

# Horizon 2020



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# Overview

1. Structure of Horizon 2020
2. Basic rules of participation
3. International cooperation aspects
4. Process for application
5. Thematic topics
6. Mobility for collaboration
7. Strategy & hints



# Quick facts

- **Budget:** €70+ billion
- **Duration:** 2014-2020
- **Participants:** global
- **Success rate:** 10-20% (for previous FP7)
- **Fields of research:** all (including SSH)
- **Funding:** 100% + 25%
- **Calls:** approx. 50 calls open, with multiple sub-topics
- **General information:** [ec.europa.eu/programmes/horizon2020](http://ec.europa.eu/programmes/horizon2020)

# SME opportunities

- Most parts of Horizon 2020 are equally open to all actors, including SMEs
- Think carefully about:
  - Time costs / financial capacity
  - Timeline of the project

## Access to risk finance

- Support and training for SMEs
- Direct and indirect finance

## Innovation in SMEs

- Support for *innovation management* – from idea to market

# 1. Structure of Horizon 2020

- *All* areas of research (not only science / technology)
- Scientific “discovery” projects, scholarships and fellowships
- Networking and policy platforms
- Examining / solving industrial, environmental and social problems
- Building capacities and infrastructures
- Supporting SMEs

# 1. Structure of Horizon 2020

## Excellent Science

- **European Research Council** (ERC)
- Future and Emerging Technologies (FET)
- **Marie Skłodowska-Curie actions** (MSCA)
- European Research Infrastructures,  
including e-Infrastructures

# 1. Structure of Horizon 2020

## Industrial Leadership

- Leadership in Enabling and Industrial Technologies (LEIT)
  - Information and Communication Technologies (ICT)
  - Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology
  - Space
- Access to risk finance
- Innovation in SMEs

# 1. Structure of Horizon 2020

## Societal Challenges (SC)

1. Health, Demographic Change and Wellbeing
2. Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
3. Secure, Clean and Efficient Energy
4. Smart, Green and Integrated Transport
5. Climate Action, Environment, Resource Efficiency and Raw Materials
6. Europe in a changing world – Inclusive, innovative and reflective societies
7. Secure societies – Protecting freedom and security of Europe and its citizens



# 1. Structure of Horizon 2020

**Spreading Excellence and Widening Participation**

**Science with and for Society**

**European Institute of Innovation and Technology (EIT)**

**Euratom**

## 2. Basic rules of participation

[http://ec.europa.eu/research/participants/data/ref/h2020/legal\\_basis/rules\\_participation/h2020-rules-participation\\_fr.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/rules_participation/h2020-rules-participation_fr.pdf)

- Minimum 3 independent legal entities, established in 3 separate EU Member States or Associated Countries
  - Plus any other legal entity from any country (unless excluded by the EC)
- For ERC & MCSA individual grants, only 1 legal entity is required
- Other exceptions are noted in individual calls

## 2. Basic rules of participation

<sup>1</sup> [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/annexes/h2020-wp1415-annex-a-countries-rules\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-a-countries-rules_en.pdf)

<sup>2</sup> [http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cpart/h2020-hi-3cpart\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-3cpart_en.pdf)

Automatic and full funding for participants from:

- EU Member States
  - including OCTs (inc. New Caledonia & French Polynesia)
- Horizon 2020 Associated Countries
  - Albania, Bosnia & Herzegovina, Faroe Islands, FYRoM, Iceland, Israel, Liechtenstein, Moldova, Montenegro, Norway, Serbia, Switzerland\*, Turkey
- Plus all other countries listed in <sup>2</sup> above (this includes most PICTs)

Notable exceptions:

- Andorra, Australia, Brazil, Canada, China, India, Japan, Mexico, New Zealand, Russia, Saudi Arabia, Singapore, South Korea, Switzerland\*, Taiwan, UAE, USA

## 2. Basic rules of participation

Evaluation of proposals based on:

