



# HORIZON 2020

**The New EU  
Framework Programme for  
Research and Innovation**

**2014-2020**

Speaker's name



# The Multiannual Financial Framework 2014-2020: European Council conclusions, 8 February 2013

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

## 1. Smart & inclusive growth (€451 billion)



## 2. Sustainable growth, natural resources (€373 billion)

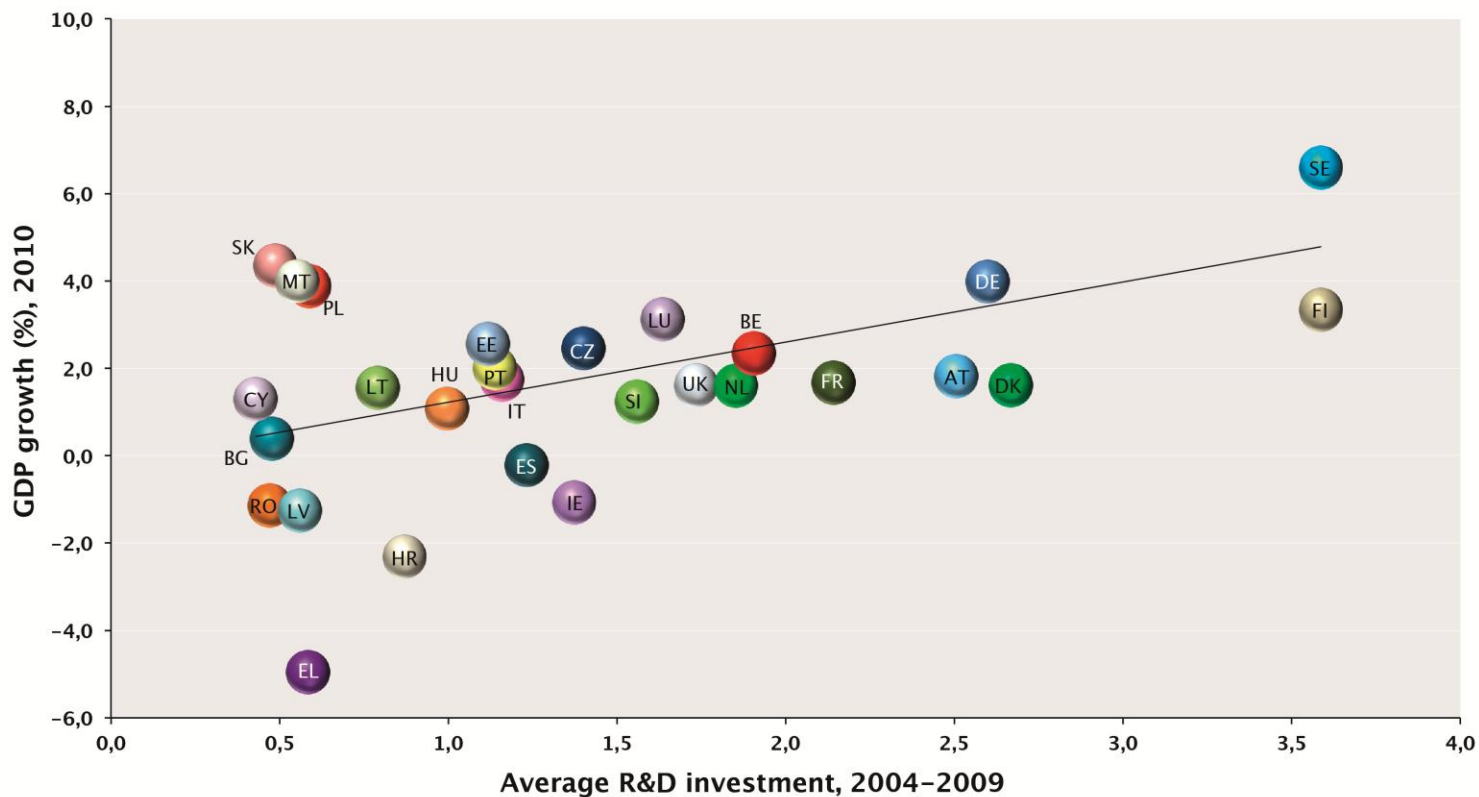
## 3. Security and citizenship (€16 billion)

## 4. Global Europe (€58 billion)

## 5. Administration (€61.6 billion)



# Investment in R&D is part of the solution to exit from the economic crises



Source: DG Research and Innovation - Economic Analysis Unit  
 Data: Eurostat

Notes. (1) Greece: average R&D intensity refers to 2004-2007.  
 (2) Denmark, Portugal, Slovenia, Sweden: Break in series between 2004-2009.

