



Horizon 2020

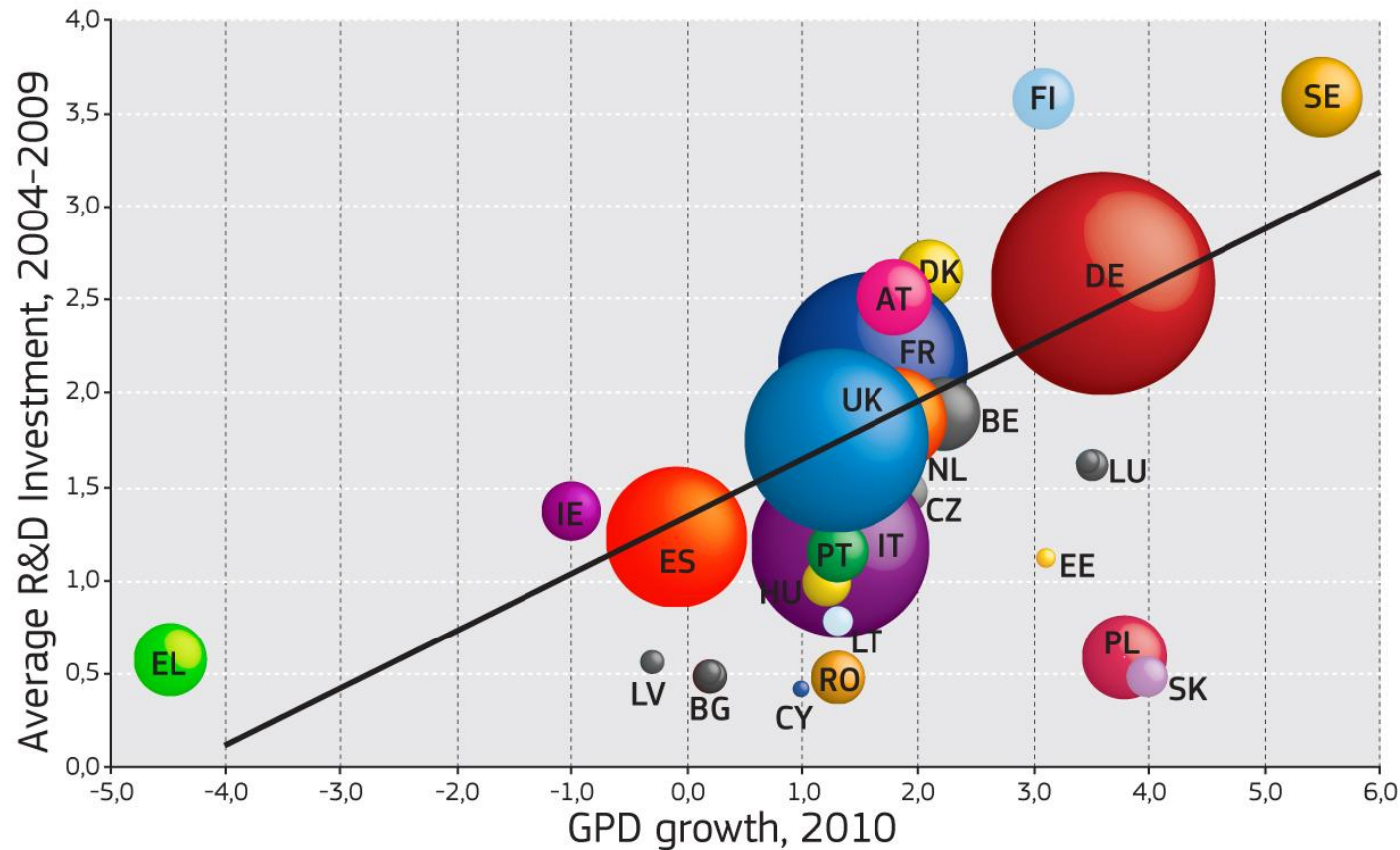
*The EU Framework
Programme for
Research and Innovation*

Anne-Sophie Lequarré

2014-2020

HORIZON 2020

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



What is Horizon 2020?

- **Proposal for a 80 billion € research and innovation funding programme (2014-2020)**
- **A part of Europe 2020, Innovation Union & European Research Area:**
 - **Responding to the economic crisis** (jobs, growth)
 - **Addressing people's concerns** (livelihood, safety, environment)
 - **Strengthening the EU's global position** in research, innovation and technology

What's new

- **A single programme** bringing together 3 programmes*
- **Coupling research to innovation**
- **Focus on societal challenges** facing EU society
- **Simplified access**, for all companies, universities, etc

3 integrated programmes

- The traditionnel Framework programme
- The Competitiveness and Innovation Programme (CIP)
- The European Institute of Innovation and Technology (EIT)

European Institute of Innovation and Technology

At Budapest since 2008 following Lisbon Strategy

- **Translation of R&D results into commercial opportunities**
- **Reaching a critical mass in various fields and in the number of SMEs**
- **Overcoming fragmentation of EU's research and higher education system and increasing entrepreneurial culture in both**

Knowledge Triangle:

Education, Research and Business sectors:
Knowledge and Innovation Communities (KICs).

