HORIZON 2020

the EU framework programme for research and innovation

What is Horizon 2020

- 80 billion euro research and innovation funding programme (2014-20)

- the mean to implement a flagship initiative of Europe 2020 strategy - Innovation Union & build 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

- offers some synergies with Structural Funds

- brought together:

7th Framework Programme	*Competitiveness and Innovation Framework Programme (CIP)*	*the European Institute of Innovation and Technology (EIT)*

- Focuses on innovation but also societal challenges facing EU society

- Provides simplified access, for all: companies, universities, institutes in all EU countries and beyond.
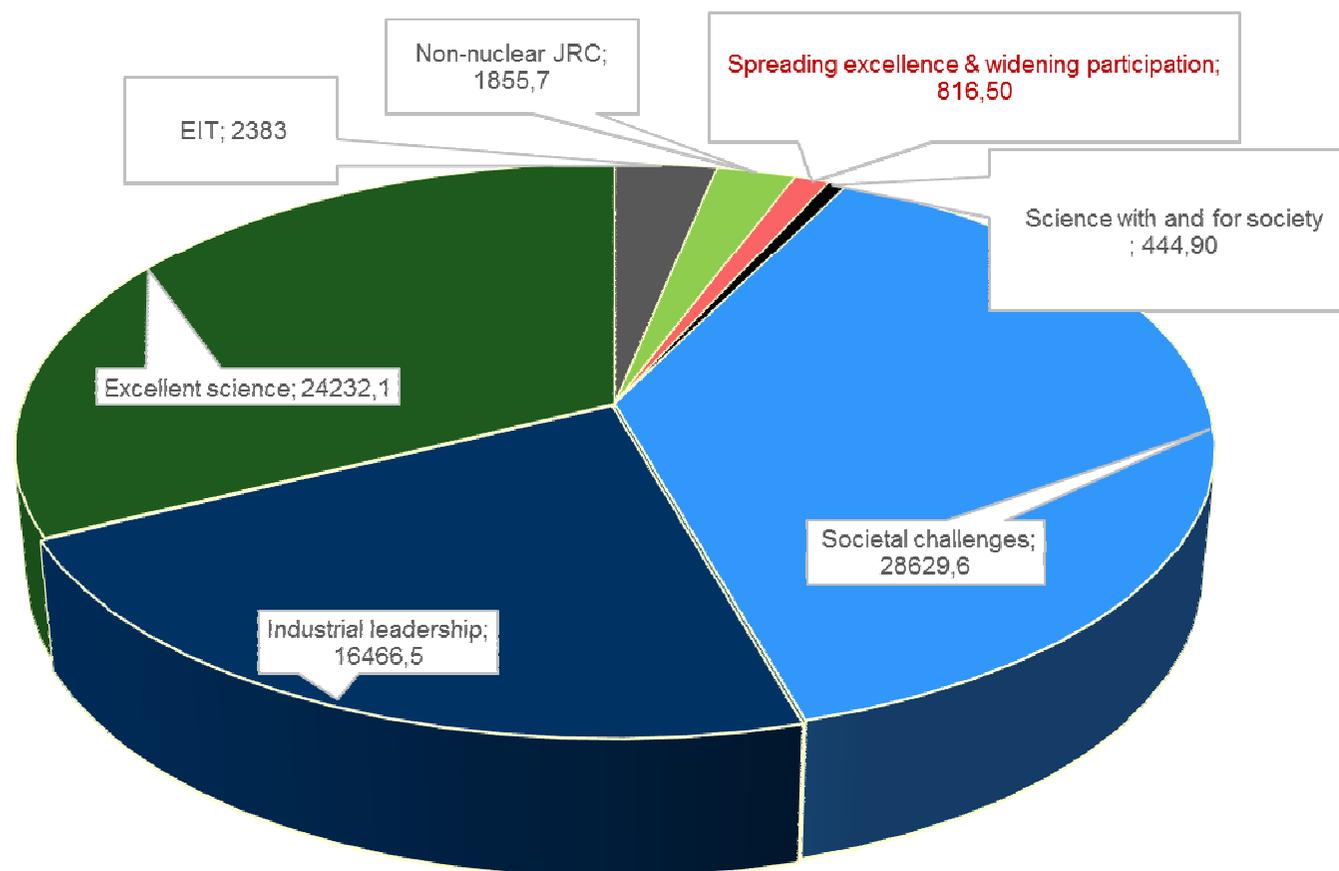
Three priorities of Horizon2020:

1 Excellent science

2 Industrial leadership

3 Societal challenges

Horizon 2020: indicative budget breakdown

EIT; 2383

Non-nuclear JRC; 1855,7

Spreading excellence & widening participation; 816,50

Excellent science; 24232,1

Science with and for society ; 444,90

Industrial leadership; 16466,5

Societal challenges; 28629,6

TOTAL 74828,3 M€
(in current prices, 2015)

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

l Excellent science, of which:	24232,1
1. The European Research Council	13094,8
2. Future and Emerging Technologies	2585,4
3. Marie Curie actions on skills, training and career development	6162,3
4. European research infrastructures (including e -Infrastructures)	2389,6

