



# HORIZON 2020

RESEARCH AND INNOVATION PROGRAMME



**EAEC-EOC**  
**TASK FORCE**

*Η κινητήρια δύναμη για εξασφάλιση χρηματοδότησης  
από Ευρωπαϊκά Προγράμματα*

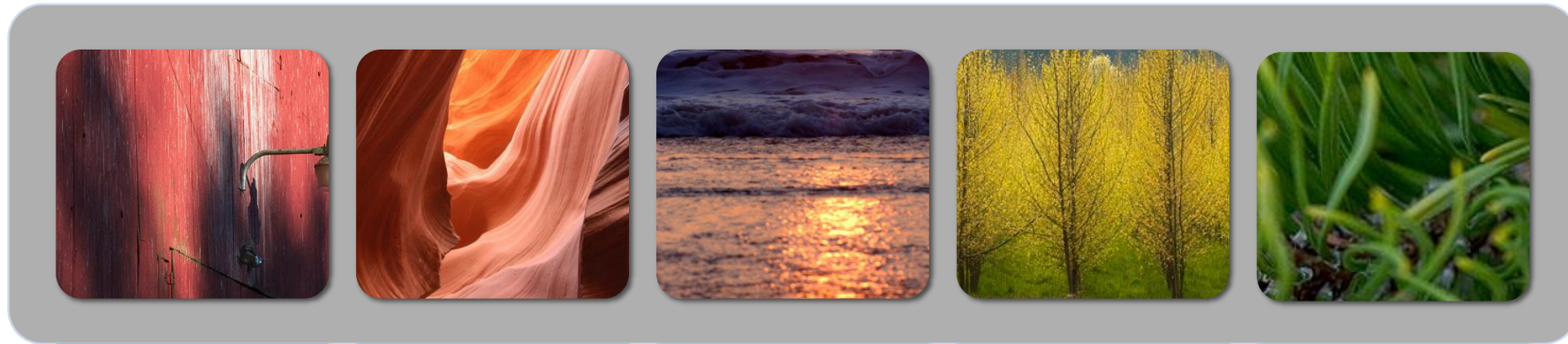




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# A GENERAL OVERVIEW

# KEY CHALLENGE: stabilise the financial and economic system while taking measures to create economic opportunities



Smart and inclusive growth  
€ 451 billion

Sustainable growth, natural resources  
€ 373 billion

Security and citizenship  
€ 16 billion

Global Europe  
€ 58 billion

Administration  
€ 61.6 billion

TOTAL:  
€ 960 billion

↳ Horizon 2020

# What is HORIZON 2020?

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- Almost € 80 billion → biggest EU research and innovation programme ever
- For the period 2014 – 2020 → 7 years period
- Investment in research and innovation is essential for Europe's future. The goal is to ensure that Europe produces world-class science and technology that drives economic growth.

## WHAT'S NEW?

- Coupling research to innovation
- Focus on societal challenges facing EU society (e.g. health, clean energy, transport, etc.)
- Simplified access for all organisations (companies, universities, institutes, etc.)
- A single programme bringing together three separate programmes / initiatives (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 PILLARS

Excellent science

Industrial  
leadership

Societal challenges



## Excellent Science

- World class science is the foundation of tomorrow's technologies, jobs, and wellbeing
- Europe needs to develop, attract and retain research talents
- Researchers need access to the best infrastructures
- European Research Council € 13 billion
- Marie-Curie Actions € 6 billion
- Future and Emerging Technologies €2.6 billion
- Research infrastructures €2.4 billion

Excellent science



## Industrial leadership

- Strategic investments in key technologies 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 € 13.5 billion
- Access to risk finance € 2.8 billion
- Innovation in SMEs € 3 billion (SME instrument)

Industrial  
leadership



## Societal challenges

- Concerns of citizens and society / EU policy objectives (climate, environment, energy, etc.) that cannot be achieved without innovation
- Breakthrough solutions from multi-disciplinary collaborations, including social sciences & humanities
- Promising solutions to be tested, demonstrated & scaled up

