



Excellent Science

European Research Council
Future and Emerging Technologies
Marie Skłodowska-Curie actions
Research Infrastructures



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1. Context and overview





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



Funding (€ million) 2014-2020



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



2. European Research Council (ERC)



ERC – specific objective and key features



- To reinforce the **excellence**, **dynamism** and **creativity** of European research.
- 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.
- Extension of restrictions on applications for 2015 calls based on the 2014 calls.

ERC – 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



3. Future and Emerging Technologies (FET)

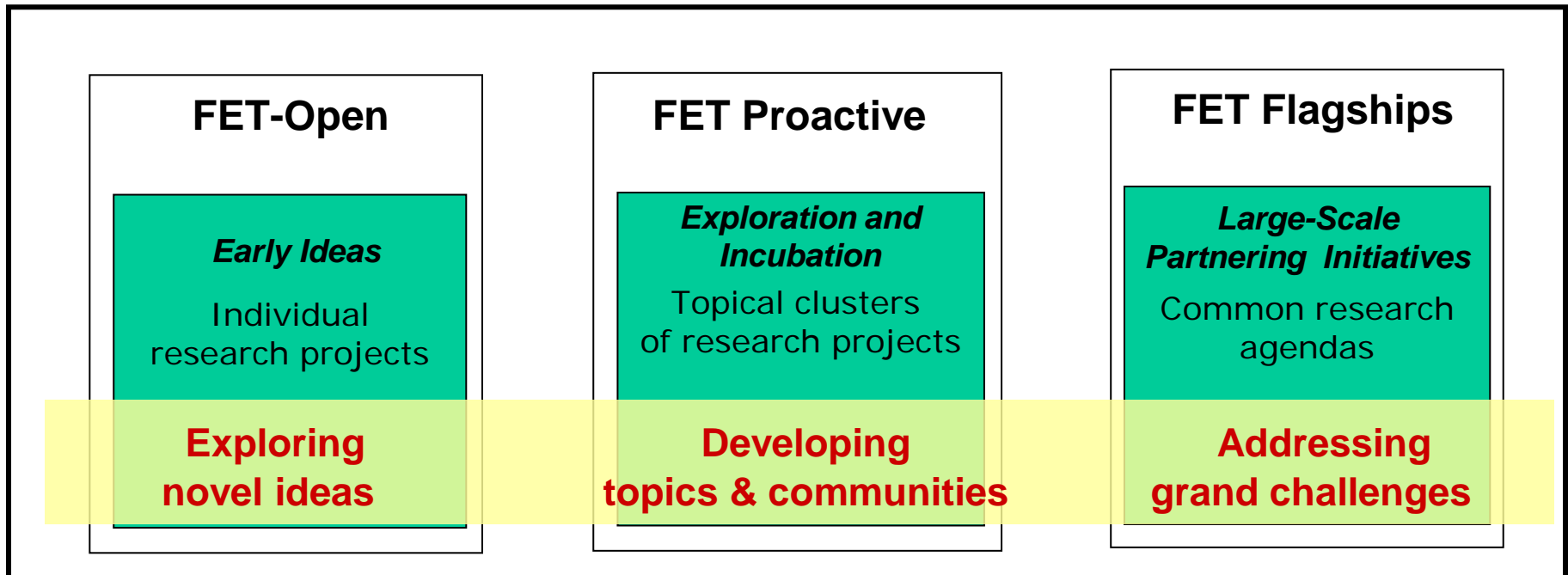


FET – specific objective



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.**

FET – funding schemes





4. Research Infrastructures



Research infrastructures

Specific objective



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





5. Marie Skłodowska-Curie actions (MSCA)



MSCA



Excellence

Research

Training

Skills

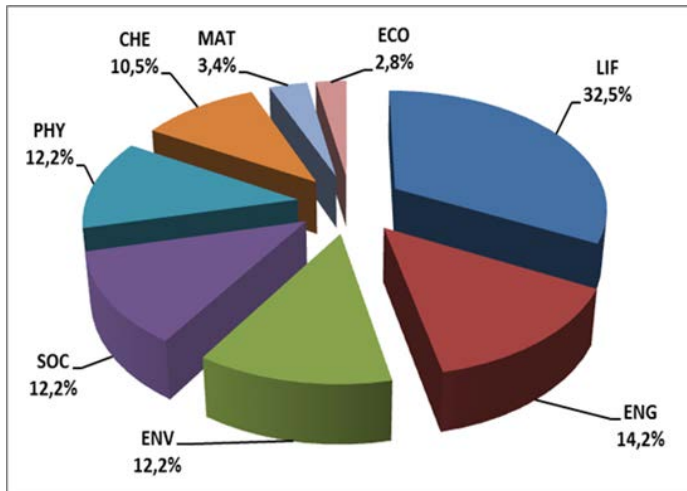


Mobility

FP7 MSCA Results



- ~ **50 000 researchers** financed in FP7
- ~ **9 400 projects** funded in FP7
- > 18 000 participations of host organisations in **82 countries** (46 TC)