Knowledge and Innovation communities (KICs)

Climate KIC: *Climate, Water, Production and Cities*

EIT-ICT KIC: *Spaces, Energy Systems, Health & Wellbeing, Digital Cities, Future Media, Intelligent Mobility*

KIC InnoEnergy: *Lighthouse, Energy from chemical fuels, Sustainable nuclear, Renewables, Clean Coal, energy-efficient buildings, Smart Electric Grid and Storage*

Three priorities:

- 1. Excellent science**
- 2. Industrial leadership**
- 3. Societal challenges**

Priority 1. Excellent science

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

Priority 2. Industrial leadership

<i>Leadership in enabling and industrial technologies</i> (ICT, space, materials, biotechnology, manufacturing, nanotechnologies)	<i>13 781</i>
<i>Access to risk finance</i> Leveraging private finance and venture capital for research and innovation	<i>3 538</i>
<i>Innovation in SMEs</i> Fostering all forms of innovation in all types of SMEs	<i>~ 7 000</i>

Priority 3. Societal challenges

- Concerns of citizens and society + EU policy objectives (climate, environment, energy, transport, etc)
- Breakthrough solutions from multi-disciplinary collaborations, including social sciences & humanities
- Promising solutions need to be tested, demonstrated and scaled up

Proposed funding (million euro, 2014-2020)

Health , demographic change and wellbeing	8 033
Food security, sustainable agriculture , marine and maritime research & bioeconomy	4 152
Secure, clean and efficient energy	5 782
Smart, green and integrated transport	6 802
Climate action, resource efficiency and raw materials	3 160
Inclusive, innovative and secure societies	3 819



The 7th EU Framework Programme (2007-2013)



