

HORIZON 2020

The EU Framework Programme For Research And Innovation (2014-2020)

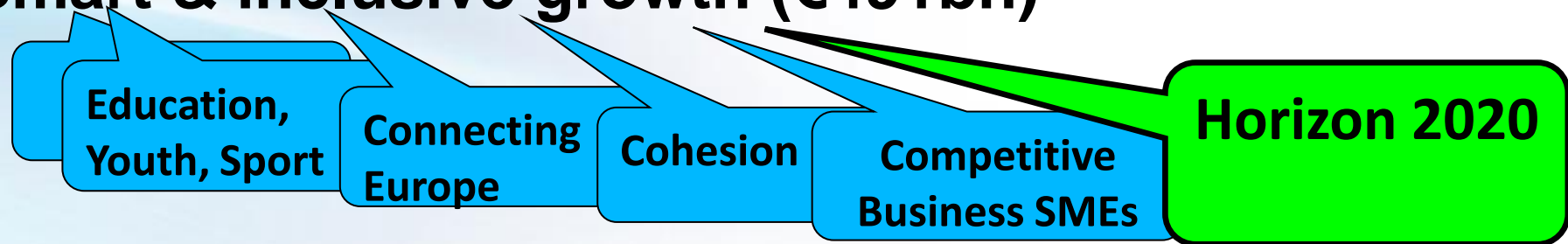
*Brendan Hawdon
DG Research & Innovation
European Commission*

The Multiannual Financial Framework 2014-2020:

Commission's proposals of 29 June 2011

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

1. Smart & inclusive growth (€491bn)



2. Sustainable growth, natural resources (€383bn)

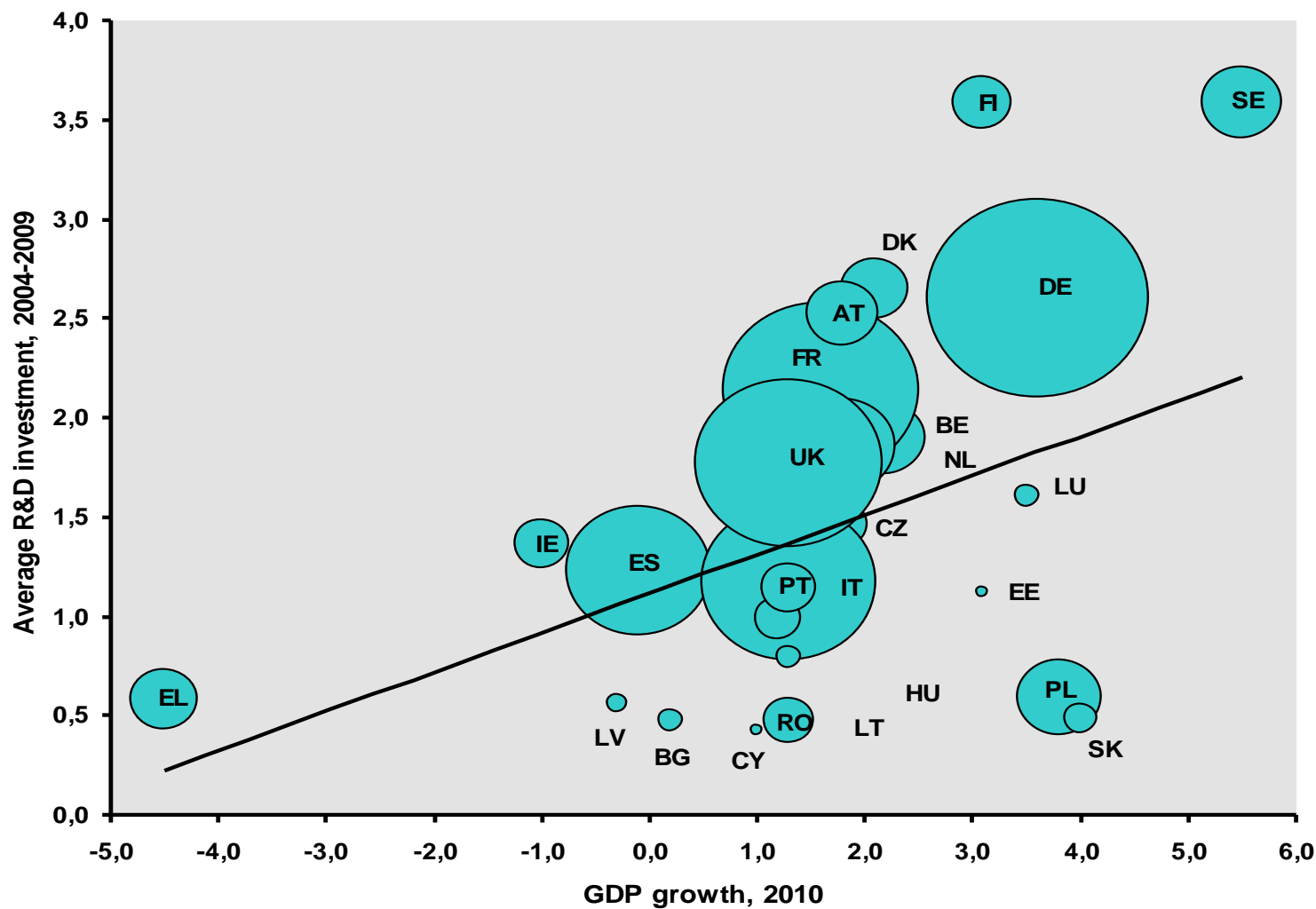
3. Security and citizenship (€18.5bn)