# What is Horizon 2020

- **Initial Commission proposal for a €80 billion research and innovation funding programme (2014-2020); now just over €70 billion (79 billion in current prices including inflation)**
- **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 7<sup>th</sup> 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**



## Proposed funding (€ million, 2014-2020)\*

<b><i>European Research Council (ERC)</i></b> Frontier research by the best individual teams	<b>13 095</b>
<b><i>Future and Emerging Technologies</i></b> Collaborative research to open new fields of innovation	<b>2 696</b>
<b><i>Marie Skłodowska-Curie actions (MSCA)</i></b> Opportunities for training and career development	<b>6 162</b>
<b><i>Research infrastructures (including e-infrastructure)</i></b> Ensuring access to world-class facilities	<b>2 488</b>

\* All funding figures in this presentation are subject to the pending Multiannual Financial Framework Regulation by the EP and the Council

## **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**

## Proposed funding (€ million, 2014-2020)

<b><i>Leadership in enabling and industrial technologies (LEITs)</i></b> (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)	<b>13 557</b>
<b><i>Access to risk finance</i></b> Leveraging private finance and venture capital for research and innovation	<b>2 842</b>
<b><i>Innovation in SMEs</i></b> Fostering all forms of innovation in all types of SMEs	<b>616</b> + complemented by expected 20% of budget of societal challenges + LEITs and <b>'Access to risk finance'</b> 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, 2014-2020)

<b>Health, demographic change and wellbeing</b>	<b>7 472</b>
<b>Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the Bioeconomy</b>	<b>3 851</b>
<b>Secure, clean and efficient energy *</b>	<b>5 931</b>
<b>Smart, green and integrated transport</b>	<b>6 339</b>
<b>Climate action, environment, resource efficiency and raw materials</b>	<b>3 081</b>
<b>Inclusive, innovative and reflective societies</b>	<b>1 310</b>
<b>Secure societies</b>	<b>1 695</b>
<i>Science with and for society</i>	462
<i>Spreading excellence and widening participation</i>	816

\* Additional funding for nuclear safety and security from the Euratom Treaty activities (2014-2018)

# 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

# Innovation Investment Package

## €22 billion Innovation Investment Package

### Joint Technology Initiatives (under Article 187)

- Innovative Medicines Initiative 2
- Clean Sky (Aeronautics) 2
- Fuel Cell and Hydrogen 2
- Bio-based Industries
- Electronic components and systems

### Joint programmes (under Article 185)

- European and Developing Countries Clinical Trials Partnership (EDCTP) 2
- European Metrology Research Programme 2
- Eurostars (for SMEs) 2
- Active and Assisted Living 2

# Benefits of Partnerships

## Joint Technology Initiatives (with industry)

- Industry driven research agenda
- Fixed budget for 7 years to leverage more industry investment
- Sector structuring to achieve impact
- Coverage of longer value chains and interrelated sectors
- Higher level of SME participation (30%) than in FP7
- Links and synergies with Structural and Investment Funds

## Joint programmes (with Member States)

- Link to national programmes
- Leverage effect
- Industry involvement
- Cross-border collaboration



# Role of the EIT and JRC in Horizon 2020

	<i>Proposed funding (€ million, 2014-2020)</i>
<b><i>European Institute of Innovation &amp; Technology (EIT)</i></b> Combining research, innovation & training in knowledge and Innovation Communities	<b>2 711</b>
<b><i>Joint Research Centre (JRC)*</i></b> Providing a robust, evidence base for EU policies	<b>1 903</b>

\* Additional funding for the JRC for Euratom Treaty activities

# 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 innovation actions, where a 70% maximum will apply for profit making entities)
- ✓ Indirect eligible costs: a flat rate of 25% 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:** time-to-grant of 8 months; exceptions for the ERC and in duly justified cases
- **No negotiation of the grant agreement in future, what is submitted will be evaluated. Potential participants must now be aware of this.**

# 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 20% 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** 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)

# Socio-economic sciences and humanities (SSH)

- **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 and reflective 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, MSCA, 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 international partner 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)

# EURATOM

**Budget:** €1603 million (2014-2018) to support Fusion and Fission indirect actions and nuclear direct actions of the JRC

**Duration of the Programme** - 5 years, in line with the Euratom Treaty

## What is new?

- Euratom Programme complements Horizon 2020 and addresses the same key challenges;
- The same rules for participation apply to Horizon 2020 and Euratom Programme;
- A streamlined fusion research programme focusing on the implementation of the fusion roadmap;
- A single regulation instead of four separate decisions during FP7

# Next steps

- **Formal political decisions on Horizon 2020** *Autumn 2013*
- **Formal political decision on Multi-annual financial framework (2014-2020)** *Autumn 2013*
- **Adoption of work programme and publication of first calls for proposals** *11 December 2013*
- **Horizon 2020 national launch events** *October to January 2014*



# HORIZON 2020

**Thank you  
for your attention!**

**Find out more:**  
[www.ec.europa.eu/horizon2020](http://www.ec.europa.eu/horizon2020)