European
Commission

Socio-economic Sciences
and Humanities €610

Transport
(including Aeronautics) €4180

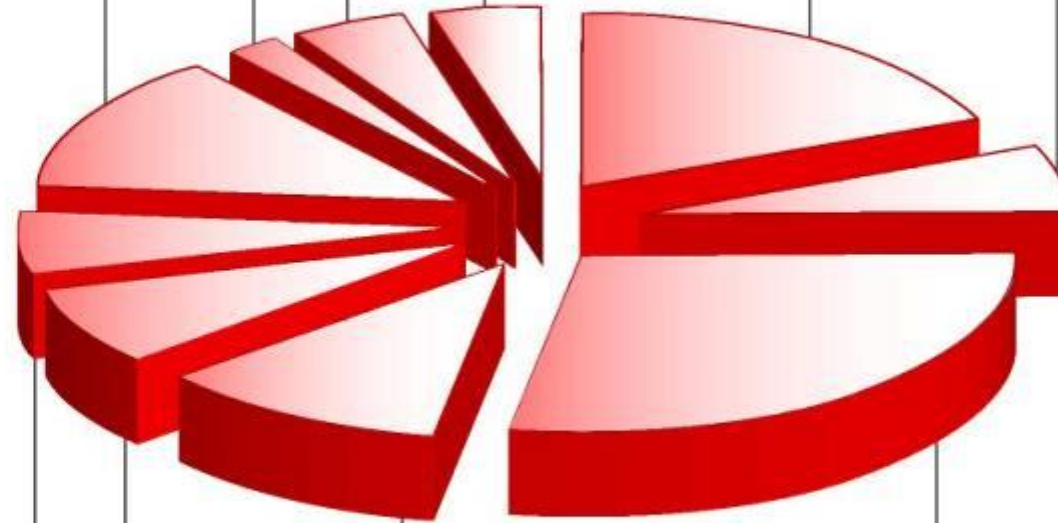
Space
€1430

Security
€1350

Health
€6050

Food, Agriculture and
Biotechnology €1935

Cooperation



Energy
€2300

Environment
(including Climate Change)
€1800

Nano production
€3500

Information and Communication
Technologies
€9110

Cooperation Programme – 10 themes

Research and
Innovation



European
Commission

Socio-economic Sciences
and Humanities €610

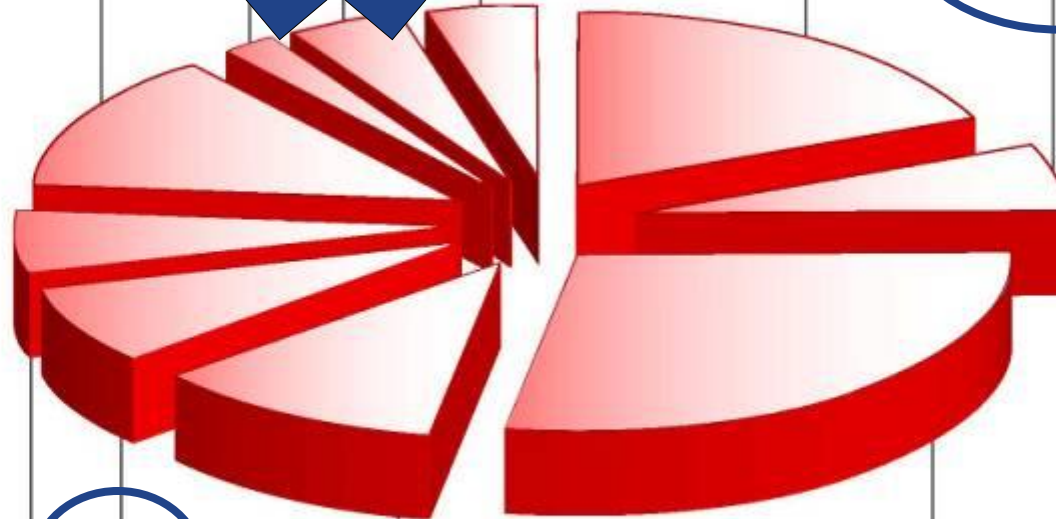
Transport
(including Aeronautics) €4180

Security
€1350

Health
€6050

Food, Agriculture and
Biotechnology €1935

Cooperation



Energy
€2300

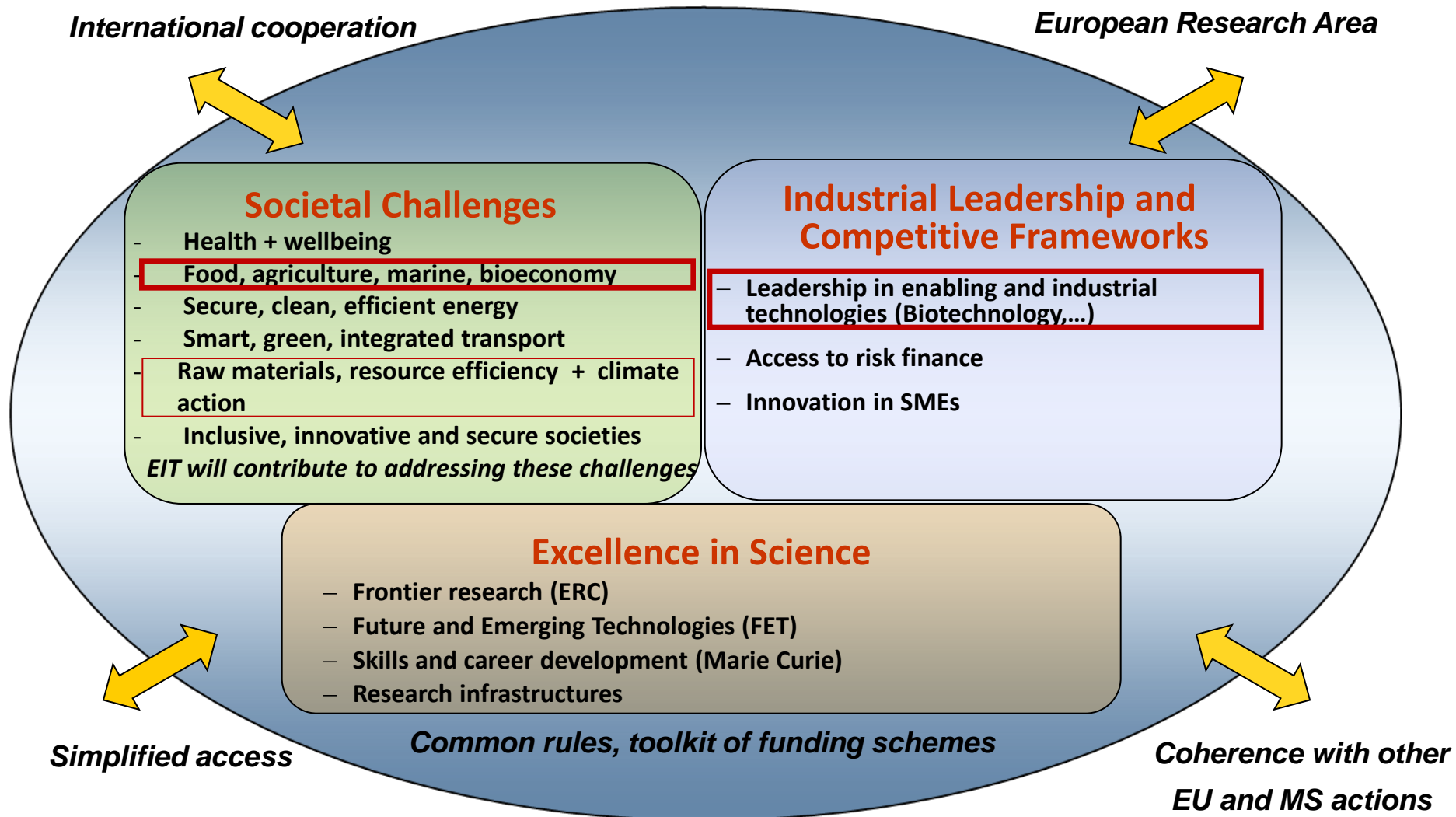
Environment
(including Climate Change)
€1800

