



# **European Research Council (ERC)**- Starting Grants & Consolidator Grants

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#### **About KoWi**





# KoWi – European Liaison Office of the German Research Organisations

A service platform for German Research Organisations

- Supported by the "Association for the Promotion of European and International Cooperation in Science e.V."
- Financed by the German Research Foundation (DFG)
- Offices in Bonn and Brussels
- Activities:
  - Information, consulting and training to support the participation of researchers at German universities and research organisations in the European Framework Programme





# Association for the Promotion of European and International Cooperation in Science e.V.



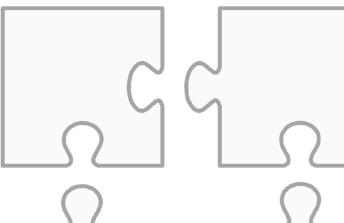




#### Support for ERC applications in Germany

Regional consulting services

National
Contact Point /
EU-Liaison
Office







National Contact Point / KoWi







#### Basic information on the ERC





#### Horizon 2020 – Framework Programme for Research and Innovation

# Part I – Excellent Science

- 1. European Research Council (ERC)
- 2. Future and Emerging Technologies (FET)
- 3. Marie Skłodowska-Curie Actions (MSCA)
- European Research
   Infrastructures, including
   e-infrastructures

#### Part II – Industrial Leadership

- Leadership in Enabling & Industrial Technologies (LEIT)
- Information and Communication Technologies
- Nanotechnologies, Advanced
   Materials, Advanced
   Manufacturing and Processing and Biotechnology
- Space
  - 2. Access to Risk Finance
    - 3. Innovation in SMEs

#### Part III – Societal Challenges

- Health, demographic change and wellbeing
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy
- 3. Secure, clean and efficient energy
- 4. Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies

Part IV Spreading excellence & widening participation

Part V Science with & for Society

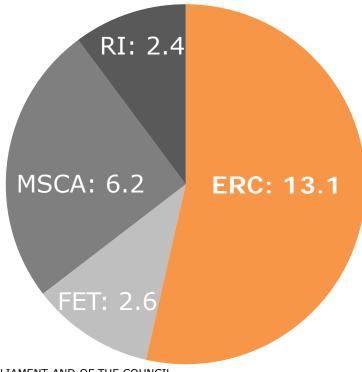
Non-nuclear direct actions of the Joint Research Centre (JRC) The European Institute of Innovation and Technology (EIT)





# Horizon 2020 Budget

Excellent Science: 24,2 bn.



total: ca. 74.8 bn. (before EFSI

cuts: 77 bn.)

(in current prizes)

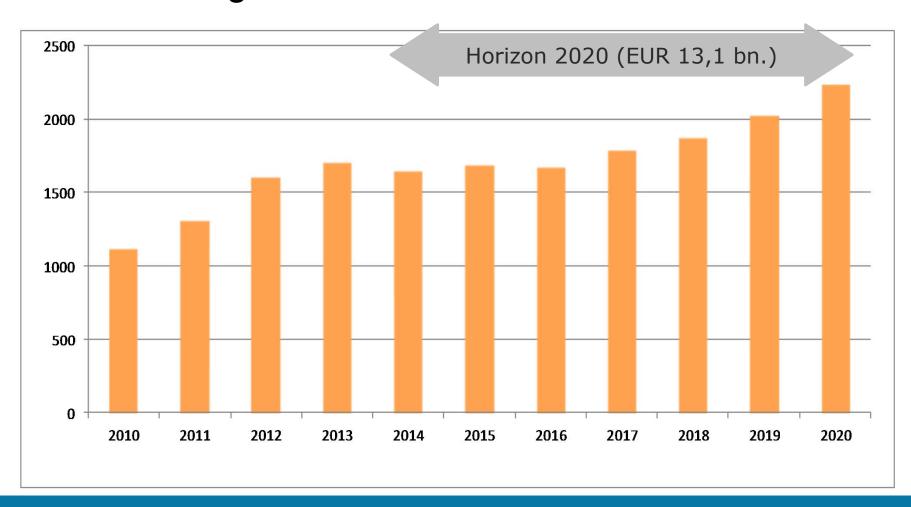
Source: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the Framework Programme for Research and Innovation "Horizont 2020" (2014-2020)

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the European Fund for Strategic Investments





# ERC budget 2010-2020







#### ERC – Underlying principles

- European funding of basic research ("frontier research")
- Development of funding schemes is science-driven (Scientific Council)
- Open to all fields of research: bottom-up, investigator-driven
- Open for researchers of any age and nationality
- Scientific excellence is the sole criterion for evaluation!