Societal challenges

## Societal challenges – 7 + 2 priority challenges



Health and wellbeing € 7.4 billion



Food security, sustainable agriculture, marine and maritime research, bioeconomy € 3.8 billion



Secure, clean and efficient energy € 5.9 billion



Smart, green and integrated transport € 6.3 billion



Climate action, resource efficiency and raw materials € 3 billion



Inclusive and reflective societies € 1.3 billion



Secure societies € 1.7 billion



Science with and for society € 0.5 billion



Spreading excellence and widening participation € 0.8 billion



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# HOW IT WORKS?

## Main type of actions in H2020

**Research & Innovation Action:** funding for research projects tackling clearly defined challenges, which can lead to the development of new knowledge or a new technology

**Innovation Action:** funding is more focused on closer-to-the-market activities. E.g. prototyping, testing, demonstrating, piloting, scaling-up, etc. if they aim at producing new or improved products or services

**Coordination and Support Action:** creation of networks (dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues, etc.)

**SME instrument:** aimed at highly innovative SMEs with the ambition to develop their growth potential.

# Who can participate?

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Any legal entity, such as:

- Universities (public and private)
- Research Centres (public and private)
- Companies (SMEs, big companies)
- Local authorities
- Associations
- International organisations



For standard research projects a consortium of **at least three legal entities**. Each entity must be established in an EU Member State or an Associated Country.

For other programmes (ERC, SME instrument, Coordination and Support Actions, etc.) the minimum condition for participation is **one legal entity** established in a Member State or in an Associated Country.

# Strong participation by SMEs

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1. Integrated approach – around 20% of the total budget for societal challenges and Leadership in Enabling and Industrial Technologies (LEITs) goes to SMEs
2. Simplification of particular benefit to SMEs (e.g. single entry point)
3. A new SME instrument is used across all societal challenges as well as for the LEITs
4. Dedicated activity for research-intensive SMEs in ‘Innovation in SMEs’
5. ‘Access to risk finance’ – strong SME focus (debt and equity facility)





# Simplified rules in H2020

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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 actions, where a 70% maximum applies for profit making entities)
  - Indirect costs: flat rate of 25% of direct costs
3. Simple evaluation criteria: Excellence, Impact, Implementation
4. Simpler rules for grants: e.g. possibility of output based grants, no time-sheets for personnel working full time on a project, etc.



# Simplified rules in H2020

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5. 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
6. Improved rules on intellectual property
  - Balance between legal security and flexibility
  - Tailor-made IPR provisions for new forms of funding
  - Emphasis on open access to research publications
7. Shorter time-to-grant: 8 months from proposal submission
  - 5 months proposal evaluation
  - 3 months contract preparation (no grant negotiation, proposals are selected as submitted)



# CALLS

# Work Programme 2016-2017

➤ Launched in October 2015

➤ Total budget: EUR 16 bn for 2 years (part of this is for funding risk capital, EC procurement, subscriptions, payments to evaluators, etc.). Budget for proposals: EUR 14.5 bn → 5% increase compared to 2014-2015

Work Programme	2014/ 2015	2016/ 2017	Change
Health, demographic change	1.179	658	-44%
Food, agriculture & bioeconomy	462	716	55%
Energy	1.181	917	-22%
Transport	866	756	-13%
Climate & environment	710	326	-54%
Societies	241	212	-12%
Security	387	393	2%
ICT	1.553	1088	-30%
NMP & biotech	1.019	588	-42%

Work Programme	2014/ 2015	2016/ 2017	Change
Space	237	182	-23%
Innovation in SMEs	40	794	1906%
European Research Council	3.329	3.302	-1%
Marie Skłodowska-Curie	1.550	1.596	3%
Future & emerging technologies	268	391	46%
Research infrastructures	555	514	-7%
Spreading excellence	114	293	158%
Science with and for society	95	143	50%
Cross-cutting activities	-	1617	-