- Shanghai top 500 -> 2/3 participating in MCA
- Top R&D investors in Europe -> 9 out of 10 participating in MCA
- **86%** beneficiaries **strengthened R&I collaboration**

All scientific areas covered - bottom-up approach

Western Balkans participation in FP7 MCA



- ✓ **4.03 million EUR** allocated to Western Balkan institutions in FP7 MCA (ITN, IAPP, IRSES, CIG)
- ✓ **2.09 million EUR** allocated to policy support actions (NIGHT and EURAXESS)
- ✓ **29 participations** in FP7 MCA projects (RS being the most active country)
- ✓ **169 researchers** funded, mainly in ITN action

MSCA objectives



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

€800 million granted in 2014 Marie Skłodowska-Curie calls

MSCA - Key features



- Open to **all domains of research and innovation** from basic research up to market take-up and innovation services (**bottom-up**)
- Participation of **non-academic sector strongly encouraged**, especially industry and SMEs
- **Mobility** as the key requirement - funding on condition participants move from one country to another
- Promotion of attractive **working and employment conditions**
- Particular attention to **gender** balance
- **Public engagement** of supported researchers



2014-2020

- ✓ ~ **65.000 researchers** to be supported, including **25.000 PhD candidates**
- ✓ ~ **200.000 scientific publications** in high impact peer-reviewed journals
- ✓ ~ **1.500 patent** applications
- ✓ ~ **100 spin-offs** created
- ✓ ~ **350-400** new regional / national / international **programmes** to be created targeting international and intersectoral training, and career development of research and innovation staff

MSCA

Scope of activities



Innovative Training Networks	ITN	International and interdisciplinary consortia for doctoral and early-stage research training
Individual Fellowships	IF	Grants for post-doctoral researchers undertaking international and inter-sector mobility Dedicated support for career restart and reintegration of researchers
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
Policy support actions	NIGHT NCP	European Researchers' Night (NIGHT) NCP support



MSCA - main EU programme for structured doctoral training

Objective

- ✓ raise excellence and **structure research and doctoral training**
- ✓ train a new generation of creative, entrepreneurial and innovative early-stage researchers

Scope

- ✓ International networks, interdisciplinary projects, **intersectoral collaboration**
- ✓ Scientific **excellence** with **innovation-oriented approach**
- ✓ Particular focus on **entrepreneurial skills** and **employability of researchers**
- ✓ Collaboration and **exchange of best practice** among participating organisations

ITN – Main features



- ✓ **Budget:** € 405.18 Million in 2014 (EID: 25.5 Mio, EJD: 30 Mio)
€ 370 Million in 2015 (EID: 25 Mio, EJD 28 Mio)
- ✓ **European Training Networks, European Industrial Doctorates, European Joint Doctorates**
- ✓ Minimum **eligibility condition:** 3 different EU MS/AC (2 for EID)
- ✓ Support to **early-stage researchers only**
- ✓ Duration of projects: maximum 4 years
- ✓ Fellowships of 3-36 months
- ✓ Maximum **540 researcher-months** per consortium (180 for EID with 2 partners)

Individual Fellowships (IF)



Objective

- ✓ enhance the creative and innovative **potential of experienced researchers**
- ✓ provide opportunities to acquire new knowledge, work on research projects in a European context or outside Europe, resume a career or return to Europe

Scope

- ✓ Individual, trans-national fellowships awarded to the best or most promising researchers
- ✓ **European Fellowships** or **Global Fellowships**
- ✓ **Career Restart Panel** and **Reintegration Panel**

Expected Impact

- ✓ release the full potential of researchers and to catalyse significant development in their careers in both the academic and non-academic sectors
- ✓ strengthen the contact network of the researcher and the host organisation

IF – Main features



- ✓ **Budget:** € 240.50 Million in 2014 (Global Fellowships: 29 Mio)
€ 213 Million in 2015 (Global Fellowships: 27 Mio)
- ✓ Duration of projects: 2 years (IF Global: 3 years)
- ✓ Support to **experienced researchers of any nationality** (IF Global and IF Reintegration: nationals of EU MS/AC and long-term residents)
- ✓ Focus on **career development**, not necessarily experience
- ✓ Additional 3 or 6 month **secondment option**, within Europe and in another sector

Research and Innovation Staff Exchange (RISE)



Objective

- ✓ promote **international and inter-sector collaboration** through research and innovation staff exchanges
- ✓ foster a shared culture of research and innovation, stimulate commercial exploitation of research result