#### ERC – Funding modalities

- Funding of individuals: Principal Investigator + project
- Support for researchers to start or consolidate their own independent research team in Europe (MS or AC)
- Funding: 100% + 25%
  - All direct project costs: living allowance, travel expenses, consumables, publication costs (incl. Open Access), research-related costs, purchase of major equipment (within the limits of depreciation rules)
  - Additional financing of indirect costs: 25% overhead



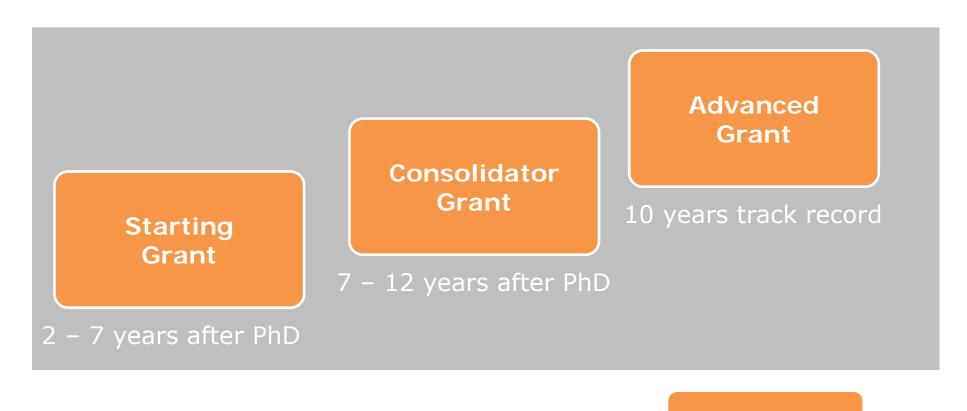


# ERC funding schemes





## ERC – Funding schemes



"Prepare ideas from your ERC Grant for the market"

Proof of Concept





#### **ERC Starting Grants & Consolidator Grants**





# Starting Grants – Overview

Target group	2-7 years after PhD (extensions possible in exceptional cases; special rules for MD)
Funding	max. EUR 1.5 million for max. 5 years (exception: + EUR 500,000 for major equipment or for PIs from Third Countries)
Host institution	in EU Member State or Associated Country
Time commitment	≥ 50% (≥ 50% in Europe)
Application procedure	single submission of full proposal, two-step evaluation (incl. interview)
Call	annually





#### Consolidator Grants – Overview

Target group	7-12 years after PhD (extensions possible in exceptional cases; special rules for MD)
Funding	max. EUR 2 million for max. 5 years (exception: + EUR 750,000 for major equipment or for PIs from Third Countries)
Host institution	in EU Member State or Associated Country
Time commitment	≥ 40% (≥ 50% in Europe)
Application procedure	single submission of full proposal, two-step evaluation (incl. interview)
Call	annually





# **Application**





#### Prolonged eligibility

- Calculation of the eligibility time window:
  - Time elapsed between date on the PhD certificate and 1 January 2017
- Prolonged eligibility for maternity/paternity leave
  - Mothers: 18 months for each child born after or before PhD award
  - Fathers: actual documented amount of paternity leave for each child born after or before PhD award
- Other reasons:
  - Documented elapsed time for long-term illnesses (> 90 days), clinical training or national service <u>after</u> PhD





#### Medical Doctor (MD)

- Principal Investigators who are MDs have to have:
  - Additional PhD

OR

 Appointment that requires doctoral equivalency (postdoc fellowship, professorship, ...)