Nano-bionics

Information and Communication
Technologies

Cooperation Programme – 10 themes

Research and
Innovation



Horizon 2020 and partnering

Public to Private partnerships:

- Through Joint Technology Initiatives (JTI)
- Through contractual agreements
- Only when clear commitments from private partners

Public to Public Partnerships:

- Through « ERA-Nets » for topping up individual calls/actions
- Through participation in joint programmes between Member States (Art. 185)
- Supporting agendas of Joint Programming Initiatives (JPI) in line with Horizon 2020
- Only when financial commitments of participating countries

European Innovation Partnerships (EIP)

- coordination with broader policies and programmes

European Innovation Partnerships

Objective: *Join resources to speed-up breakthrough innovations*

- **Challenge-driven**
- **Acting across research & innovation chain**
 - => *supply and demand together, across sectors and borders*
 - => *foster communication among stakeholders*
- **coordinating existing instruments and initiatives**

The EIP is not a funding or a programme instrument; it cannot take decisions in areas for which MS and/or EU are competent. Existing initiatives are keeping their own identity and use the EIP as a platform for adjusting their priorities.

Innovation Union:

EIP «Agricultural Productivity and Sustainability»

- *Pilot EIP on active and healthy ageing (2011)*
- *Commission examines a first round of partnerships: raw materials, water, smart cities, smart mobility and **Innovation Partnership on Agricultural Productivity and Sustainability***
- *endorsement of EIP by Council and European Parliament, Steering Board end of February 2012*

Network Function of the EIP

- Interlinking innovation-related actions of Rural Development Policy
- Effective flow of information and advice to partners about opportunities from EU policies
- Exchange on best practice and accompanying research
- Systematic feedback about practice needs to the scientific community
- Exchange with European Technology Platforms (ETPs), European Research Area Networks (ERA-NETs), Joint Programming Initiatives, and other relevant fora
- Interface function of the Standing Committee for Agricultural Research SCAR

Simplification:

- **Single set of** simpler and more coherent participation **rules**
- 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** (20%)
- 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)

- 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:** 15% of the budget for societal challenges to go to SMEs.
- **Simplification** of particular benefit to SMEs
- A **new SME instrument**, building on the SBIR model, will be used across all societal challenges
- A dedicated activity for research-intensive SMEs in **'Innovation in SMEs'**.
- **'Access to risk finance'** will have a strong SME focus

Widening participation

- **Principle of excellence:** allocate funding on 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, coordination between funding programmes, support policy reforms.
- **Accompanying measures:** twinning, ERA chairs, support for access to international networks

Horizon 2020

Food security, sustainable agriculture, marine and maritime resources & the bioeconomy

Sustainable agriculture and forestry:

1. **Increasing** production **efficiency**, coping with climate change, while ensuring **sustainability** and **resilience**
2. Providing **ecosystem services** and public goods
3. Empowerment of rural areas, **support to policies and rural innovation**

Horizon 2020

Food security, sustainable agriculture, marine and maritime resources & the bioeconomy

Unlocking the potential of aquatic living resources

1. Developing **sustainable** and environmentally-friendly **fisheries**
2. Developing **competitive** European **aquaculture**
3. Boosting **marine innovation** through **biotechnology**

Horizon 2020

Food security, sustainable agriculture, marine and maritime resources & the bioeconomy

Sustainable and competitive bio-based industries

1. Fostering the bio-economy for **biobased industries**
2. Developing integrated **biorefineries**
3. Supporting **market development for biobased** products and processes



Value chains to be covered by Research and Innovation, within the bioeconomy strategy action plan

AGRICULTURE and FORESTRY

*Land use
Resources efficiency
Eco-intensive
production
Climate change*

FISHERIES and AQUACULTURE

*Fish stocks
Sustainable fisheries
Competitive
Aquaculture*

BIO-BASED INDUSTRIES

*Biorefineries
New products
inc from Marine biotech
Waste*

FOOD CHAIN

*Food Security
and Safety
Nutrition
Efficient food/feed
industry*



Thank you for your attention!

Find out more:

www.ec.europa.eu/research/horizon2020

JPI
JTI
KIC
EIT
ERA-Net
TP
Etc...