4. Global Europe (€70bn)

5. Administration (€62.6bn)

**Total:
€ 1,025bn**

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



What is Horizon 2020

- Commission proposal for a 80 billion euro research and innovation funding programme (2014-20)
- Part of proposals for next EU budget, complementing Structural Funds, education, etc.
- A core part of Europe 2020, Innovation Union & European Research Area:
 - **Responding to the economic crisis** to invest in future jobs and growth
 - **Addressing peoples' 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 (FP 7 evaluation), Matias (Horizon 2020) and Carvalho (simplification)
- **Overwhelming response** to the public consultation on Horizon 2020 (more than 1300 contributions), including 35 from Ireland
- **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 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:

1 Excellent science

2 Industrial leadership

3 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

Proposed funding (million euro, 2014-20)

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

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 SMEs to create growth and jobs

Proposed funding (million euro, 2014-20)

Leadership in enabling and industrial technologies (<i>ICT, nanotechnologies, materials, biotechnology, manufacturing, space</i>)	13 781
Access to risk finance <i>Leveraging private finance and venture capital for research and innovation</i>	3 538
Innovation in SMEs <i>Fostering all forms of innovation in all types of SMEs</i>	619

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 euro, 2014-20)

Health, demographic change and wellbeing	8 033
Food security, sustainable agriculture, marine and maritime research & the 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

*Additional €1 788m for nuclear safety and security from the Euratom Treaty activities (2014-18). Does not include ITER.

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

Role of the EIT and JRC in Horizon 2020

Three priorities to be supported by:

European Institute of Innovation and Technology (EIT) <i>Combining research, innovation & training in Knowledge and Innovation Communities</i>	1 360 + 1 440*
Joint Research Centre (JRC)** <i>Providing a robust, evidence base for EU policies</i>	1 962

* Second tranche pro rata from LEIT and Societal challenges (subject to review)

**Additional €656 m for the JRC to be funded from the Euratom Treaty activities

Simplification: Rules for Participation (1)

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 direct costs (except for actions close to market, where a 70% maximum will apply)
- Indirect eligible costs: a flat rate of 20% 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 (2)

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:** reduction of average time to grant by 100 days (current average of around 350 days under FP7)

Broader access

- For **SMEs** - *dedicated SME projects to address societal challenges and enabling technologies*
- For all **regions** – *tailored support to policy learning, twinning, networking, complementing Structural Funds*
- For **international partners** – *broad access to Horizon 2020 (“mainstreaming”), strategic initiatives where there is mutual benefit*
- For **all forms of innovation** - *social innovation, services, pilots, stimulating demand through public procurement, standard setting*

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

High level of alignment - position paper of the Irish government and Horizon 2020

Basic principles – Irish government	Horizon 2020
Integration of European research and innovation funding	√
Major simplification	√
Fostering co-operation	√
Focus on societal challenges	√
Mainstreaming innovation	√
Marie Curie	√
Strong support for SMEs	√

Research on human embryonic stem cells

- Ethics is a key element in the funding of public research and innovation activities.
- Horizon 2020 fully in line with the approach supported by the EP and the Council upon their adoption of FP7, which included a statement by the Commission (OJ L 412, 30.12.2006, p. 42.)
- Horizon 2020 includes the following principles:
 - *No projects will be funded that intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.*
 - *Research on human stem cells, both adult and embryonic, may be financed, but this depends on the contents of the scientific proposal and the legal framework of the Member States involved. No project involving the use of human embryonic stem cells should be funded that does not obtain the necessary approvals from the Member States.*
 - *No activity should be funded that is forbidden in all Member States.*
 - *No activity should be funded in a Member State where such activity is forbidden.*

First reactions

- ERC President Professor Helga Nowotny: "The Scientific Council and I are very pleased about the Commission's proposal for 'Horizon 2020'".
- The League of European Research Universities (LERU): "A reimbursement of a 100% of direct costs will mean a true simplification for the participants [...]"
- Lambert van Nistelrooij, European People's Party, European Parliament (EP): "...Horizon 2020 will give a powerful sign that Europe is "willing to invest and work hard to become a world leader in knowledge." "The bureaucratic burden has been much too heavy for researchers in recent years, and with this new programme it really is time to make significant changes."
- Maria da Graca Carvalho, EPP member of the EP, believes the proposal forms a good basis, but says the Commission should be wary of oversimplification.
- Jens Rohde, Liberals and Democrats group in the EP: "In times of budget cuts, we should not forget about our future growth needs. Investing in R&D is money well spent".

Next steps

From 30/11: Parliament and Council negotiations on the basis of the Commission proposals

Ongoing: Parliament and Council negotiations on EU budget 2014-20 (including overall budget for Horizon 2020)

Mid 2012: Final calls under 7th Framework Programme for Research to bridge gap towards Horizon 2020

By end 2013: Adoption of legislative acts by Parliament and Council on Horizon 2020

1/1/2014: **Horizon 2020 starts; launch of first calls**

Thank you for your attention!

Find out more:

www.ec.europa.eu/research/horizon2020