What is Horizon 2020?

The new European Union programme for research and innovation for 2014-2020

- **Coupling research to innovation**

- **Challenge based**

- **Strong focus on SMEs**

- **Major simplification**

European Commission

H2020 scope

EU Financial Regulation

Specific rules for participation

> Covering all H2020 research and innovation actions

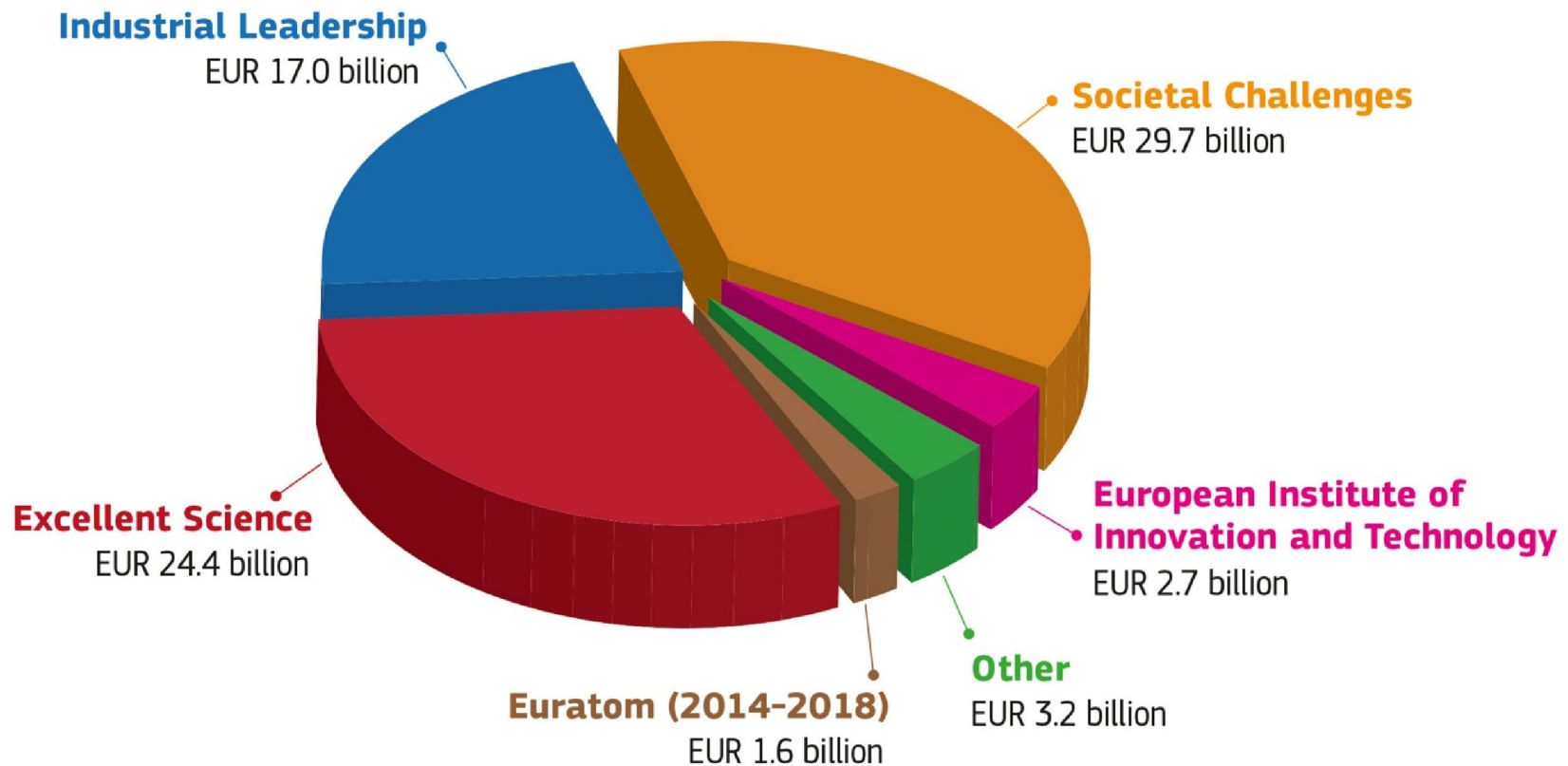> Keeping flexibility where needed.

