

EU H2020 opportunities for the Royal Military Academy

Koninklijke Militaire School – Ecole Royale Militaire

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Agenda

1. Eurofed team
2. Horizon 2020
3. Rules for participation
4. Work Programmes 2016 – 2017
5. More information and questions ?

1. Eurofed team

Who are we ?

- National Contact Points for Horizon 2020 of the Belgian federal government
- Eurofed is a service of the Scientific and Technical Information Service (DWTI-SIST)/Belgian Science Policy Office (BELSPO)
- 3 team members

What is our aim ?

- Inform the federal actors about Horizon 2020:
 - telephone; email; face-to-face meetings
 - info sessions
 - with EC
 - with NCP colleagues in Belgium
- Support federal actors in submitting proposals and managing projects

How can we help you ?

- Inform you:
 - The [Eurofed website](#)
 - Our newsfeed (in English): please subscribe !
 - Twitter-account
 - Drafts workprogrammes
- Answer to your questions: don't hesitate to send us a mail or give us a call.

2. Horizon 2020

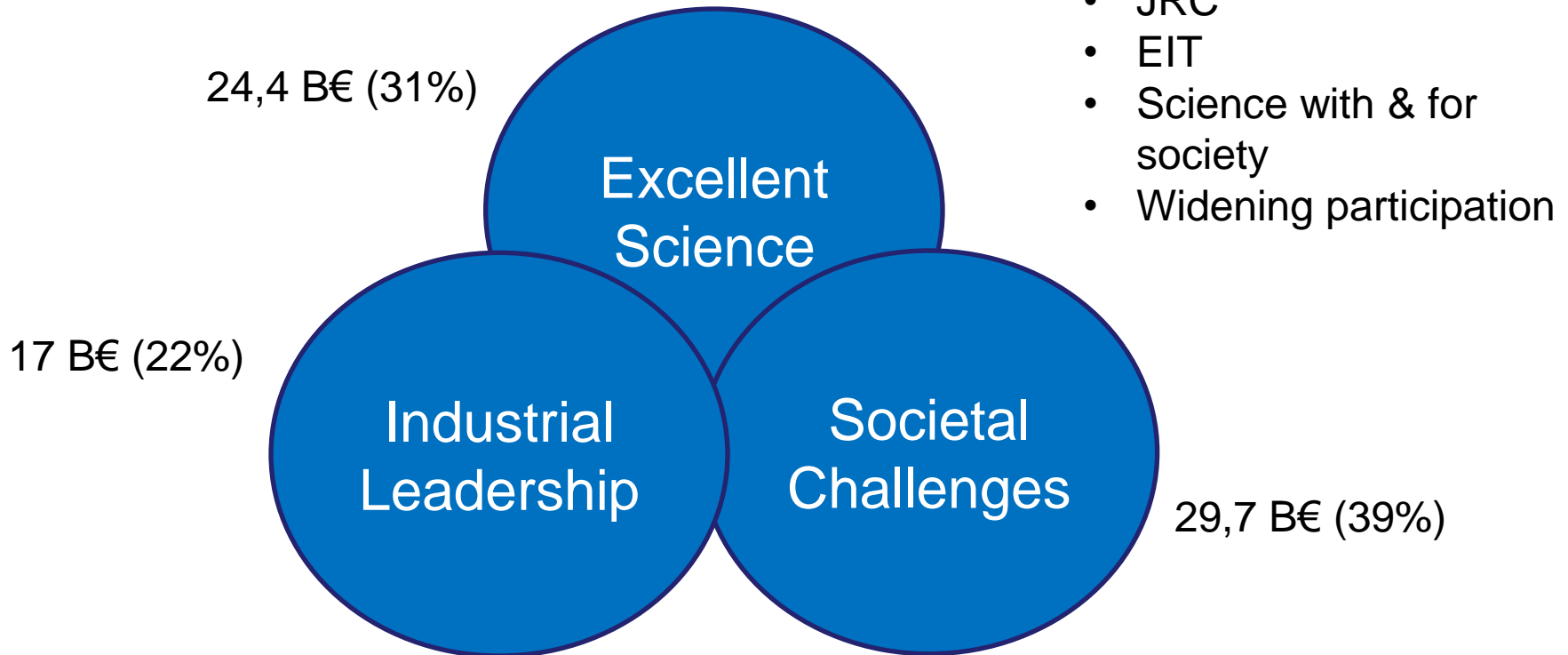
What is Horizon 2020?

