

The European Research Council



ERC – all you need to know before applying!

Monday, 10th of July 2017



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Horizon 2020
European Union funding
for Research & Innovation



The European Research Council



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Established by the European Commission

- What is the ERC
- How to apply
- France Performance in ERC schemes



ERC is....

1. funding: it is part of H2020



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Pillar 1: Excellent Science

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

Pillar 2: Industrial leadership

- LEIT
- Access to Risk Finance
- Innovation in SMEs

Pillar 3: Societal challenges

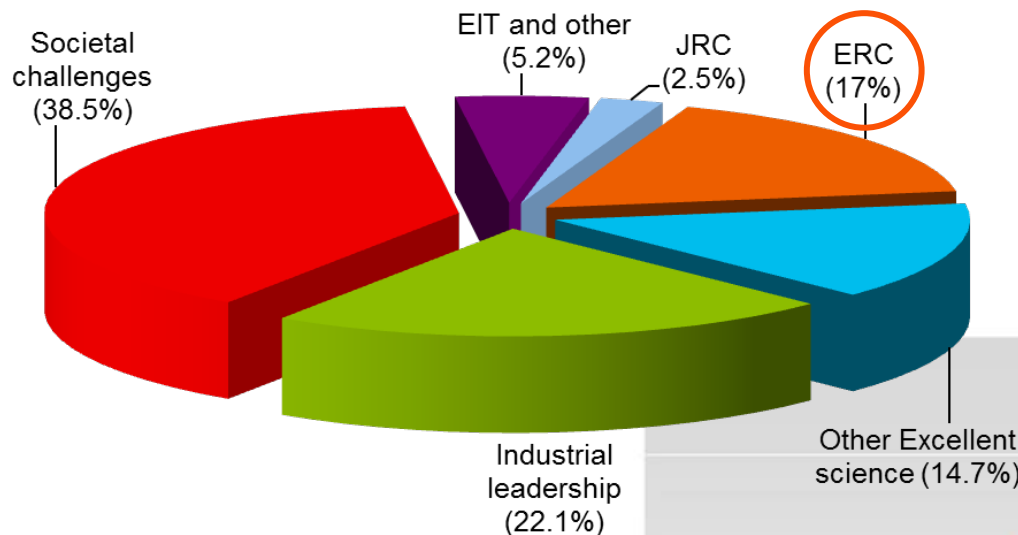
- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

ERC is....

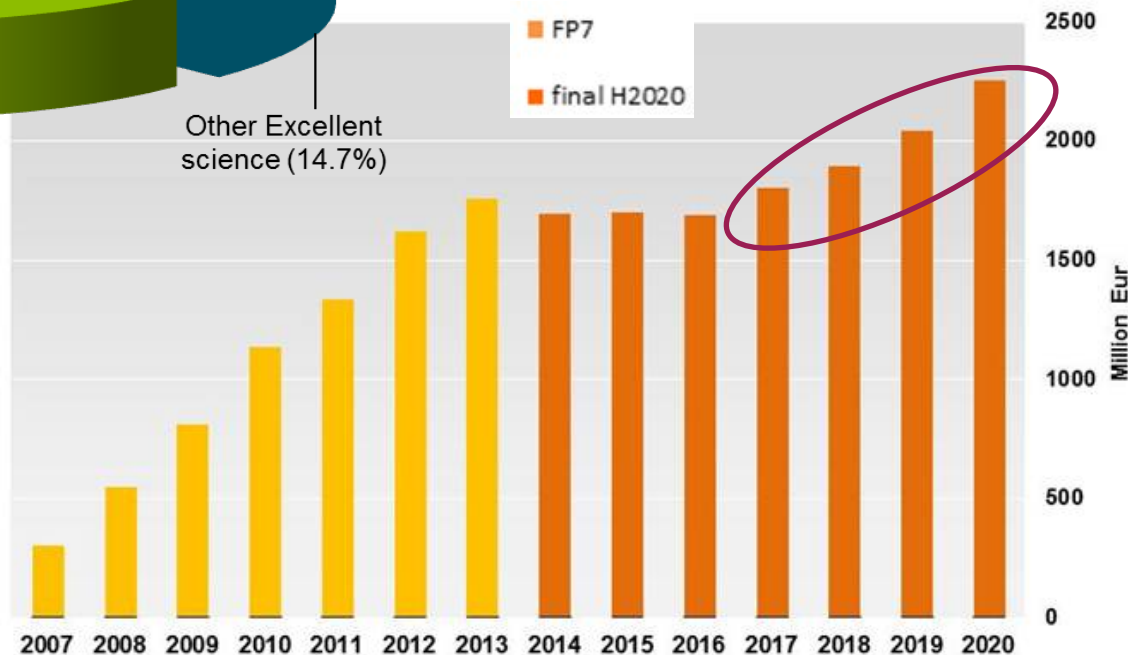
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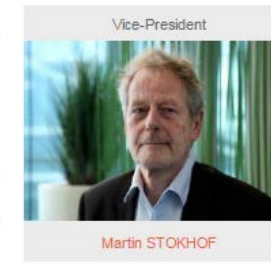
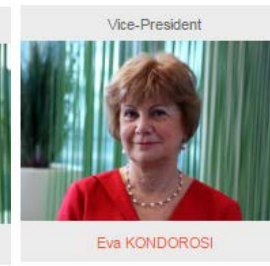
ERC Budget €13 billion



