposal

Societal Challenges

- Health, demographic change and well-being
- 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 (proposed budget €3 160 million)**
- Inclusive, innovative and secure societies

Climate action, resource efficiency and raw materials

Policy drivers

- *Europe 2020 strategy*
- *Innovation Union*
- *Resource-Efficient Europe and corresponding Roadmap*
- *Roadmap for moving to a competitive low carbon economy in 2050*
- *Adapting to climate change: Towards a European framework for action*
- *The Raw Materials Initiative*
- *EU's Sustainable Development Strategy*

Climate action, resource efficiency and raw materials

- **Objective:** achieve a resource efficient and climate change resilient economy and a sustainable supply of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources
- **Activities:** contributing to increasing European competitiveness and improving well-being, whilst assuring environmental integrity and sustainability, keeping average global warming below 2°C and enabling ecosystems and society to adapt to climate change

Climate action, resource efficiency and raw materials

Broad lines of the activities

1. Fighting against and adapting to climate change
2. Sustainably managing natural resources and ecosystems
3. Ensuring the sustainable supply of non-energy and non-agricultural raw materials
4. Enabling the transition towards a green economy through eco-innovation
5. Developing comprehensive and sustained global environmental observation and information systems

1. Fighting and adapting to climate change

- **Improve the understanding of climate change and the provision of reliable climate projections**
- **Assess impacts, vulnerabilities and develop innovative cost-effective adaptation and risk prevention measures:**
- **Support mitigation policies**

2. Sustainably managing natural resources and ecosystems

- **Further our understanding of the functioning of ecosystems, their interactions with social systems and their role in sustaining the economy and human well-being**
- **Provide knowledge and tools for effective decision making and public engagement**

3. Ensuring the sustainable supply of non-energy and non-agricultural raw materials

- **Improve the knowledge base on the availability of raw materials**
- **Promote the sustainable supply and use of raw materials, covering exploration, extraction, processing, recycling and recovery**
- **Find alternatives for critical raw materials**
- **Improve societal awareness and skills on raw materials**

4. Enabling the transition towards a green economy through eco-innovation

- **Strengthen eco-innovative technologies, processes, services and products and boost their market uptake**
- **Support innovative policies and societal changes**
- **Measure and assess progress towards a green economy**
- **Foster resource efficiency through digital systems**

5. Developing comprehensive and sustained global environmental observation and information systems

- **Assess and predict the condition, status and trends of the climate, natural resources including raw materials, ecosystems and ecosystem services**
- **Evaluate low-carbon and climate mitigation and adaptation policies and options across all sectors of the economy**

Horizon 2020 proposal: main environment-related novelties

- **Integrated, systemic and challenge-driven approach**
 - **Inclusion of raw materials**
 - **Environment and health now under "Health" Challenge**
 - **Increased synergy with stakeholders**
 - **More: transformation towards a green economy and society**
 - **More: cco-innovation, incl. social innovation**
 - **More: socio-economic and forward-looking activities**
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- ☐ ***Mainstreaming of climate and sustainable development objectives across Horizon 2020***

Horizon 2020 proposal

***NEW:* Mainstreaming of climate and sustainable development objectives**

- Climate action and resource efficiency for achieving sustainable development
- Specific objectives to be complemented through the other specific objectives of Horizon 2020
- At least **60%** of the overall Horizon 2020 budget should be related to **sustainable development**
- **Climate-related** expenditure should exceed **35%** of the overall Horizon 2020 budget

Horizon 2020 Negotiations (I)

- 30 November 2011* – *Commission proposals*
- 31 May 2012* – *Council partial general approach on FP*
- 11 December 2012* – *Council partial general approach on SP*
- end 2012-early 2013* – *Negotiations with EP & Council (Trilogue)*
- during 2013* – *EP and Council decisions*
- 1st semester 2013* – *Start preparation of 1st Work Programme*
- end 2013/start 2014* – *Publication of 1st calls*

Horizon 2020 Negotiations (II)

Council: *overall positive*

Main amendments in PGA of May 2012 (FP) and December 2013 (SP) put more emphasis on

- **environmental protection**
- **cultural heritage**
- **water management**

EP: *overall positive*

ITRE Committee vote of 28 Nov. 2012, put more emphasis on

- **cultural heritage**
- **water management**
- **marine and maritime research**

Plenary vote only once MFF decided (2013)

Links

Environmental Research & Innovation on EUROPA :
http://ec.europa.eu/research/environment/index_en.cfm

FP7 Success Stories:
www.ec.europa.eu/research/infocentre/success_stories_en.cfm

Horizon 2020:
www.ec.europa.eu/research/horizon2020

Community Research and Development Information Service CORDIS:
http://www.cordis.europa.eu/home_en.html



Thank you for your attention!

Find out more:

www.ec.europa.eu/research/horizon2020