Priority 2 Industrial leadership

▶ **Why:**

- Europe needs more innovative SMEs to create growth and jobs

- 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

II Industrial leadership, of which:	
	16466,5
1. Leadership in enabling and industrial technologies	
	13035
2. Access to risk finance	
	2842,3
3. Innovation in SMEs	
	589,2

Priority 3 Societal challenges

► **Why:**

- 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

III Societal challenges, of which	28629,6
1. Health, demographic change and wellbeing;	7256,7
2. Food security, sustainable agriculture, marine and maritime research and the bio- economy;	3707,7
3. Secure, clean and efficient energy	5688,1
4. Smart, green and integrated transport	6149,4
5. Climate action, resource efficiency and raw materials	2956,5
6. Inclusive, innovative societies	1258,5
7. Secure societies	1612,7

Remaining instruments

V Spreading excellence & widening participation	**816,50**
IV Science with and for society	**444,90**
VII European Institute of Innovation and Technology (EIT)	**2383**
VI Non-nuclear direct actions of the Joint Research Centre	**1855,7**

Spreading Excellence and Widening Participation

▶ Particular political objectives of WIDESPREAD in H2020

▶ necessitate a targeted approach to help those participants with low performance in R&I

▶ H2020 legal text >>"low performing RDI Member States and regions"

▶ Specific Eligibility Criterion: Composite Indicator that measures Research Excellence at national level (threshold at 70% of the EU average)

▶ "low RDI performing" Member States for Widening actions: Latvia, Croatia, Lithuania, Malta, Slovakia, Romania, Luxembourg, Poland, Bulgaria, Estonia, Portugal, Slovenia, Cyprus, Czech Republic and Hungary.

▶ Instruments: **Teaming for Excellence** (CoEs) - **Twinning** (institutional networking) - **ERA Chairs** (bringing excellence to institutions)

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

Horizon 2020 and partnering

▶ **Public-Private Partnerships (PPPs):**
- Through *Joint Technology Initiatives* or other formal structures (*§ 187.*)
- Via *contractual arrangements*, which provide inputs for workprogrammes
- 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 programs* between Member States (§ 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

Knowldedge and Innovation Centres (KIC)s - EIT

▶ **Existing KICs:** Climate-KIC, EIT Digital, KIC InnoEnergy

▶ **1st wave** (2 themes, 2014) has been based on maturity of the field, the potential societal and economic impact, opportunities for synergies with other initiatives.

  ➤ Innovation for *Healthy living* and *active ageing*;

  ➤ *Raw materials* – sustainable exploration, extraction, processing, recycling and substitution;

2nd wave in 2016(2 themes envisaged):

  ➤ *Food4future* - sustainable supply chain from resources to consumers.

  ➤ *Added-value manufacturing*

3rd wave in 2018 (1 themes envisaged):

  ➤ *Urban mobility*

SIMPLIFICATION

EU Financial Regulation

SINGLE SET OF RULES
for Horizon 2020

...ETC

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

➢ a consortium of at least 3 legal entities from at least 3 EU Member States or an Associated Countries

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 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: Ukraine – automatically eligible for funding, USA – in priciple partners from USA bring their own funding (except S.C. 2 - Health….)

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 (eg. common IT platform).

EC has published draft calls for 2016-2017

https://ec.europa.eu/programmes/horizon2020/en/draft-work-programmes-2016-17

SFS-01-2016: Solutions to multiple and combined stresses in crop production

SFS-02-2016: Teaming up for good: Exploiting the benefits of species diversity in cropping systems

SFS-03-2016: Testing and breeding for sustainability and resilience in crops

SFS-04-2017: New partnerships and tools to enhance European capacities for in-situ conservation SFS-05-2017: Robotics Advances for Precision Farming

SFS-06-2016: Weeding - strategies, tools and technologies for sustainable weed management

SFS-07-2016-2017: Organic breeding – Increasing the competitiveness of the organic breeding and farming sectors

SFS-08-2017: Organic inputs – contentious inputs in organic farming

SFS-09-2016: Spotlight on critical outbreak of pests: the case of Xylella fastidiosa

SFS-10-2017: Research and approaches for emerging diseases in plants and terrestrial livestock

SFS-11-2016: Challenges for disease management: Perennial crops in the tropics and subtropics

SFS-12-2016: Support for international research on animal health

SFS-13-2017: Validation of diagnostic tools for animal and plant health

SFS-14-2016: Understanding host-pathogen-environment interactions

SFS-15-2016-2017: Breeding livestock for resilience and efficiency

SFS-16-2017: Bee health and sustainable pollination

SFS-17-2017: Innovations in plant protection

SFS-18-2016: Framework Partnership Agreement supporting Joint Actions towards PublicPublic Partnerships in the Bioeconomy

SFS-19-2016: ERA-NET Cofund: Public-Public Partnerships in the bioeconomy

SFS-20-2017: Towards a science-based regionalisation of the Common Fisheries Policy.

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

Thanks for your attention!

Find out more:

http://ec.europa.eu/research/horizon2020

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