- New Framework Programme for Research and Innovation for 2014-2020 (75 billion €)
- Financial instrument to implement the Innovation Union
- Coupling research to innovation
- Challenge based

Main changes

- Single programme, combining all R&I instruments (FP7, CIP and EIT)
- Single set of rules
- 1 project = 1 funding rate
- Shorter time-to-grant (8 months)
- No negotiation (project as it is)
- 2 year work programme
- Less prescriptive calls, focusing on challenges

3 pillars



Excellent Science

- **European Research Council (ERC)**
Frontier research, all fields of science, all nationalities
- **Marie-Sklodowska-Curie actions (MSCA)**
Training and career development
- **Future and Emerging Technologies (FET)**
Collaborative research to open up new and promising fields of research & innovation
- **European Research Infrastructures (RI)**
Ensure access to world-class RI (incl. e-RI) in EU and beyond

Industrial Leadership

- Leadership in enabling and industrial technologies (LEIT)
 - Information and Communication Technologies (ICT)
 - Nanotechnologies, advanced materials, advanced manufacturing & processing
 - Biotechnology
 - Space
- Access to risk finance
- Innovation in SMEs

Societal Challenges

- Health, demographic change and wellbeing
- Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research and the Bioeconomy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure Societies

3. Rules for participation

In general

- At least 3 legal entities established in 3 different Member states or associated countries
- Work programme is the guiding document to follow
- Time to grant is “5 + 3 months”
- Evaluation is done by independent experts, not by the European Commission
- There can be a role for every type of partner

Funding Instruments

Funding actions	Funding rates
Research and Innovation Action	100 %
Innovation Action (close to market) <i>funds new, modified or improved products, processes or services</i> <i>- creating prototypes, tests, demonstrations, pilot projects, large-scale product validation and developing marketability</i>	70 % 100 % for NPOs
Co-ordination and support action	100 %
European Research Council (ERC)	100 %
Marie Skłodowska-Curie action	100 % (except Co-fund)
SME Instrument	70 %

New!

New!

Funding actions	Goals
Prizes <i>New!</i>	<ul style="list-style-type: none">• To create incentive investments in research and development in specific areas• Awards based on results• Uncomplicated procedure for granting funds
Fast Track to Innovation <i>New!</i>	<ul style="list-style-type: none">• Speeding up the development of technologies towards innovative products, processes and services• Increasing private investment in R & I
Pre-Commercial Procurement – Co-fund (PCP)	<ul style="list-style-type: none">• Co-financing research and development in innovative products and services that are not yet on the market
Public Procurement of Innovative Solutions (PPI) – Co-fund	<ul style="list-style-type: none">• Co-financing to procure innovative products and services that are already on the market or have just been launched onto the market
Various other Co-fund <i>New!</i>	<ul style="list-style-type: none">• Co-financing (e.g. ERA-NET procedures, Fellowship programme etc.)

Funding rate

- For **“Research and Innovation Actions“** and **„Coordination and Support Actions“**: **100 %**
Indirect costs: 25 % of the direct, eligible costs
(except subcontracting + third parties in-kind contribution not used on the beneficiaries premises)

**Direct
Costs**

**Indirect
Costs**

Direct Costs	Indirect Costs	Total	Funding rate	Funding
100 €	25 €	125 €	100 %	125 €

Funding rate

- For „Innovation actions“: **70 %**
„non-profit“ org.: **100 %**
- **Indirect Costs: 25 % of the direct eligible costs**
(except subcontracting + third parties in-kind contribution not used on the beneficiaries premises)

Generally funded to 70 %

**Direct
Costs**

**Indirect
Costs**

Type of organisation	Direct costs	Indirect costs	Total	Funding rate	Funding
General	100 €	25 €	125 €	70 %	87,5 €
Non profit org.	100 €	25 €	125 €	100 %	125 €