AND

- Research experience (in any case)
- Eligibility time-window:
  - 4-9 years past MD for Starting Grants
  - 9-14 years past MD for Consolidator Grants





#### Evaluation criteria – PI

- Intellectual capacity and creativity:
  - To what extent has the PI demonstrated the ability to propose and conduct ground-breaking research?
  - To what extent does the PI provide evidence of creative independent thinking?
    - e.g. publications without PhD supervisor, own third party funding
  - To what extent have the achievements of the PI typically gone beyond the state-of-the-art?

#### II. Commitment:

- To what extent does the PI demonstrate the level of commitment to the project necessary for its execution and the willingness to devote a significant amount of time to the project?
  - StG: 50% time commitment
  - CoG: 40% time commitment

Source: ERC WP 2017



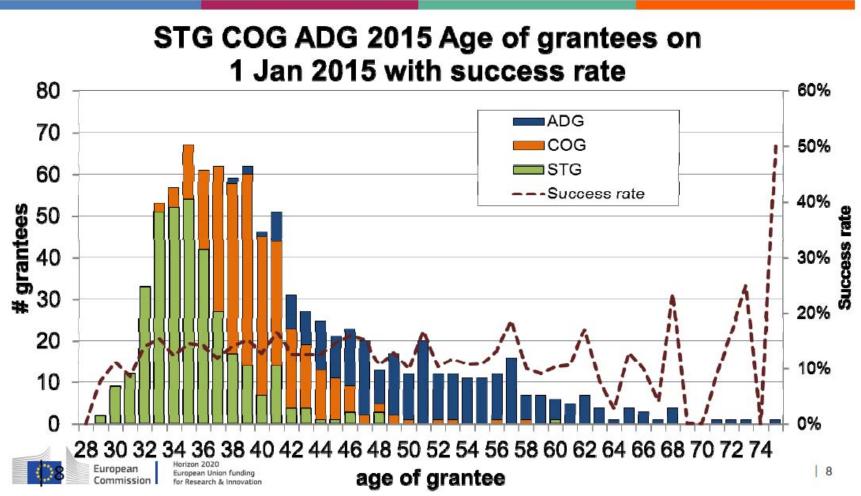


#### ERC Starting Grantees – Profile features

- Starting-Grantees usually have longer (and often several) "mobility experiences"
- Solid third-party funding (DFG, BMBF, EU etc.)
- Publications in the most high-ranking international journals
- Memberships in academies and editorial boards, review activities
- Distinct (inter)national research cooperation with leading scientists

#### 2015 Calls: Age of grantees



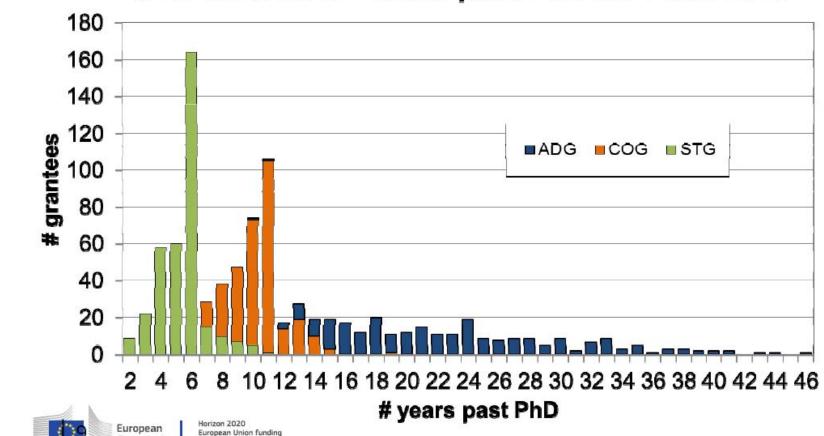


# 2015 Calls: "Academic age" of grantees

European Research Council

Established by the European Commission

#### STG COG ADG - Years past PhD on 1 Jan 2015



for Research & Innovation





#### Evaluation criteria – Project

- Ground-breaking nature and potential impact of the research project
  - To what extent does the proposed research address important challenges?
  - To what extent are the objectives ambitious and beyond the state-of-the-art (e.g. novel concepts and approaches or development between or across disciplines)?
  - To what extent is the proposed research high risk/high gain?