Work Programme	2014/ 2015	2016/ 2017	Change
TOTAL	13.787	14.486	5%

# Work Programme 2016-2017

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1. General Introduction
2. Future and Emerging Technologies (11)
  1. FET OPEN: Novel ideas for radically new technologies
  2. FET PROACTIVE: Boosting emerging technologies
  3. FET PROACTIVE: High performance computing
  4. FET FLAGSHIPS: Tackling grand interdisciplinary science and technology challenges
3. Marie Skłodowska-Curie Actions (10)
  1. Marie Skłodowska-Curie Innovative Training Networks
  2. Marie Skłodowska-Curie Individual Fellowship
  3. Marie Skłodowska-Curie Research and Innovation Staff Exchange
  4. Marie Skłodowska-Curie Co-funding of regional, national and international programmes
4. European Research Infrastructures (including e-Infrastructures) (15)
  1. Development and long-term sustainability of new pan-European research infrastructures
  2. Integrating and opening research infrastructures of European interest
  3. E-infrastructures
  4. Fostering the innovation potential of Research Infrastructures
  5. Support to policy and international cooperation



# Work Programme 2016-2017

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## 5. Leadership in enabling and industrial technologies

### i. Information and communication technologies (47)

1. A new generation of components and systems
2. Advanced computing and cloud computing
3. Future internet
4. Content
5. Robotics and autonomous systems
6. ICT Key enabling technologies
7. Innovation and entrepreneurship support
8. Responsibility and creativity
9. International cooperation activities

### iii. Space (22)

1. Earth observation
2. Competitiveness of European Space Sector: Technology and Science
3. Applications in Satellite Navigation – Galileo - 2017



### ii. Nanotechnologies, advanced materials, biotechnology and advanced manufacturing and processing (53)

1. Energy efficient buildings
2. Nanotechnologies, advanced materials, biotechnology and production
  1. Advanced materials and nanotechnologies for high added value products and process industries
  2. Green vehicles
  3. Advanced materials and nanotechnologies for healthcare
  4. Advanced materials and nanotechnologies for energy applications
  5. Eco-design and new sustainable business models
  6. Biotechnology
  7. Modelling the development of nanotechnologies and advanced materials
  8. Science-based risk assessment and management of nanotechnologies, advanced materials and biotechnologies
  9. Innovative and responsible governance of new and converging enabling technologies

# Work Programme 2016-2017

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## 6. Access to risk finance (1)

1. Awareness-raising and capacity-building for business angels and other early-stage investors

## 7. Innovation in SMEs (21)

## 8. Health (36)

### 1. Personalised medicine

1. Understanding health, well-being and disease
2. Preventing disease
3. Treating and managing diseases
4. Active ageing and self-management of health
5. Methods and data
6. Health care provision and integrated care



# Work Programme 2016-2017

## 9. Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy (83)

### 1. Sustainable food security

1. More resilient and resource efficient value chains
2. Environment-smart and climate-smart primary production
3. A competitive food industry
4. Healthy and safe foods and diets for all
5. Support to the implementation of the EU-Africa Partnership on food and nutrition security and sustainable agriculture
6. Implementation of the EU-China FAB Flagship initiative

### 2. Blue Growth – Demonstrating an ocean of opportunities

1. Boosting innovation for emerging blue growth activities
2. Linking healthy oceans and seas with healthy people
3. The Arctic Dimension
4. Valorising the Mediterranean Sea Basin

### 3. Rural Renaissance – Fostering innovation and business opportunities

1. New approaches towards policies and governance
2. New value chains and business models
3. Innovation and skill development

### 4. Bio-based innovation for sustainable goods and services – Supporting the development of a European Bioeconomy

1. Securing sustainable biomass supply for bio-based goods and services
2. Building the “bio-based markets of the future” – mobilising stakeholders engagement



