



Excellent science pillar HORIZON 2020

**The New EU
Framework Programme for
Research and Innovation
(2014-2020)**

Excellence Pillar

**Neville Reeve, DG RTD, European
Commission**



Three priorities



1. Context and overview

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**

Proposed funding (€ million, 2014-2020)

<i>European Research Council (ERC)</i> Frontier research by the best individual teams	13 095
<i>Future and Emerging Technologies</i> Collaborative research to open new fields of innovation	2 696
<i>Marie Skłodowska-Curie actions (MSCA)</i> Opportunities for training and career development	6 162
<i>Research infrastructures (including e-infrastructure)</i> Ensuring access to world-class facilities	2 488

2. European Research Council (ERC)

European Research Council - specific challenge

- To meet Europe's ambitions of achieving smart, sustainable and inclusive growth we need more than incremental improvements to current technologies and knowledge.
- World-leading innovation is closely associated with excellent science. Once the undisputed leader, Europe has fallen behind in the race to produce the very best cutting-edge science.
- The specific objective of the ERC is to reinforce the excellence, dynamism and creativity of European research.

European Research Council – grant schemes

Starting Grants

starters
(2-7 years after PhD) up
to € 2.0 Mio
for 5 years

Consolidator Grants

consolidators
(7-12 years after PhD)
up to € 2.75 Mio
for 5 years

Advanced Grants

track-record of
significant research
achievements in the
last 10 years
up to € 3.5 Mio
for 5 years

Synergy Grants

2 – 4 *Principal* Investigators
up to € 15.0 Mio for 6 years

Proof-of-Concept

bridging gap between research - earliest stage
of marketable innovation
up to €150,000 for ERC grant holders

European Research Council - key features

The fundamental activity of the ERC is to provide attractive, long-term funding to support excellent investigators and their research teams for ground-breaking, high-gain/high-risk research.

- Three types of ERC frontier research grant for 2014: Starting; Consolidator; and Advanced Grants.
- Proof of Concept Grant for ERC Principal Investigators.
- Indicative budget for 2015 to help the research community to plan applications.
- Extension of restrictions on applications for 2015 calls based on the 2014 calls.

3. Future and Emerging Technologies (FET)

Future and Emerging Technologies (FET)

- FET aims to uncover radically new technological possibilities from genuine cross-fertilisation and deep synergies between advanced sciences and cutting-edge engineering disciplines on high-risk ideas for radically new technologies.
- *Separate session dedicated to FET later today*

4. Marie Skłodowska-Curie actions (MSCA)

Marie Skłodowska-Curie actions - objectives

- Focus on delivering **new knowledge and skills**
- Providing excellent opportunities for **career development** in research and innovation
- Attracting and retaining **research talent**
- Developing state-of-the-art, **innovative training schemes**, consistent with the highly competitive and increasingly interdisciplinary requirements of R&I
- Promoting **international and inter-sector collaboration** and transfer of knowledge
- Contributing to a strong partnership with Member States via the **co-funding mechanism** (alignment of practices in doctoral training and post-doctoral fellowships)

MSCA - scope of activities

Innovative Training Networks	ITN	International and interdisciplinary consortia for doctoral and early-stage training <i>European Training Networks, European Industrial Doctorates, European Joint Doctorates</i>
Individual Fellowships	IF	Grants for post-doctoral researchers undertaking international and inter-sector mobility Dedicated support for career restart and reintegration of researchers <i>European Fellowships and Global Fellowships</i>
Research and Innovation Staff Exchange	RISE	International and inter-sector cooperation and transfer of knowledge through the exchange of staff
Co-funding of programmes	COFUND	Co-funding of regional, national and international programmes: <ul style="list-style-type: none"> - doctoral programmes - fellowship programmes
Policy support actions	NIGHT NCP	European Researchers' Night (NIGHT) NCP support Non call-based activities

MSCA - key new features

- Streamlining: from 8 actions in FP7 to 4 main activities
- Stronger focus on transferable skills, employability, and inter-sector mobility
- MSCA - the main EU programme for structured doctoral training
- MSCA dimension of joint doctorates (programmes leading to the delivery of joint, double or multiple doctoral degrees)
- Broader definition of industry involvement: participation of businesses (including SMEs) and other socio-economic actors (potential employers of researchers)
- EU contribution fully based on unit costs (person-month)
- Country coefficients applicable only to living allowances

5. Research Infrastructures

Research Infrastructures - specific challenge

- In response to the 'Innovation Union' and the 'Digital Agenda for Europe' commitments as well as to the recommendations of the ERA Communication.
- The objective of this H2020 part is to endow Europe with world-class research infrastructures, including e-infrastructures, which are accessible to all researchers in Europe and beyond and which fully exploit their potential for scientific advance and innovation.

Research Infrastructures - scope of activities

1. Developing the European RIs for 2020 and beyond
 - Supporting the development of new world-class RIs to help Europe to respond to grand challenges in science, industry and society
 - Integrating and opening to all European researchers national and regional RIs of European interest to ensure their optimal use and joint development
 - Developing, deploying and operating e-Infrastructures to achieve a world-leading capability in networking, computing and scientific data in a single and open European space for online research
2. Fostering the innovation potential of RIs and their human resources
3. Reinforcing European RI policy and international cooperation

Research Infrastructures - key new features

- More focused support to the implementation and operation of world-class infrastructures such as **ESFRI projects**
- Broader **access** to and deeper **integration** of European research infrastructures
- Foster the **innovation** potential of research infrastructures
- **Widen** the participation to pan-European research infrastructures
- More support to **e-infrastructures**
- Reinforce policy support to **European strategy on research infrastructures**
- Develop **international dimension** of the actions



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**Thank you
for your attention!**

Find out more:
www.ec.europa/research/horizon2020