



HORIZON 2020



**European Commission
Research & Innovation**

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Research and
Innovation

**HORIZON 2020
National Information Day
Vilnius, 10/01/2014**

The Multiannual Financial Framework 2014-2020:

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)



(figures are given in constant prices)

What is Horizon 2020?

The new European Union programme for research and innovation for 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



State of Play

- **Formal political decision on Multi-annual financial framework (2014-2020)** *2 December 2013*
- **Formal political decisions on Horizon 2020** *3 December 2013*
- **Adoption of work programme 2014-15 and publication of first calls for proposals** *11 December 2013*
- **Horizon 2020 national launch events** *October to January 2014*

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

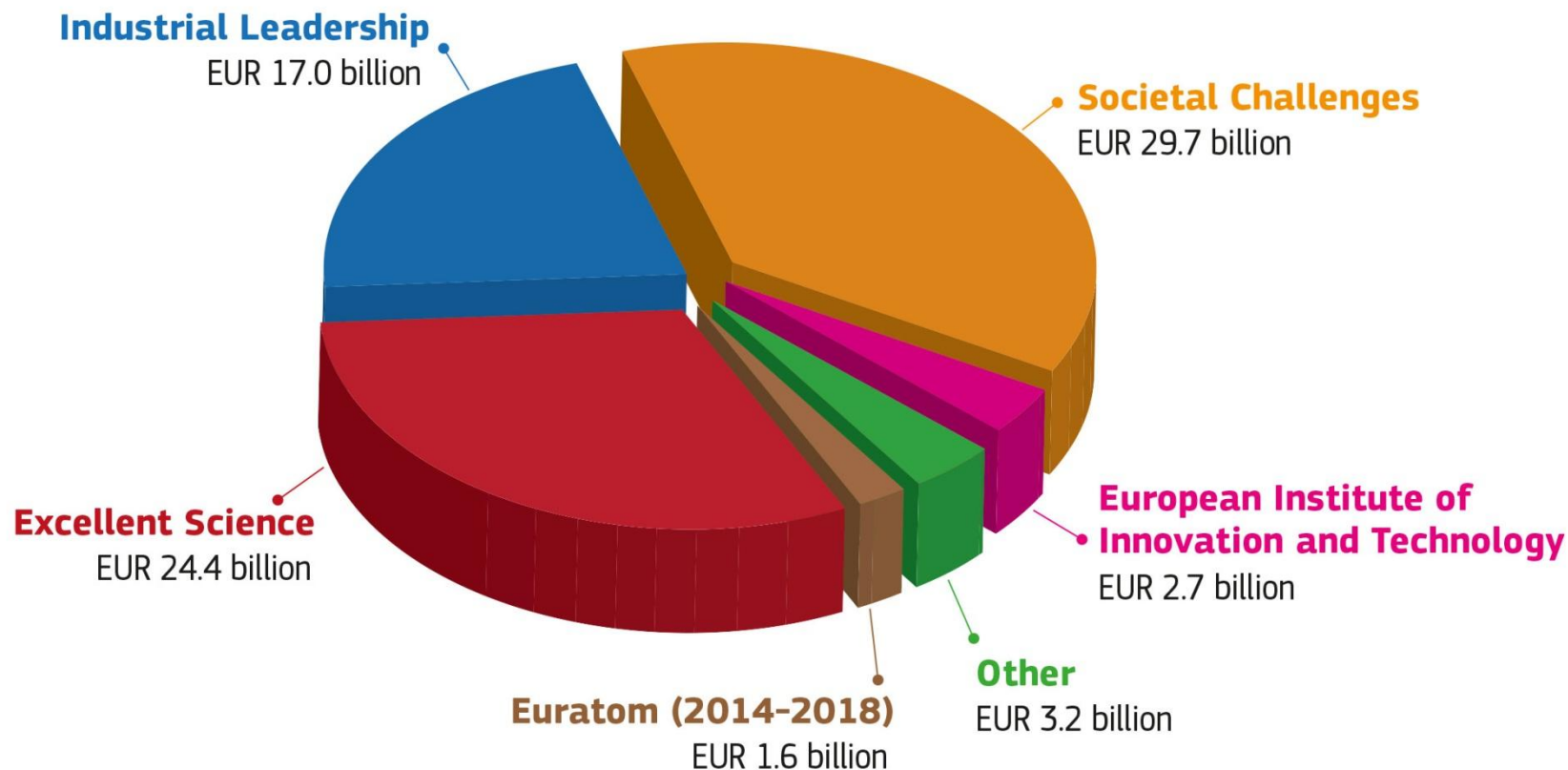
* The 7th Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

Three priorities



€ 78,6 billion from 2014 to 2020

HORIZON 2020 BUDGET (in current prices)



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)

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

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)