HORIZON 2020

European Commission

Priorities

EIT

Excellent science

EURATOM

Industrial leadership

Societal challenges

HORIZON 2020

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€ 79 billion from 2014 to 2020

HORIZON 2020 BUDGET (in current prices)
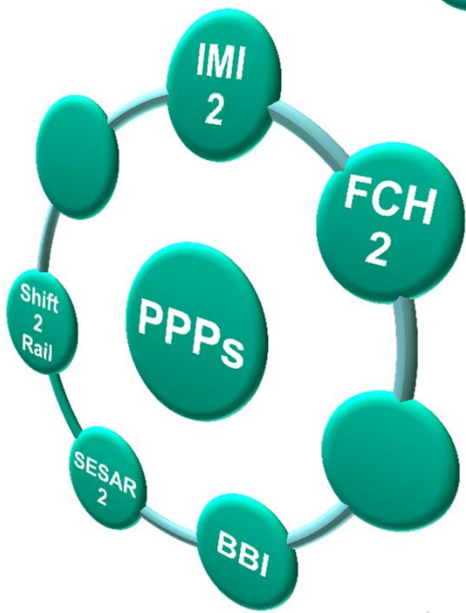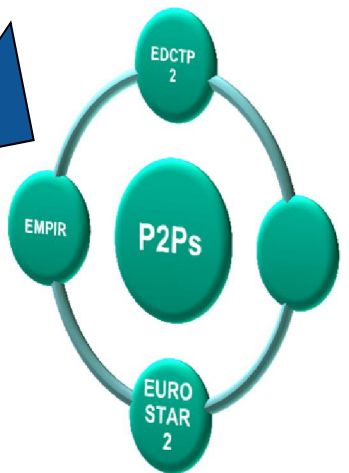
Industrial Leadership
EUR 17.0 billion

Societal Challenges
EUR 29.7 billion

Excellent Science
EUR 24.4 billion

European Institute of Innovation and Technology
EUR 2.7 billion

Euratom (2014–2018)
EUR 1.6 billion

Other
EUR 3.2 billion

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H2020 Who is who

4–4%

55 %

10 %

2 %

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New approach to work programmes and calls

- ## Based on a "strategic programme"

  ✓ **First Horizon 2020 calls with 12 focus areas**

- ## Two year work programmes (€ 15 billion)

  ✓ **Possibility of fine-tuning after the first year**

- ## Less prescriptive calls (64 calls in 2014)

  ✓ **Broader and fewer topics**

  ✓ **First call deadlines as from March 2014**

European Commission

Excellent Science Pillar: ~ € 3 B

- **European Research Council** (4 calls) **€ 1.662 B**

- **Marie Skłodowska-Curie actions** (6 calls) **€ 0.8 B**

- **Future and Emerging Technologies (FET)** (4 calls) **€ 0.2 B**

Focus on research beyond what is known, accepted or widely adopted and supports novel and visionary thinking to open promising paths towards powerful <u>new technologies</u> through <u>collaborative</u> interdisciplinary approaches

- **European Research Infrastructures (including e-Infrastructures)** (4 calls) **€ 0.277 B**

Supporting the development of new world-class research infrastructures (e.g. ESFRI) and e-infrastructures and on fostering their innovation potential

European Commission

Future and Emerging Technologies (FET) (1/3)

FET Open: radically new future technologies

- <u>High risk</u> visionary science and technology <u>collaborative</u> research projects

- Entirely <u>bottom-up</u> to allow for new ideas

- <u>Risk-friendly</u> and highly interdisciplinary research approach

European Commission

Future and Emerging Technologies (FET) (2/3)

FET Proactive: emerging novel areas

- Emerging novel areas that are not yet ready for inclusion in industry research roadmaps.

- Towards structuring emerging communities and supporting the design and development of transformative research themes.

- A cluster of projects that each address aspects of a research theme and exchange results.

European Commission

Future and Emerging Technologies (FET) (3/3)

FET Flagship: large-scale, long-term projects

- Tackle grand <u>science and technology challenges</u> requiring cooperation among a range of disciplines, communities and programmes.

- Science-driven, large-scale, multidisciplinary and built around a <u>visionary unifying goal</u>.

- Strong and broad basis for future technological <u>innovation</u> and economic exploitation, as well as novel <u>benefits for society</u>.