# Work Programme 2016-2017

## 10. Secure, Clean and Efficient Energy (61)

1. Heating and cooling
2. Engaging consumers towards sustainable energy
3. Buildings
4. Industry, services and products
5. Innovative financing for energy efficiency investments
6. Towards and integrated EU energy systems
7. Renewable energy technologies
8. Enabling the decarbonisation of the use of fossil fuels during the transition to a low-carbon economy
9. Social, economic and human aspects of the energy system
10. Supporting the development of a European research area in the field of energy



## 11. Smart, green and integrated transport (55)

1. Aviation
2. Waterborne
3. Safety
4. Urban mobility
5. Logistics
6. Intelligent transport systems
7. Infrastructure
8. Socio-economic and behavioural research and forward looking activities for policy making
9. Automated road transport
10. Green vehicles

# Work Programme 2016-2017

## 12. Climate action, environment, resource efficiency and raw materials (29)

1. Climate services
2. Towards a low-carbon Europe
3. Nature-based solutions for territorial resilience
4. Water
5. Raw materials
6. Earth observation
7. Cultural heritage for sustainable growth



## 13. Europe in a changing world – inclusive, innovative and reflective societies (39)

1. Co-creation for growth and inclusion
2. Reversing inequalities and promoting fairness
3. Engaging together globally
4. Understanding Europe – promoting the European public and cultural space



# Work Programme 2016-2017

## 14. Secure societies – Protecting freedom and security of Europe and its citizens (30)

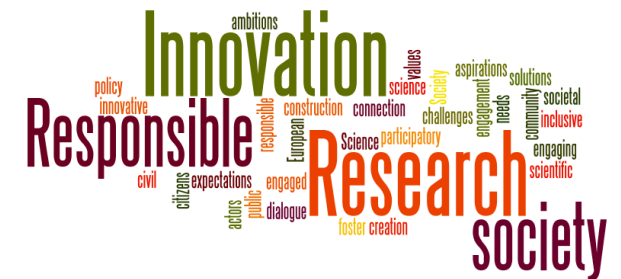
1. Critical infrastructure protection
2. Security
  1. Disaster-resilience: safeguarding and securing society
  2. Fight against crime and terrorism
  3. Border security and external security
  4. General matters
3. Digital Security Focus Area



## 15. Spreading excellence and widening participation (5)

## 16. Science with and for society (25)

14. Institutional change to support responsible research and innovation in research performing and funding organisations
14. Embedding responsible research and innovation in Horizon 2020 Research & Innovation
15. Strengthening the science with and for society knowledge-base
16. Developing inclusive, anticipatory governance for research & innovation







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# EVALUATION PROCESS

# Evaluation process: Admissibility and eligibility checks

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## ➤ Admissibility is checked by the Commission/Agency:

- Readable, accessible and printable
- Completeness of proposal  
presence of all requested forms
- Plan for exploitation and dissemination of results  
(unless otherwise specified in the WP)