Source: ERC WP 2017





#### Evaluation criteria – Project

#### II. Scientific Approach

- To what extent is the outlined scientific approach feasible bearing in mind the extent that the proposed research is high risk/high gain?
- To what extent is the proposed research methodology appropriate to achieve the goals of the project?
- To what extent does the proposal involve the development of novel methodology?
- To what extent are the proposed timescales and resources necessary and properly justified?

Source: ERC WP 2017



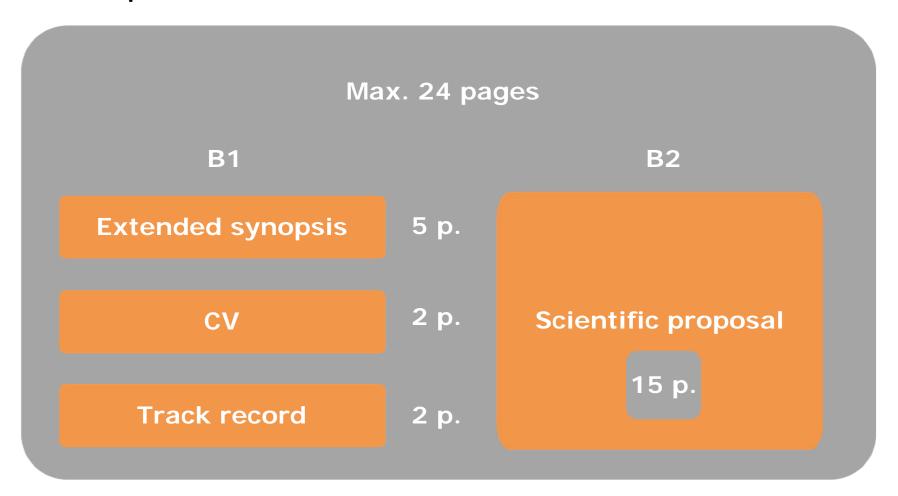


#### Proposal

- Administrative forms (Part A)
  - 1 General Information
  - 2 Participants & Contacts
  - 3 Budget
  - 4 Ethics
  - 5 Call-specific questions
- Research Proposal (Part B)
- Annexes
  - Host Support Letter (Commitment of the Host Institution)
  - PhD-Certificate
  - Ethics Self-Assessment (if applicable)
  - Further documents (if applicable)

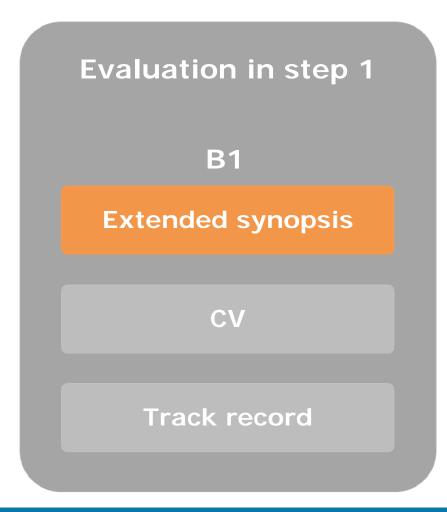








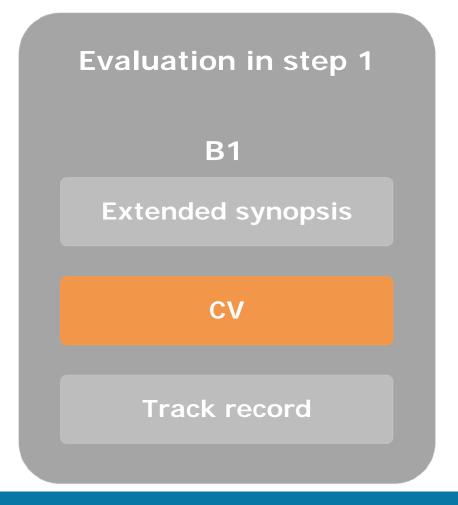




- Concise presentation of scientific project
- Particular attention to the ground-breaking nature of the research
- Demonstration of the feasibility of the scientific approach
  - Short work plan, team composition and budget