Funding partners from third countries



- **Differentiation according to country groupings**
- Funding, if specified in the **Work Programme**
- **„Industrialised States“, BRIC and Mexico**
=> no automatic funding, except in the case of:
 - ✓ Funding as specified in the Work Programme or
 - ✓ Participation is essential for the realisation of the project or
 - ✓ Existing bilateral agreement

Open Access

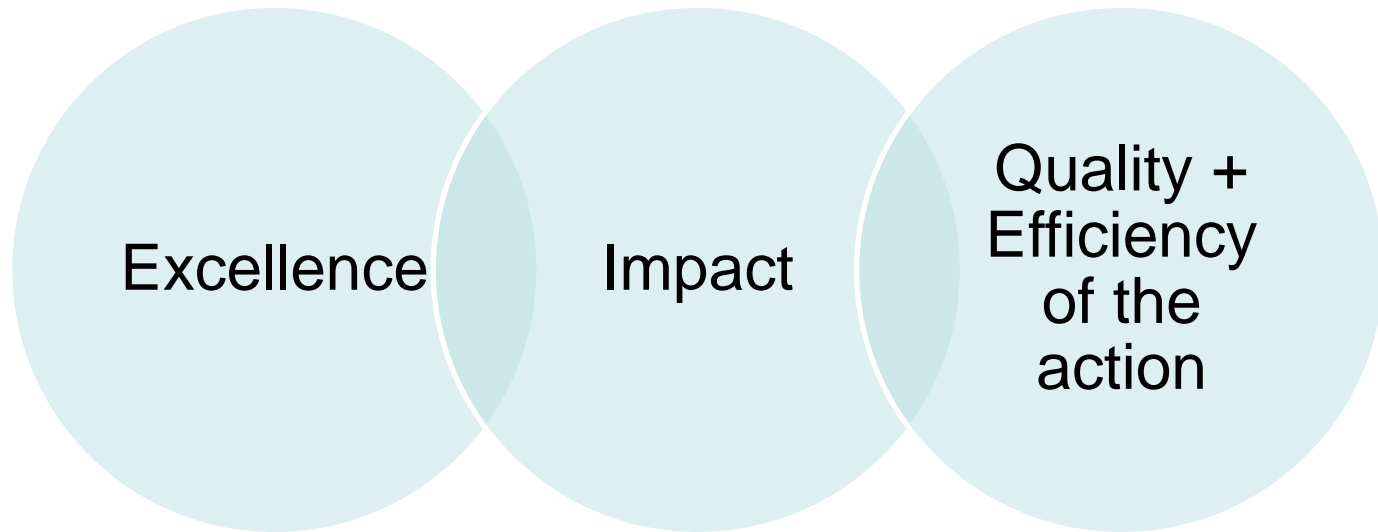
Scientific (peer-reviewed) publications:

- **Open Access as a basic principle** („green“ or „gold“)
- **No “obligation to publish“!**
- beneficiary must aim to deposit research data needed to validate the results
- OA costs are eligible for the duration of the project.

Research data:

- **Pilot “open Research Data Pilot“**

Evaluation of proposal – standard award criteria



- ✓ ERC frontier research actions = „only excellence“
- ✓ Innovation actions = higher weighting for „impact“

Who can become evaluator ?

- Simple answer: almost everyone (except conflict of interest)
- Database of the European Commission
<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>
- Added value for your organisation/company ?
 - Researchers learn from it
 - You stay in 'the loop'/networking

...but there are negative aspects as well

- Although time-to-contract is reduced, it is still ± 1 year starting from the publication of the call.
- Your research has to fit perfectly with the topic description.
- The competition is very high.

4. Work Programmes 2016 - 2017

4.1 Excellent Science

European Research Council

- Autonomous funding body launched in 2007
- Led by scientists (22 scientists in the Scientific Council)
- Grants for excellent researchers, of any nationality, to perform frontier research in Europe
- All fields of science

ERC - Grants

Starting Grants
2-7 years after PhD
Up to 2 M€
for 5 years
Deadline: Feb 2015
Budget: 410 M€

Consolidator Grants
7-12 years after PhD
Up to 2,75 M€
for 5 years
Deadline: March
2015
Budget: 605 M€

Advanced Grants
>12 years after PhD
Up to 3,5 M€
for 5 years
Deadline: 21/10/14
Budget: 450 M€

Proof of Concepts
Up to 150.000€ for ERC grantees
Deadline: 1/10/14
Budget: 15 M€

Marie Skłodowska-Curie actions

- Innovative Training Networks (ITN)

Main EU programme for structured doctoral training (early stage training).