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

Health, demographic change and wellbeing	7 472
Food security, sustainable agriculture and forestry, 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
<i>Science with and for society</i>	<i>462</i>
<i>Spreading excellence and widening participation</i>	<i>816</i>

* 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>
<i>European Institute of Innovation & Technology (EIT)</i> Combining research, innovation & training in knowledge and Innovation Communities	2 711
<i>Joint Research Centre (JRC)*</i> Providing a robust, evidence base for EU policies	1 903

* Additional funding for the JRC for Euratom Treaty activities

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

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 focus on SMEs

- **20% of budget**
 - ✓ from societal challenges and LEITs
- **New SME instrument**
 - ✓ > € 500 million in 2014-2015
- **Support measures under 'Innovation in SMEs'**
- **Access to risk finance**
- **Participation with Member States (Public-Public)**
Eurostars joint programme



International cooperation in H2020

Principle of general openness
the programme will remain 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**



International cooperation in H2020: Funding

- Horizon 2020 is **open to participation from across the world**
- **Automatic funding:**
 - Member States (including overseas departments and overseas territories)
 - Associated Countries
 - exhaustive list of countries in annex to work programme (but: no longer BRIC + Mexico in this list!)
- Participants from other countries only funded in **exceptional cases:**
 - when provision is made in the call text
 - bilateral agreement (e.g. Health challenge – NIH)
 - when the Commission deems it essential (case by case assessment)



New approach to work programmes and calls

- **More strategic**

- Focusing on areas where EU level action has greatest impact for society and citizens
- With a coherent set of actions from research to innovation
- Greater integration across different parts of Horizon 2020

- **Two year work programmes**

2014-2015: > € 15 billion, published 11 December 2013

- **Less prescriptive calls**

- Stronger emphasis on impact
- Cross-cutting issues mainstreamed (e.g. social sciences, gender)
- Stimulating inter-disciplinary projects
- Broader and fewer topics (64 calls in 2014)
- First call deadlines as from March 2014



Work Programme 2014

Funding for calls

Excellent Science Pillar: ~ € 3 billion

- **European Research Council** (4 calls) € 1 662 million
- **Marie Skłodowska-Curie actions** (6 calls) € 800 million
- **Future and Emerging Technologies (FET)** (4 calls) € 200 million
- **European Research Infrastructures (including e-Infrastructures)** (4 calls) € 277 million

Work Programme 2014

Funding for calls

Industrial Leadership Pillar: ~ € 1.8 billion

Leadership in Enabling and Industrial Technologies (LEITs)

- **Information and Communication Technologies (ICT)**
(2 calls) € 700 million
- **Nanotechnologies, Advanced Materials, Biotechnology and Production** (5 calls) € 500 million
- **Space** (5 calls) € 128 million
- **Access to Risk Finance (financial instruments)** (2 calls) € 5 million
(€ 295 million NOT in calls)
- **Innovation in small and medium-sized enterprises** (1 call)
€ 10 million
- **SME Instrument** € 251 million

Work Programme 2014

Funding for calls

Societal Challenges Pillar: ~ € 2.8 billion

- **Health, demographic change and wellbeing** (2 calls) **€ 600 million**
- **Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research and the Bioeconomy** (3 calls) **€ 300 million**
- **Secure, clean and efficient energy** (4 calls) **€ 600 million**
- **Smart, green and integrated transport** (3 calls) **€ 540 million**
- **Climate action, environment, resource efficiency and raw materials** (3 calls) **€ 300 million**
- **Europe in a changing world – inclusive, innovative and reflective societies** (5 calls) **€ 112 million**
- **Secure Societies** (4 calls) **€ 200 million**

In addition

- **Spreading Excellence and Widening Participation** (3 calls) **€ 50 million**
- **Science with and for Society** (4 calls) **€ 45 million**

First Horizon 2020 calls 12 focus areas

Some examples:

- ✓ **Personalising health and care**
(€ 549 million)
- ✓ **Blue growth: unlocking the potential of seas and oceans**
(€ 100 million)
- ✓ **Overcoming the crisis: new ideas and strategies to overcome the crisis in Europe**
(€ 35 million)



Cross-cutting issues across the Work Programmes

Social Sciences and Humanities (over € 400 million)

- ✓ **>200 topics** (at least 35% of the total topics in the Work Programme)
- ✓ **Budget over € 400 million**
- ✓ **Topics 'flagged' by the system designed for searching the Work Programme**

In addition

- ✓ **ERC** (around 17% of budget for SSH)
- ✓ **Marie Skłodowska-Curie actions**

Cross-cutting issues across the Work Programmes

Gender

- ✓ Explicitly integrated in all the sections of the Work Programme
- ✓ Specific call under Science with and for Society (€ 9.5 million)
- ✓ Topics are flagged to ease access for applicants

Climate Change

- ✓ ~35% of the budget for activities addressing climate change
- ✓ Climate topics are of particular importance in some of the focus areas of the Work Programme

Evaluation criteria



- ✓ **ERC** frontier Research actions >> only EXCELLENCE
- ✓ **Innovation actions** >> higher weighting for "IMPACT"

Proposal evaluated by the experts "as it is"
and not as "what could be" = no need for negotiation

Simpler access through the Participant Portal

- **Single entry point**
from calls to electronic submission of proposals
- **New tools for smart searches for the benefit of users,**
including newcomers to the programme.