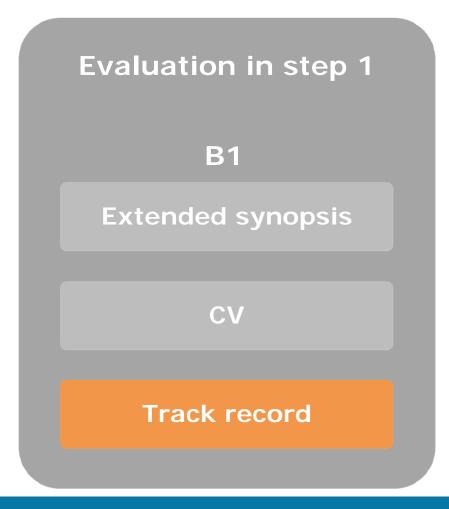




- Standard academic and research record
- Clear explanation of research career gaps and/or unconventional paths
  - + Funding ID







- Early achievements track record
- Publications in peer-reviewed international journals
- Conference proceedings
- Monographs
- Granted patent(s)
- Invited presentations
- Prizes, awards, memberships





#### State of the art and objectives

- Ground-breaking
- Potential impact

#### Research methodology

- High risk/high gain
- Feasibility

#### Resources

- Timescale / appropriate use
- Work plan, team composition and budget!

# **Evaluation step 2 B1 B2**: Scientific proposal





# Starting & Consolidator Grants – Evaluation





## Proposal & evaluation

**Evaluation in step 1 Extended synopsis** CV Track record

**Evaluation in step 2 B1 Scientific proposal** 





#### Peer review evaluation

- Selection of evaluators through the Scientific Council
- Domain specific evaluation panels: panel chair and 10-15 panel members
- Three scientific domains:
  - Physical Sciences & Engineering (PE): 10 Panels
  - Life Sciences (LS): 9 Panels
  - Social Sciences & Humanities (SH): 6 Panels





#### Evaluation – two-step process

- Evaluation step 1:
  - Single (remote) evaluation through panel members
  - Overall evaluation in the panel (meeting)
- Evaluation step 2:
  - Single evaluation through panel members & external reviewers
  - Interview
  - Overall evaluation in the panel
- Both steps: Panel meetings establish a ranking list of proposals based on individual reviews
- Reviewers evaluate PI and proposal respectively on a scale from A to C (in both steps)





# Physical Sciences and Engineering (PE)

PE1	Mathematics
PE2	Fundamental constituents of matter
PE3	Condensed matter physics
PE4	Physical and analytical chemical sciences
PE5	Synthetic chemistry and materials
PE6	Computer science and informatics
PE7	Systems and communication engineering
PE8	Products and processes engineering
PE9	Universe sciences
PE10	Earth system science





#### Example Panel PE7 – Descriptors

Keywords, not sub-panels!

, etc.)

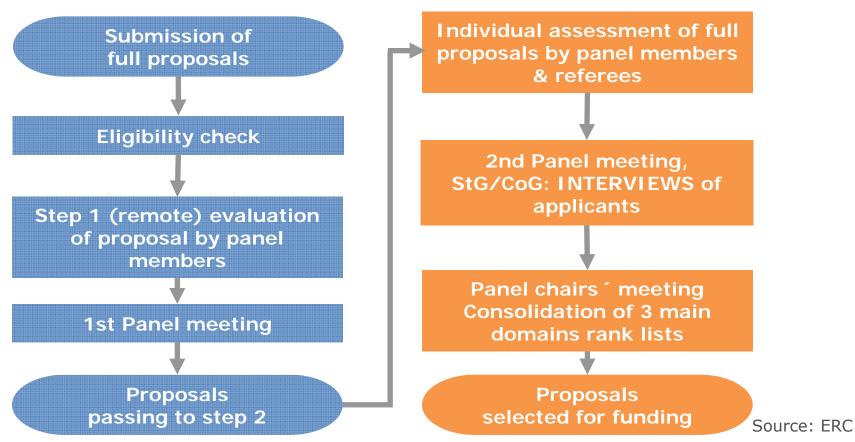
- <u>PE7 Systems and Communication Engineering:</u> Electrical, electronic, communication, optical and systems engineering
  - PE7\_1 Control engineering
  - PE7\_2 Electrical engineering: power components and/or systems
  - PE7\_3 Simulation engineering and modelling
  - PE7 4 (Micro and nano) systems engineering
  - PE7\_5 (Micro and nano) electronic, optoelectronic and photonic components
  - PE7\_6 Communication technology, high-frequency
  - PE7\_7 Signal processing
  - PE7\_8 Networks (communication networks, senso
  - PE7\_9 Man-machine-interfaces
  - PE7\_10 Robotics
  - PE7\_11 Components and systems for applications (in e.g. medicine, biology, environment)
  - PE7\_12 Electrical energy production, distribution, application
- <u>PE8 Products and Processes Engineering:</u> Product design, process design and control, construction methods, civil engineering, energy processes, material engineering
  - PE8\_1 Aerospace engineering
  - PE8\_2 Chemical engineering, technical chemistry
  - PE8\_3 Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste
  - treatment
  - PE8\_4 Computational engineering
  - PE8\_5 Fluid mechanics, hydraulic-, turbo-, and piston engines
  - PE8\_6 Energy processes engineering





