

European Commission

HORIZON 2020

The New EU Framework Programme for Research and Innovation

2014-2020

Robert-Jan Smits Director-General DG Research & Innovation European Commission

What is Horizon 2020

- The new European Union programme for research and innovation for 2014-2020
- A budget of just over €79 billion; 30 per cent higher in real terms than the 2007-2013 period
- A core part of Europe 2020, Innovation Union & European Research Area:
 - Responding to the economic crisis to invest in 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

- An integrated programme coupling research to innovation – support from research to retail, bringing together three separate programmes/initiatives*
- Challenge based tackling major challenges facing EU society, e.g. health, clean energy and transport
- Strong focus on SMEs 20% of budget for SMEs, new dedicated SME instrument
- Open to the rest of the world open to participants from any country in the world
- Major simplification 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)

ommission

Three priorities

Excellent science

Industrial Societal leadership challenges



Priority 1. Excellent science (24.4 Billion Euro)

Why:

- World class science is the foundation of tomorrow's technologies, jobs and well-being
- Europe needs to develop, attract and retain research talent
- Researchers need access to the best infrastructures

European Research Council Frontier research by the best individual teams	13.095
Future and Emerging Technologies Collaborative research to open new fields of innovation	2.696
Marie Skłodowska Curie Actions* Opportunities for training and career development	6.162
Research Infrastructures (including e-infrastructure- Ensuring access to world-class facilities	2.488



Priority 2. Industrial leadership (17 Billion Euro)

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

Leadership in enabling and industrial technologies (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)	13.557
Access to risk finance Leveraging private finance and venture capital for research and innovation	2.842
Innovation in SMEs Fostering all forms of innovation in all types of SMES	616 +complemented by expected 20% of societal challenges and LEITs + 'Access to risk finance with strong SME focus'



European Commission

Priority 3. Societal challenges (31 Billion Euro)

Why:	
 Concerns of citizens and societ 	ty
/EU policy objectives	1
(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

Health, demographic change and wellbeing	7.472
Food security, sustainable agriculture, marine and maritime and inland water research and the bioeconomy	3.851
Secure, clean and efficient energy	5.931
Smart, green and integrated transport	6.339
Climate action, environment, resource efficiency and raw materials	3.081
Inclusive, innovative and reflective societies	1.310
Secure societies	1.695
Science with and for society	462
Spreading excellence and widening participation	816



Major Simplification

1. A single set of rules for all funding under Horizon 2020

- Fewer, more flexible, funding instruments
- More coherent with other new EU Programmes

2. Simpler reimbursement: 1 project = 1 funding rate

- ✓ 100% of the total eligible costs (70% for innovation actions)
- ✓ Single flat rate for indirect costs (25% of eligible costs)

3. Faster time to grant

✓ Within 8 months of call deadline in most cases

4. Fewer, better targeted controls and audits

5. Coherent implementation

- Through dedicated agencies with central support service within the Commission
- ✓ Single IT system

6. Simplification in grant agreements

No time-sheets for personnel working full time on a project



New approach to WPs and calls

More strategic work programmes

- ✓ Focusing on areas where EU level action has greatest impact
- ✓ With a coherent set of actions from research to innovation
- ✓ Greater integrated across different parts of Horizon 2020

Less prescriptive calls

- ✓ More open to innovative proposals
- Stronger emphasis on impact
- Stimulating inter-disciplinary projects

Two year work programmes

- Greater participation in setting work programmes, including by citizens
- More advanced notice for applicants



Strong focus on SMEs

- In collaborative projects 20% of total budget for societal challenges and enabling & industrial technologies to go to SMEs
- A new SME instrument in all societal challenges and enabling & industrial technologies (7% of relevant budgets)
- **Simplification** of particular benefit to SMEs (e.g. single entry point)
- **Eurostars joint programme** with Member States and associated countries for research-intensive SMEs
- Support measures under 'Innovation in SMEs' networking and brokering; SMEs to 'spin in' technology by connecting to researchers and innovators across Europe
- Access to risk finance to have a strong SME focus (debt and equity facilities)



International cooperation

- **Principle of general openness:** the programme will remain to be the most open funding programme in the world
- Open to the association of: enlargement countries / EFTA / European Neighbourhood (and others associated to FP7)
- Targeted actions to be implemented taking a strategic approach to international cooperation



Partnerships with industry and Member States

€22 billion Innovation Investment Package proposed by Commission (July 2013)

Joint Technology Initiatives (with industry under Article 187):

- Innovative Medicines Initiative
- Clean Sky (Aeronautics)
- Fuel Cell and Hydrogen
- Biobased industries
- Electronic components and systems

Joint programmes (with Member States, under Article 185)

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



Next steps

- Legislative decision on EU budget (2014-20)
- Legislative decisions on Horizon 2020
- Horizon 2020 launch events
- Launch of first calls for proposals
- Launch of Joint Technology Initiatives Beginning 2014 and Joint Programmes with Member States

√ √ Oct 2013 – Feb 2014 √ Beginning 2014



Switzerland and Horizon 2020



Performance of Switzerland in FP7

- Switzerland participates in 3 084 projects (signed grant agreements, excluding international organisations based in Switzerland)
- Benefiting from a total of **1.8 billion euro EU contribution**
- Greatest EU contribution to Swiss participants in:
- ERC, ICT, Marie Curie, Health, NMP
- Switzerland's top organisations in terms of EU contributions in FP7
- ETH Zürich
- EPFL Lausanne
- UNIVERSITY OF ZÜRICH
- UNIVERSITY OF GENEVA
- (including international organisations, CERN is 5th)

• Switzerland's success rate for applications is 25.1%



Strengths and challenges of Switzerland's research and innovation system (1)

Strengths

- High performing research system
- Innovation Leader: a top performer in the Innovation Scoreboard
- Policy characterised by stability and continuity
- Strong international role
 - Major international infrastructures: CERN
 - First class networks with international partners
- Strong investment by industry



Strengths and challenges of Switzerland's research and innovation system (2)

Challenges

- To stay on top
- Falling trend of researchers employed by business sector
- High dependency on private-sector research
- Possible reverse effects of bottom-up
- To anticipate new emerging sectors in which Switzerland has scientific and technological strengths (in particular in energy, environment and nanotechnologies)
- High salaries may deter foreign investors
- Strong Swiss franc/weak Euro since the EU contributions are paid in Euro



Conclusions:

- Research and Innovation trigger growth and jobs and provide solutions to societal challenges
- At regional, national and EU level, continous investments in Research and Innovation are necessary
- Horizon 2020 is the main EU Research and Innovation programme (2014-2020) with a budget of €79 bn
- Switzerland is a natural partner for the EU in Science and Innovation
- Switzerland will be associated to whole Horizon 2020 package



Switzerland and the EU: partners in excellent Science and Innovation!!





HORIZON 2020

Thank you for your attention!

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