European Commission

European Research Infrastructures (1/3)

Large scale European RIs

- Ensure long-term <u>sustainability and efficient operation</u> of the research infrastructures identified by the European Strategy Forum on Research Infrastructures (ESFRI) and other world-class research infrastructures.

- Open up <u>key national research infrastructures</u> to all European researchers, from both academia and industry, and to ensure their optimal use and joint development.

- Support to global research and education networks providing advanced, standardised and scalable inter-domain <u>ICT services</u>.

European Commission

European Research Infrastructures (2/3)

Innovation potential of RIs

- R&D <u>partnerships with industry</u> to develop EU capacities and industrial supply in high-tech areas.

- Pre-commercial procurement by research infrastructure actors to drive forward innovation and act as <u>early adopters of technologies</u>.

- Stimulate the <u>use of research infrastructures by industry</u>, e.g. as experimental test facilities or knowledge-based centres.

- Encourage the <u>integration</u> of research infrastructures into local, regional and global innovation ecosystems.

- <u>Strengthen the human capital</u> of research infrastructures by training and exchange of staff and by adequate supply of human resources.

European Commission

European Research Infrastructures (3/3)

- **Reinforce European policy for research infrastructures, by**

exploiting <u>synergies</u> between national and Union initiatives by setting up partnerships between relevant policy makers and funding bodies.

- **Facilitate strategic international cooperation, by**

the development of <u>global research infrastructures</u> that require funding and agreements on a global scale, and by the cooperation of European research infrastructures with their non-European counterparts.

European Commission

Industrial Leadership Pillar: ~ € 1.8 billion
Leadership in Enabling and Industrial Technologies (LEITs)

- **Information and Communication Technologies (ICT)** (2 calls) **€ 0.7 B**

- **Nanotechnologies, Advanced Materials, Biotechnology and Production** (5 calls) **€ 0.5 B**

- **Space** (5 calls) **€ 0.128 B**

- **Access to Risk Finance (financial instruments)** (2 calls) **€ 5 M** (€ 295 M NOT in calls)

- **Innovation in small and medium-sized enterprises** (1 call) **€ 10 M**

- **SME Instrument € 0.251 B**

European Commission

Societal Challenges Pillar: ~ € 2.8 billion

- **Health, demographic change and wellbeing** (2 calls) **€ 0.6 B**

- **Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research and the Bioeconomy** (3 calls) **€ 0.3 B**

- **Secure, clean and efficient energy** (4 calls) **€ 0.6 B**

- **Smart, green and integrated transport** (3 calls) **€ 0.54 B**

- **Climate action, environment, resource efficiency and raw materials** (3 calls) **€ 0.3 B**

- **Europe in a changing world – inclusive, innovative and reflective societies** (5 calls) **€ 0.112 B**

- **Secure Societies** (4 calls) **€ 0.2 B**

European Commission

EURATOM

Budget: €87,87 million in 2014 to support Fission indirect actions

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 single regulation instead of four separate decisions during FP7

European Commission

Horizontal activities

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

Teaming: associates advanced research institutions to other institutions, agencies or regions for the creation or upgrade of existing centres of excellence.

Twinning: strengthen a defined field of research in a knowledge institution through linking with at least two internationally leading counterparts in Europe.

ERA Chairs: to attract and maintain high quality human resources and implement structural changes.

European Commission

Major Simplification for the benefit of applicants

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

   ✓ **Fewer, more flexible, funding instruments**

2. Simpler reimbursement: 1 project = 1 funding rate

   ✓ **100% of the total eligible costs** (70% for innovation actions)

   ✓ **Non-profit legal entities can also receive 100% in innovation actions**

   ✓ **Single flat rate for indirect costs** (25% of eligible costs)

3. Faster time to grant

   ✓ **Within 8 months of call deadline**

European Commission

Major Simplification
for the benefit of applicants

4. Fewer, better targeted controls and audits

5. Coherent implementation

    ✓ **Through dedicated agencies**

    ✓ **Single IT system**

6. Simplification in grant agreements

European Commission

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.