Deadline: 12/01/16; 370 M€

- Research and Innovation Staff Exchange (RISE)

To promote international and inter-sectoral collaboration through research and innovation staff exchanges

Deadline: 28/04/16; 80 M€

- Individual Fellowships (IF) – Experienced researchers - Post-Doc

Deadline: 12/04/16; 218,5 M€

European Research Infrastructures

- Research infrastructures: facilities, resources and services used by the research communities to conduct research and foster innovation in their fields.
- Major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructure, such as data and computing systems and communication networks; and any other infrastructure of a unique nature essential to achieve excellence in research and innovation.
- RI can be *single-sited, virtual or distributed*.

4.2 Industrial Leadership

4.2.1 Information and Communication Technologies

ICT

- Four different calls (subthemes):
 - Information and Communication Technologies Call
 - EU-Japan Joint Call
 - EU-Brasil Joint Call
 - EU-South Korea Joint Call
- Deadlines for 2016 calls:
 - 19 January 2016
 - 12 April 2016

- A new generation of components and systems

ICT-01-2016: Smart Cyber-Physical System

ICT-04-2017: Smart Anything Everywhere Initiative

- Future Internet

ICT-07-2017: 5G PPP Research and Validation of critical technologies and systems

ICT-08-2017: 5G PPP Convergent Technologies

ICT-09-2017: Networking research beyond 5G

ICT-10-2016: Software Technologies

- Content technologies and information management

ICT-24-2016: Gaming and gamification

- Robotics and Autonomous Systems

ICT-25-2016-2017: Advanced robot capabilities research and take-up

ICT-26-2016: System abilities, development and pilot installations

ICT-27-2017: System abilities, SME & benchmarking actions, safety certification

ICT-28-2017: Robotics Competition, coordination and support

- **ICT Key Enabling Technologies**

ICT-29-2016: Photonics KET 2016

ICT-30-2017: Photonics KET 2017

ICT-31-2017: Micro-and nanoelectronics technologies

- **EU-Japan Joint Call**

EUJ-01-2016: 5G – Next Generation Communication Networks

- **EU-South Korea Joint Call**

EUK-01-2016: 5G – Next Generation Communication Networks

4.2.2 Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing

Nano

- Two different calls (subthemes):
 - Call for Energy Efficient Buildings
 - Call for Nanotechnologies, Advanced Materials, Biotechnology and Production

- Deadlines for 2016 calls:
 - 8 December 2015
 - 21 January 2016

ENERGY-EFFICIENT BUILDINGS

- EEB-01-2016: Highly efficient insulation materials with improved properties
- EEB-04-2016: New technologies and strategies for the development of pre-fabricated elements through the reuse and recycling of construction materials and structures

NANOTECHNOLOGIES, ADVANCED MATERIALS, BIOTECHNOLOGY AND PRODUCTION

NMBP-04-2017: Architected/Advanced material concepts for intelligent bulk material structures

NMBP-06-2017: Improved material durability in buildings and infrastructures, including offshore

NMBP-07-2017: Systems of materials characterisation for model, product and process optimisation

NMBP-25-2017: Next generation system integrating tangible and intangible materials model components to support innovation in industry

4.2.3 Space

Space

- Three different calls (subthemes):
 - Call for Earth Observation
 - Call for Competitiveness of European Space Sector: Technology and Science
 - Call for Applications in Satellite Navigation – Galileo
- Deadlines for 2016 calls:
 - 3 March 2016
 - 1 March 2017

Earth Observation

- EO-1-2016: Downstream applications
- EO-2-2016: Downstream services for public authorities
- EO-3-2016: Evolution of Copernicus services
- EO-1-2017: Downstream applications
- EO-2-2017: EO Big Data Shift

Competitiveness of European Space Sector: Technology and Science

- COMPET-2-2016: Maturing satellite communication technologies
- COMPET-4-2016: SRC - Space Robotics Technologies
- COMPET-3-2017: High speed data chain