# Evaluation procedure – StG & CoG

Step 1 Step 2

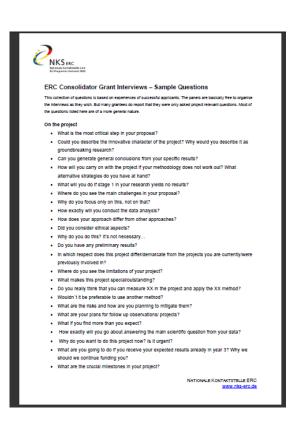






#### Be prepared: Questions on your profile

- Prooven independency from PhD-supervisor
- Experience with Team-Leadership and Supervision
- Own qualification and ability to lead ground-breaking research
- Your scientific achievements (CV and Track Record)
- Future career aims







## From submission to funding ≈ 10 months







#### Resubmission in 2017?

Result step 1	<b>2014</b> and before	2015	2016
A	yes	yes	yes
В	yes	yes	NO
С	yes	NO	NO

A in step 1 (passed to step 2): resubmit without limitations

B in step 1: do not submit in the next call year

C in step 1: do not submit in the next two calls years





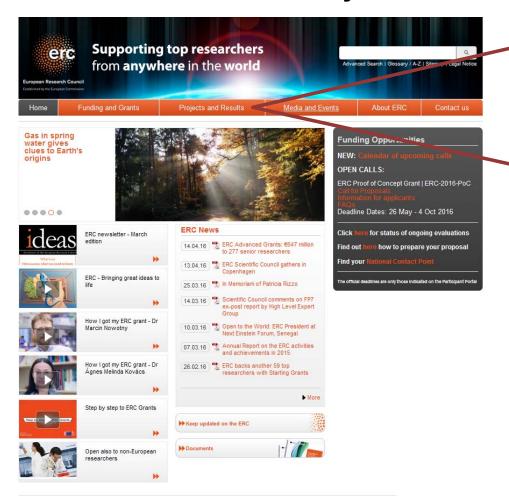
#### First reflections on the project

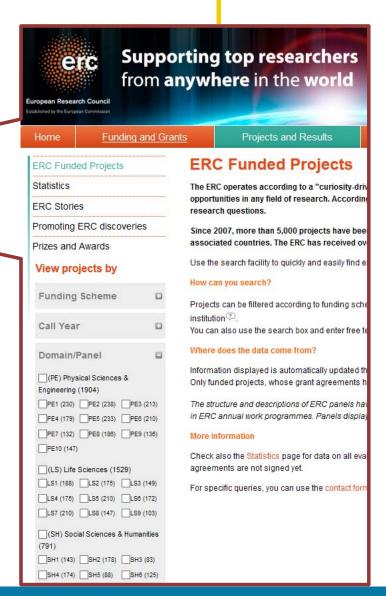
- Can you explain your vision for the project in one sentence?
- Which important (societal/ topic-related) challenges are you going to tackle with the project?
- Which are the ground-breaking aspects of your project?
- What is the excpected **impact** of your project on your research field?
- Why are you the right person to carry out the project?





