

HORIZON 2020

The New EU
Framework Programme for Research and Innovation
2014-2020



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What is Horizon 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
- 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)



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)
- 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





Priority 1. Excellent science

Proposed funding (€ million, 2014-2020)*

European Research Council (ERC)	
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 (MSCA)	
Opportunities for training and career development	6 162
Research infrastructures (including e-infrastructure)	
Ensuring access to world-class facilities	2 488

^{*} 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

Proposed funding (€ million, 2014-2020)

Leadership in enabling and industrial technologies (LEITs) (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 budget of societal challenges + LEITs and 'Access to risk finance' with strong SME focus



Priority 3. Societal challenges

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
Science with and for society	462
Spreading excellence and widening participation	816

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



Horizon 2020 and partnering

Public-private partnerships (PPPs):

- 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 (P2Ps):

- 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 (EIPs):

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 (IMI2)
- Clean Sky (Aeronautics) 2 (CS2)
- Fuel Cell and Hydrogen 2 (FCH2)
- Bio-based Industries (BBI)
- Electronic components and systems (ECSEL)

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



Public-public partnerships (P2Ps)

SEAS-Era: Towards Integrated European Marine Research Strategy and Programmes (Eranet) - develop a coordination structure of MS marine research programmes sustainable at the long term with the major goal of **developing and implementing common research strategies** related to the EU basins

BONUS+/Bonus-185: Multilateral call for research projects (Eranet+) / Joint Baltic Sea Research Programme. Adopted in July 2010 (Article 185)

JPI Oceans: Joint Programming Initiative for "Healthy and Productive Seas and Oceans"



Role of the EIT and JRC in Horizon 2020

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

^{*} 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 and demonstration 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.

Forms of funding

Grants

 Direct financial contribution by way of donation in order to finance an action

Prizes

 Financial contribution given as reward following a contest (recognition or inducement prizes)

Procurement

 Supply of assets, execution of works or provision of services against payment

Financial instruments

 Equity or quasi-equity investments; loans; guarantees; other risk-sharing instruments



Types of actions supported by grants

- Research and innovation actions
- Innovation actions (prototyping, testing, demonstrating, piloting, large-scale product validation and market replication).
- Coordination and support actions
- SME instrument
- ERANET Co-fund
- Pre-commercial procurement (PCP) Co-fund
- Public procurement of innovative solutions (PPI) Cofund



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 mobility 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 (SBIR model) 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)



International cooperation: The Atlantic Ocean Research Alliance



Launched in May 2013 (Galway Statement) under Irish Presidency with Commissioners Geoghegan-Quinn & Damanaki

Goal: To better understand the Atlantic Ocean and to promote the sustainable management of its resources. The work will also study the interplay of the Atlantic Ocean with the Arctic Ocean, particularly with regards to climate change.



EURATOM

Budget: €939 million to support indirect research actions in nuclear fission, radiation protection and fusion activities

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
- Formal political decision on Multi-annual financial framework (2014-2020)
- Adoption of work programme and publication of first calls for proposals
- Horizon 2020 national launch events

Autumn 2013

Autumn 2013

11 December 2013

(several deadlines)

October to January 2014





Muito obrigada pela vossa atenção!

Horizonte 2020:

www.ec.europa/research/horizon2020