In 2017, the budget will be 1,8 B euros, the highest ever since the beginning of the ERC!

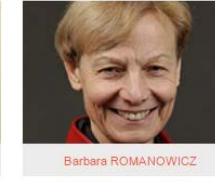
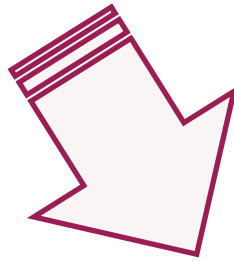
ERC is....

2. the Scientific Council



Scientists at the Driver's Seat

- 22 prominent researchers appointed by the Commission
- Establishes overall scientific strategy
- Controls quality of operations and management
- Ensures communication with the scientific community



Panel Members

- Appointed by the Scientific Council
- Full independence in the evaluation and ranking of the proposals
- Appoint remote referees

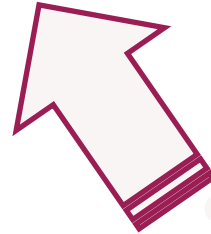
ERC is...

3. the ERCEA



The ERC Executive Agency

- Implements calls for proposals
- Organises peer review evaluation
- Establishes and manages grant agreements
- Administers scientific and financial aspects
- Carries out communications activities



ERC Scientific officers

- Work closely with the panel members
- Manage all practical aspects of the evaluations
- Carry out scientific follow-up

ERC basics:

1 researcher, 1 Host Institution, 1 project, 1 selection criterion



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INDIVIDUAL RESEARCHERS
FROM ALL OVER THE WORLD

LONG TERM GRANTS

TO HIGH-RISK/HIGH-GAIN PIONEERING PROJECTS
IN ANY FIELD OF FRONTIER RESEARCH



Life Sciences



Physical Sciences and Engineering



Social Sciences and Humanities

The main ERC funding schemes...



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ERC STARTING GRANT



COMPLETED YOUR PHD
2 TO 7 YEARS BEFORE
1/1 OF THE YEAR OF THE CALL



ONE IMPORTANT PUBLICATION
SCIENTIFIC JOURNAL IN
YOUR FIELD

ERC CONSOLIDATOR GRANT



PHD AWARDED
7 TO 12 YEARS BEFORE
1/1 OF THE YEAR OF THE CALL



A CV AND TRACK-RECORD
INDEPENDENCE AND
RESEARCH MATURITY



SEVERAL IMPORTANT PUBLICATIONS
SCIENTIFIC JOURNALS IN
YOUR FIELD

ERC ADVANCED GRANT



UP TO 10 YEARS EXCELLENT
SCIENTIFIC
TRACK-RECORD

Coming
soon!