Evaluation criteria

STANDARD AWARD CRITERIA

EXCELLENCE	IMPACT	QUALITY & EFFICIENCY OF THE ACTION

✓ **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**

European Commission

H2020 vs.	**Cohesion policy**
Horizon 2020 focuses on **research and innovation**	**Cohesion policy** focuses on galvanising **smart specialisation** that will act as a **capacity building** instrument including **research and innovation**
Based largely on **individual R&D and innovation Projects**	Based on **multiannual Programmes** aiming to reduce regional disparities, including through **close to the market competitive R&D and innovation** efforts
Awarded **directly to beneficiaries**	Awarded **through** shared management exclusively to national and regional **public intermediaries**
Through **transnational competitive calls**	**Non-competitive attribution** to regional players **based on strategic planning**

European Commission

Country profile - Hungary

National R&D 2020 Intensity Target	1.8% of GDP
Total number of participants, total EU financial contribution	1.468 participants receiving € 259,34 m in FP7
Number of applicants	7.232 (1,44% of EU-28)
Success rate (EU-28 = 20,9%)	20.4%
Total Population & EU 27 Population Share	9.958.453 (2% of EU-28)
Top collaborative links	1. DE - Hungary (2.248) 2. UK - Hungary (1.679) 3. IT - Hungary (1.470) 4. FR - Hungary (1.439) 5. ES - Hungary (1.315)

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Participation per regions

HU – Hungary – FP7 participation (NUT S3)

FP7 Number of participants
- 505 and more
- 100 – 505
- 74 – 100
- 1 – 74
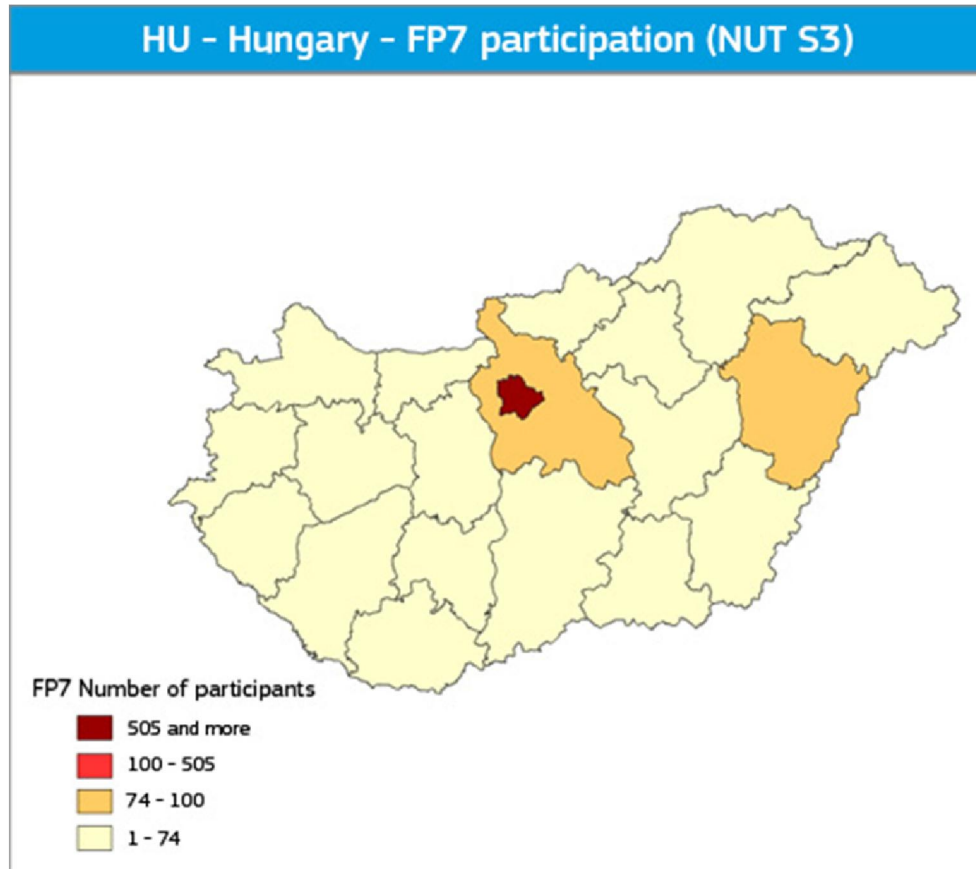
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- **Participant Portal**
  http://ec.europa.eu/research/participants/portal/desktop/en/home.html
- **Helpdesk**
  http://ec.europa.eu/research/enquiries
- **Expert evaluators needed!**
  http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html
- **Learn more about Horizon 2020**
  http://ec.europa.eu/horizon2020

HORIZON 2020