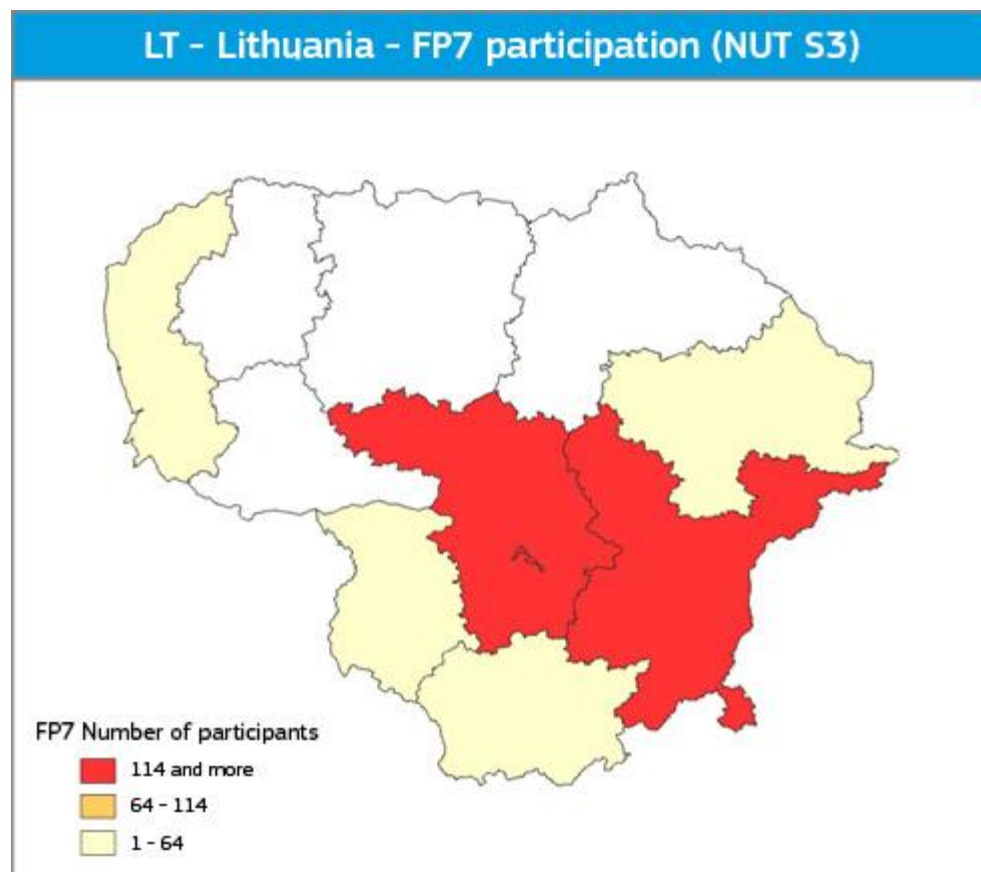


Country profile - Lithuania



National R&D 2020 Intensity Target	1.9% of GDP
Total number of participants, total EU financial contribution	392 participants receiving € 52,26 m in FP7
Number of applicants	2.031 (0,40% of EU-28)
Success rate (EU-28 = 20,9%)	20.2%
Total Population & EU 27 Population Share	3.525.761 (0.6% of EU-28))
Top collaborative links	<ul style="list-style-type: none">1. UK - Lithuania (507)2. DE - Lithuania (481)3. IT - Lithuania (389)4. FR - Lithuania (364)5. ES - Lithuania (330)

Participation per regions



LITHUANIA– *SUCCESS STORY*

A COST-EFFECTIVE WAY OF TACKLING SOIL POLLUTION

The SORBENT project addresses the need to remediate contaminated soil at a viable cost. Human activities have resulted in more than 3.5 million suspected contamination sites across the EU.

PROJECT: SORBENT

COORDINATOR: UAB GROTA, Vilnius, Lithuania

LITHUANIAN PARTICIPANT: UAB BIOCENTRAS (VILNIUS)

OTHER PARTICIPANTS FROM: UK, DK, PL, ES, EE

EU FUNDING: 0.9 Million EUR out of 1.4 Million EUR of total costs



For further information

- **Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

<http://ec.europa.eu/horizon2020>

Thank you for your attention!