Applications in Satellite Navigation – Galileo

- GALILEO-1-2017: EGNSS Transport applications
- GALILEO-2-2017: EGNSS mass market applications
- GALILEO-3-2017: EGNSS professional applications
- GALILEO-4-2017: EGNSS awareness raising and capacity building

4.3 Societal Challenges

4.3.1 Europe in a changing world – Inclusive, Innovative and Reflective Societies (SC6)

SC6

- Three different calls (subthemes):
 - Call for Co-creation for Growth and Inclusion
 - Call for Reversing Inequalities and Promoting Fairness
 - Call for Engaging Together Globally
 - Call for Understanding Europe: promoting the European public and cultural space
- Deadlines for 2016 calls:
 - 4 February 2016
 - 14 April 2016
 - 2 February 2017

ENGAGING TOGETHER GLOBALLY

- ENG-GLOBALLY-01-2017: Strengthening Europe's position in the global context: science diplomacy and intercultural relations
- ENG-GLOBALLY-02-2017: Shifting global geopolitics and Europe's preparedness for managing risks, mitigation actions and fostering peace

SECURITY

- SEC-01-DRS-2016: Integrated tools for response planning and scenario building

4.3.2 Secure Societies (SC7)

SC7

- Three different calls (subthemes):
 - Call for Critical Infrastructure Protection
 - Call for Security
 - Call for Digital Security Focus Area
- Deadlines for 2016 calls:
 - 16 February 2016
 - 12 April 2016
 - 25 Augustus 2016

CRITICAL INFRASTRUCTURE PROTECTION

- CIP1-2016-2017: Prevention, detection, response, mitigation of the combination of physical and cyber threats to the critical infrastructures of Europe

SECURITY

- SEC-01-DRS-2016: Integrated tools for response planning and scenario building
- SEC-02-DRS-2016: Situational awareness systems to support civil protection preparation and operational decision making
- SEC-03-DRS-2016: Validation of biological toxins measurements after an incident: Development of tools and procedures for quality control

SECURITY

- SEC-04-DRS-2017: Broadband communication systems
- SEC-05-DRS-2016-2017: Chemical, biological, radiological and nuclear (CBRN) cluster
- SEC-07-FCT-2016-2017: Human Factor for the Prevention, Investigation, and Mitigation of criminal and terrorist acts
- SEC-11-FCT-2016: Detection techniques on explosives: Countering an explosive threat, across the timeline of a plot
- SEC-13-BES-2017: Next generation of information systems to support EU external policies

SECURITY

- SEC-14-BES–2016: Towards reducing the cost of technologies in land border security applications
- SEC-16-BES-2017: Through-foliage detection, including in the outermost regions of the EU
- SEC-19-BES-2016: Data fusion for maritime security applications
- SEC-20-BES-2016: Border Security: autonomous systems and control systems

Digital Security Focus Area

- DS-01-2016: Assurance and Certification for Trustworthy and Secure ICT systems, services and components
- DS-03-2016: Increasing digital security of health related data on a systemic level
- DS-04-2016: Economics of Cybersecurity
- DS-05-2016: EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation
- DS-06-2017: Cryptography
- DS-07-2017: Addressing Advanced Cyber Security Threats and Threat Actors
- DS-08-2017: Privacy, Data Protection, Digital Identities

4.4 Cross-cutting activities (Focus Areas)

Cross-cutting activities

- Three different calls (subthemes):
 - Call for Industry 2020 in the Circular Economy
 - Call for Internet of Things
 - Call for Smart and Sustainable Cities
- Deadlines for 2016 calls:

8 December 2015	5 April 2016
21 January 2016	12 April 2016
8 March 2016	27 October 2016

INDUSTRY 2020 IN THE CIRCULAR ECONOMY

- FOF-02-2016: Machinery and robot systems in dynamic shop floor environments using novel embedded cognitive functions FOF
- FOF-07-2017: Integration of unconventional technologies for multi-material processing into manufacturing systems
- FOF-13-2016: Photonics Laser-based production

INDUSTRY 2020 IN THE CIRCULAR ECONOMY

- CIRC-1-2016/2017: Systemic, eco-innovative approaches for circular economy: large-scale demonstration projects

INTERNET OF THINGS

- IoT-01-2016: Large Scale Pilots

5. More information and questions ?

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