- a. Excellence
- b. Impact
- c. Quality & efficiency of implementation

Different weightings depending on call, e.g.:

- innovation actions may focus on Impact
- ERC grants only consider Excellence

### 3. International cooperation aspects

- Horizon 2020 is open to participants from *all* countries
- Coordinator can be from any country, but usually Member State or Associated Country
- Many call topics will target specific countries/regions
- EC may exclude some countries from participation (e.g. joint calls)
- EC may allow funding for some countries not normally eligible
- EU participants sign contract under EU law, but other countries sign contract under Belgian law

### 3. International cooperation aspects

Funding to countries such as China, New Zealand, USA, etc. is possible when:

- There is a specific bilateral agreement that includes funding,
- The call topic allows for it, or
- Their participation is essential to address the topic (e.g. global leader, infrastructure, location, unique data)

## 4. Process for application

- Topics are prescribed by the EC
- Calls usually open July, open for 3-6 months
- Many different types of projects:
  - Networks on topics, or in regions
  - Coordination actions
  - Collaborative projects (5-60 partners)
  - Individual grants/fellowship

# Example call topic

## Deep mining on continent and/or in sea-bed (SC5-11c-2015)

- €116m, open 12 Dec 2014, close 21 Apr 2015
- Proposals should develop new highly-automated technological sustainable solutions for deep mining on the continent and/or in the sea bed combined with in-situ processing of minerals, particularly addressing the challenge of industrial viability, the exposure of workers underground and the impact on the continental and marine environment and reducing the amount of waste rock to be transported. Related raw materials, marine and maritime policies are to be taken into account.
- <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2153-sc5-11c-2015.html>



## 4. Process for application

Step 1: Read the *Work Programme*

Step 2: Contact colleagues

Step 3: Attend *InfoDay* in Europe

Step 4: Build consortium

Step 5: Develop & submit proposal

Step 6: Evaluation

Step 7: *Negotiation* with EC, sign *Grant Agreement*

Step 8: Start project

## 4. Process for application

How to find call topics?

- Go to the Participant Portal

[ec.europa.eu/research/participants/portal](https://ec.europa.eu/research/participants/portal)

## 5. Thematic topics

Major calls for 2015 in PACE-Net Plus priority areas:

- Personalising health and care
- Blue Growth: Unlocking the potential of seas and oceans
- Sustainable food security
- Innovative, sustainable and inclusive bioeconomy
- Water Innovation: Boosting its value for Europe
- Growing a low carbon, resource efficient economy with a sustainable supply of raw materials
- Waste: A resource to recycle, reuse and recover raw materials

## 5. Thematic topics

Other interesting areas:

- Biotechnology
- Nanotechnologies, advanced materials and production
- Earth observation
- Factories of the future
- Energy-efficient buildings
- Information and communications technologies

## 5. Thematic topics

- Smart cities and communities
- Competitive low carbon energy
- Mobility for growth
- Green vehicles
- New forms of innovation
- Reflective societies: cultural heritage and European identities

## 5. Thematic topics

- The young generation in an innovative, inclusive and sustainable Europe
- Overcoming the crisis: new ideas, strategies and governance structure for Europe
- Europe as a global actor
- Fight against crime and terrorism
- Border security and external security/disaster-resilience: safeguarding and securing society, including adapting to climate change
- Digital security: cybersecurity, privacy and trust

## 6. Mobility for collaboration

### Excellent Science

- Specifically for developing research **talent**
- Open to researchers from *any* country
- **Best scientists** supported by the European Research Council (ERC)
- Marie Skłodowska-Curie Actions (MSCA) facilitates the **mobility** of researchers



## 6a. European Research Council

- *erc.europa.eu*
- Investigator driven grants for the best researchers (Excellence)
- Highly prestigious, highly competitive
- Any research topic, any field
- Any researcher of any nationality can apply
- Portable grant