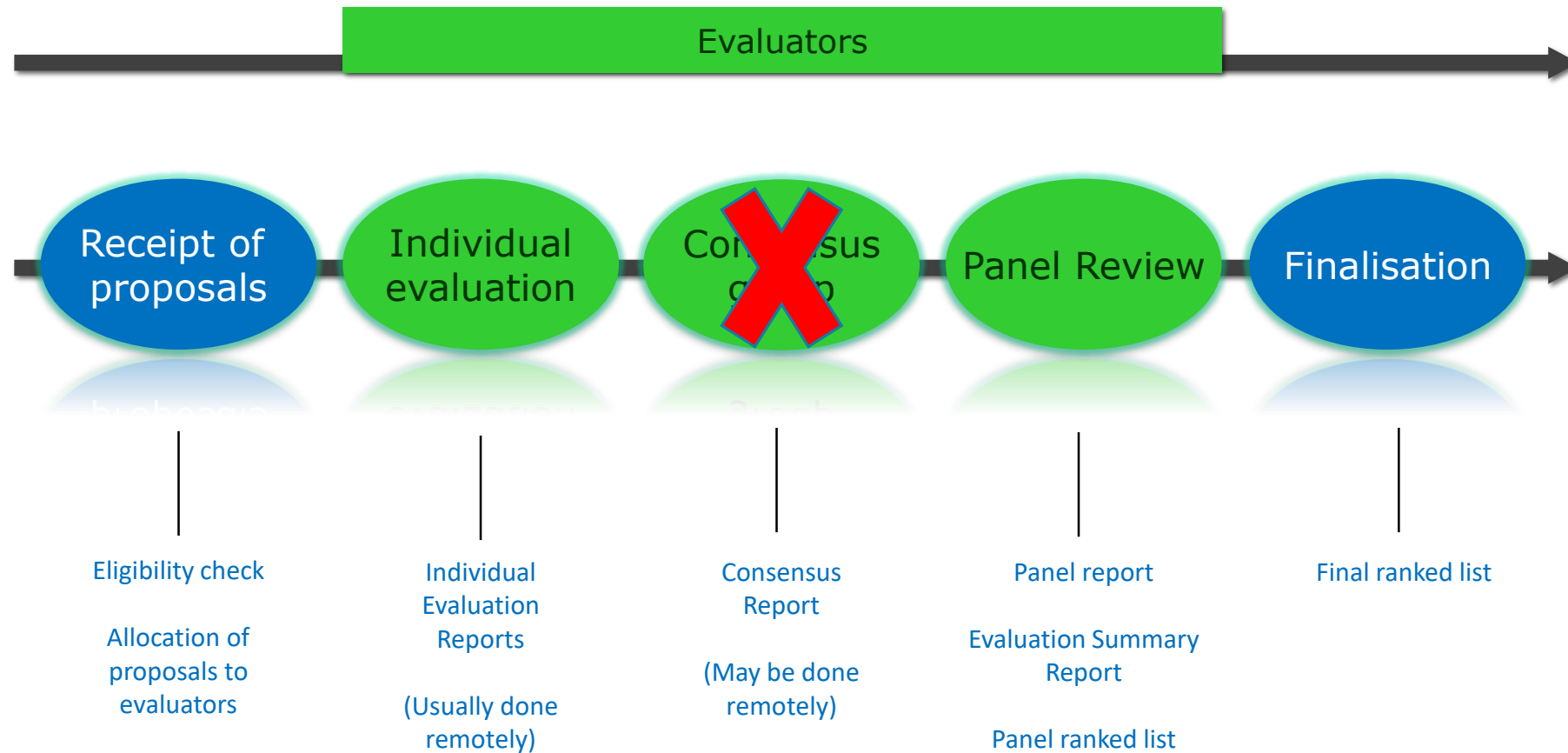
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## ➤ Eligibility checked by the Commission/Agency

- Minimum number of partners as set out in the call conditions
- Other criteria may apply on a call-by-call basis as set out in the call conditions
- “Out of scope” – you need to check the scope of proposals
  - A proposal will only be deemed ineligible in clear-cut cases



# Evaluation process: evaluators



# Evaluation process: Scoring

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- Evaluators give a score of between 0 and 5 to each criterion
  - Half-marks can be used
  - The whole range of scores should be used
  - Scores must pass *thresholds* if a proposal is to be considered for funding
- Thresholds apply
  - to individual criteria where the default threshold is 3 (unless specified otherwise in the WP)
  - to the total score where the default overall threshold is 10 (unless specified otherwise in the WP)
- For Innovation actions and the SME instrument, the criterion Impact is given a weight of 1.5 to determine the ranking

Score	Interpretation
0	The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information
1	Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.
2	Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.
3	Good. The proposal addresses the criterion well, but a number of shortcomings are present.
4	Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.
5	Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.



Thank you for your attention!

Need more information? Contact us at:

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