Scope

- ✓ International and inter-sector **transfer of knowledge** and sharing of ideas
- ✓ Common **research and innovation project**
- ✓ Highly skilled research and innovation staff
- ✓ **Within Europe: only inter-sector secondments**
- ✓ No secondments between institutions located outside Europe or within the same MS/AC

Expected Impact

- ✓ strengthen the interaction between organisations in the academic and non-academic sectors, and between Europe and third countries

RISE – Main features



- ✓ **Budget:** € 70 Million in 2014
€ 80 Million in 2015
- ✓ Duration of projects: maximum 4 years
- ✓ Minimum eligibility condition: **participants in 3 different countries** (at least 2 MS/AC)
- ✓ Support to **secondments of staff members (1-12 months)**
- ✓ No mobility rule required
- ✓ **Eligibility condition** for staff member: **6 month at the sending institution** prior to the first secondment
- ✓ Maximum **540 researcher-months** per consortium



MSCA to foster excellence throughout Europe

Objective

- ✓ stimulate regional, national or international programmes to foster excellence in researchers' training, mobility and career development

Scope

- ✓ international, intersectoral and interdisciplinary **research training**, as well as transnational and cross-sector **mobility** of researchers
- ✓ opportunities for **researchers from all countries**
- ✓ researchers to comply with the mobility rules of the MSCA
- ✓ open and transparent selection and recruitment

Expected Impact

- ✓ exploit synergies between EU actions and those at regional, national, and international level
- ✓ enhance excellent career opportunities and employment conditions for researchers

COFUND – Main features



- ✓ **Budget:** € 80 Million in 2014 (Doctoral Programmes: 30 Mio)
€ 80 Million in 2015 (Doctoral Programmes: 30 Mio)
- ✓ Maximum **€10 Million per single applicant** per call
- ✓ **Doctoral programmes** and **Fellowship programmes**
- ✓ Duration of projects: maximum 5 years
- ✓ **Researchers** recruited for **minimum 3 months**
- ✓ EU unit cost contribution to **living allowances for researchers** and **management costs**
- ✓ Minimum living allowance fixed in the WP

European Researchers' Night



Objective

- ✓ bring researchers closer to the **general public**
- ✓ increase **awareness of research** and innovation activities

Scope

- ✓ yearly event, typically on the last Friday of the month of September
- ✓ focus on the general public, addressing and attracting people regardless of the level their scientific background
- ✓ special **focus on pupils and students**
- ✓ promotion of the European dimension and gender balance in research and innovation
- ✓ **involvement of researchers funded by Horizon 2020**

Expected Impact

- ✓ raise awareness of the importance of research careers
- ✓ in the long term, encourage young people to embark on scientific careers

NIGHT – Main features



- ✓ **Budget:** € 8 Million in 2014 (2 editions covered)
- ✓ Call under **Coordination and support action**
- ✓ Maximum 100% funding
- ✓ Duration: **maximum 2 years** (option for one edition only)
- ✓ Beneficiaries: any legal entity in the EU Member States and Associated Countries
- ✓ Consortium agreement not required

EU contribution



- ✓ Contribution fully based on unit costs (person-month) → MSCA calls
- ✓ New approach to country coefficients
- ✓ Country coefficients applicable to living allowances in ITN and IF
- ✓ Two broad dimensions of unit costs: researcher and institutional
- ✓ Dedicated unit cost for management and overheads

EU contribution – amounts



Categories of eligible costs	Costs of researchers/seconded staff member (1)				Institutional costs (2)	
	Living allowance (a)	Mobility allowance (b)	Family allowance (c)	Top-up allowance (d)	Research, training and networking costs (a)	Management and indirect costs (b)
Marie Skłodowska-Curie action						
ITN (100%)	3 110	600	500	--	1 800	1 200
IF (100%)	4 650	600	500	--	800	650
RISE (100%)	--	--	--	2 000	1 800	700
COFUND (50%)	ESR: 3 710 ER: 5 250	--	--	--	--	650

MSCA Calls 2014-2015



ITN	11/12/2013 – 09/04/2014 02/09/2014 – 13/01/2015	EUR 405.18 million in 2014 EUR 370 million in 2015
IF	12/03/2014 – 11/09/2014 12/03/2015 – 10/09/2015	EUR 240.50 million in 2014 EUR 213.00 million in 2015
RISE	11/12/2013 – 24/04/2014 06/01/2015 – 28/04/2015	EUR 70.00 million in 2014 EUR 80.00 million in 2015
COFUND	10/04/2014 – 02/10/2014 14/04/2015 – 01/10/2015	EUR 80.00 million in 2014 EUR 80.00 million in 2015
NIGHT	11/12/2013 – 04/03/2014	EUR 8.00 million



HORIZON 2020

Find out more:

<http://ec.europa.eu/programmes/horizon2020>

<http://ec.europa.eu/mariecurieactions>

<http://ec.europa.eu/research/participants/portal>