## 6a. European Research Council

- Must undertake the project at a host institution in MS/AC (including private enterprise)
- Can include international partners (with funding)
- Must spend at least 50% (30% for AdG) of time working on project, and 50% of time in MS/AC— i.e. joint appointments are possible
- Funding for up to 5 years
- **Starting Grant (StG)**  
2-7 years after PhD, €1.5 million + €0.5 million (**open now**)
- **Consolidator Grant (CoG)**  
7-12 years after PhD, €2 million + €0.75 million (**open now**)
- **Advanced Grant (AdG)**  
€2.5 million + €1 million (open Feb 2015)

## 6b. Marie Skłodowska-Curie Actions

- Excellent mechanism(s) for building lab-lab relationships and long-term collaborations
- Ideal for promoting mobility amongst regional partners in the Pacific



## 6b. Marie Skłodowska-Curie Actions

Most useful MSCA mechanisms:

- **Individual** Fellowships (IF)
- Research and Innovation Staff **Exchanges** (RISE)
- Innovative **Training Networks** (ITN)

Evaluation: excellent (50%), impact (30%), implementation (20%)

## 6b. MSCA IF

- For individual researchers to experience:
  - International mobility, or
  - Intersectoral mobility
- Two types of fellowships:
  - European Fellowship (to MS/AC)
  - Global Fellowship (to external country)

## 6b. MSCA IF

- 1-2 years (+1 year return to MS/AC for Global Fellows)
- €55,800/y salary, plus mobility & family allowances
- Must have PhD, or 4+ years equivalent experience
- Next call open March 2015

## 6b. MSCA IF (example)

- **AMFISALS – *Advanced Models for Fisheries Stock Assessment of Large Pelagics***
- Host: SPC, New Caledonia
- Budget: €240,143, 2013-2015
- The aim is to train the fellow in state-of-the-art stock assessment models and the further development of these models through the inclusion of electronic tagging data, spatial variability of biological parameters, and projections of the models into the future. The south Pacific swordfish, *Xiphias gladius*, has been chosen as a base case.
- [http://cordis.europa.eu/project/rcn/110193\\_en.html](http://cordis.europa.eu/project/rcn/110193_en.html)

## 6b. MSCA RISE

- For lab-lab exchange activities
- Knowledge-sharing via:
  - International mobility, and/or
  - Intersectoral mobility
- Early-career or experienced researchers, or administrative/technical staff

## 6b. MSCA RISE

- Minimum 2 MS/AC partners, plus 1 other (normal funding rules apply)
- 1-12 months (total) per exchange
- Top-up allowance €2,000/m, plus costs
- Next call open January 2015
- Funding for NZ partners:  
*<http://www.royalsociety.org.nz/programmes/funds/international-relationships/research-and-innovation-staff-exchange-rise>*



## 6b. MSCA RISE (example)

- **TRANZFOR – *Transferring research between EU and Australia-New Zealand on forestry and climate change***
- Coordinator: INRA
- Budget: €230,400 (€870,400 total), 2009-2013
- 3 EU organisations, and 2 organisations from Australia and New Zealand. Addresses scientific issues related to forestry and climate change. 4 years coordinated joint programme of exchanges for short periods (2-12 months), providing unique mobility possibilities to individuals and support to organisations to establish and reinforce long-term research co-operation.
- <http://www.tranzfor.eu/>

## 6b. MSCA ITN

- Research / doctoral training programmes
- Three types of programmes:
  - European Training Networks (ETN)
  - European Industrial Doctorates (EID)
  - European Joint Doctorates (EJD)

## 6b. MSCA ITN

- Minimum 3 MS/AC partners (normal funding rules apply)
- 3-36 months per researcher
- Call **open now**

## 7. Strategy & hints

- Let an experienced coordinator do the hard work for the proposal
- Approach your EU colleagues & consider your regional partners
- Accentuate your unique assets / capabilities
- Politics
- Remember: Excellence, Impact, Quality
- Join a COST Action ([www.cost.eu](http://www.cost.eu))
- Become an evaluator

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