# ERC Website: Project search









# Success Rates, Calls & Deadlines





#### ERC Success Rates 2014 - 2016

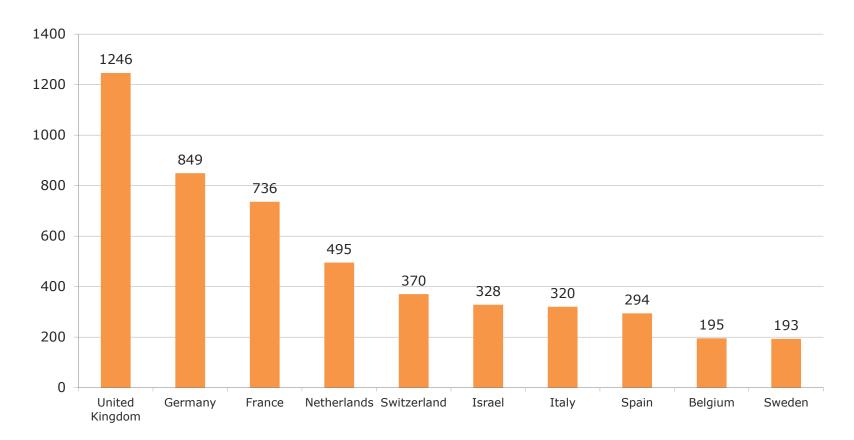
Call year	2014	2015	2016
Starting Grants	11,5 %	12 %	11 %
Consolidator Grants	15 %	15 %	
Advanced Grants	8,3 %	14 %	





# **ERC-Grants by Host Institution Country**

As of: March 2016

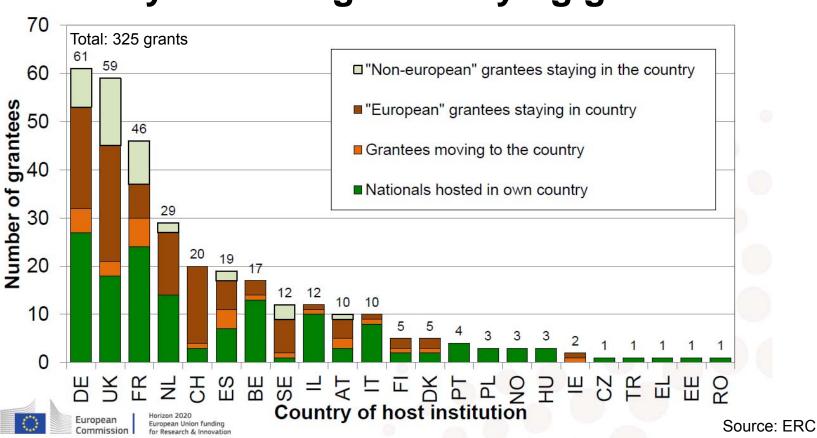


Statistic based on ERC data





# ERC Starting Grant 2016 Mobility: Incoming and staying grantees







#### Calls for proposals 2017

Publication of the Work Programme: 26 July 2016

Funding scheme	Reference date	Call Opens	Deadline	Budget
Starting Grants	01 January 2017	26 July 2016	18 October 2016	605 Mio.
Consolidator Grants	01 January 2017	20 October 2016	09 February 2017	575 Mio.
Advanced Grants		16 May 2017	31 August 2017	567 Mio.
Proof of Concept		2 August 2016	19 January 2017, 25 April 2017, 5 September 2017	20 Mio.
			5 p.m. Brussels time	

5 p.m. Brussels time





# Support for applicants





#### **ERC** services at KoWi

- Individual support and supervision for applicants
- Homepage on ERC, incl. FAQs: www.nks-erc.de
- Newsletter (available in English): <a href="http://www.eubuero.de/newsletter-en.htm">http://www.eubuero.de/newsletter-en.htm</a>
- Information events, workshops and consulting for small groups at German universities and research organisations
- Interview trainings for the Starting and Consolidator Grants and on-site support in Brussels
- Consulting on ERC project management





#### **ERC:** Information online





**National Contact Point (NCP)** 

**European Research Council (ERC)** 





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All current issues about EU research funding – simply delivered









## **ERC**: Contact persons

#### Head of the team



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