Synergy Grants

Ambitious highly integrated by 2 – 4 PIs
Up to € 14.0 Mio (10+4)
For 6 years
(Pending approval of ERC WP 2018)

... are substantial long-term grants...

ERC
STARTING
GRANT



FUNDING: OF NORMALLY
UP TO €1.5 MILLION

ERC
CONSOLIDATOR
GRANT



FUNDING: OF NORMALLY
UP TO € 2 MILLION

ERC
ADVANCED
GRANT



FUNDING: OF NORMALLY
UP TO € 2.5 MILLION

OF 5 YEARS

COVER UP TO 100%

TOTAL ELIGIBLE DIRECT COSTS

- Reasons for additional funds:
- start-up costs for moving to Europe
 - access to large facilities
 - major equipment

...that go to the very best scientists...



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PAN-EUROPEAN COMPETITIONS



OPEN TO
**EXCELLENT
& INDEPENDENT
RESEARCHERS**

REGARDLESS
**NATIONALITY
AGE & GENDER**

NO THEMATIC PRIORITIES
NO CONSORTIA
NO CO-FINANCING



European
Commission

Horizon 2020
European Union funding
for Research & Innovation

... with excellence as the sole evaluation criterion!



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SCIENTIFIC EXCELLENCE OF THE RESEARCHER & THE PROJECT

Why should one apply for an ERC grant?



ERC offers independence, recognition & visibility

- research topic of **own choice**, with a team of **own choice**
- true **financial autonomy** for 5 years
- negotiate with the host institution the **best conditions** of work
- attract **top team members** (EU and non-EU) **and collaborators**
- **portability of grants** within Europe
- **attract additional funding**

After 10 Years, the ERC has been a Success Story



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Key figures

7,000

top researchers funded

50,000

researchers & other professionals
hired in ERC teams

with **€12 billion**



Breakthroughs

73%

of completed projects
led to breakthroughs/major
advances



Scientific impact

> 5,500

articles among
1% most cited
scientific journals



Open to the World

9

international initiatives
for non-EU talent
to join ERC teams



Prestigious prizes, e.g.

6

Nobel
Prizes

5

Wolf
Prizes

4

Fields
Medals



ERC as model

15

EU countries set up
ERC-like structures/funding
schemes

ERC is carrying out post-project evaluations to measure its impact!

- 2/3 of completed ERC projects resulted in scientific breakthroughs (around 21%) or major advances (around 50%).
- 2/3 of the projects have an important degree of interdisciplinarity.
- The projects that have made more significant contributions have a higher degree of interdisciplinarity and a higher potential for economic or societal impact.
- Conclusion: the high-risk/high-gain approach intrinsic to the ERC frontier research funding is very successful!

NATURE | NEWS

Europe's premier funding agency measures its impact

European Research Council embarks on an unusual evaluation that could inspire others.

Alison Abbott

26 July 2016



PDF



Rights & Permissions



Celebrating ERC-10 in Europe and beyond

- ✓ ERC Week: 13-19 March
- ✓ >160 events in 35 countries
- ✓ Twitter: **#ERC10yrs**
- ✓ More information: erc.europa.eu/ERC10yrs/erc-week



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Preparing your proposal




Step 1: Get information!



- **Register early**, get familiar with the European Commission's Participant Portal system, download the templates and start filling in the forms
<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>
- Use the **help tools and call documents** (**Information for Applicants**, Work Programme, Frequently Asked Questions) to prepare your proposal
 - 💡 Read the guidelines carefully!
 - 💡 **Find out about the formatting rules and page limits to respect!**
- **Talk to your Institution's grant office and other ERC grantees**

Host Institution



-  **Your** choice (in an EU Member State/Associated Country)
-  You **can change** it during the project's life
-  **Negotiate** with the HI (your position, equipment, administrative support, access to infrastructure, etc.)

Rumour: *The quality/fame of the HI is increasing my chances/scores.*

✗ NOT true: the HI is not an evaluation criterion!

Preparing your proposal

Step 2: make sure you are eligible!



- **Window is calculated as according to the 1st of January of the year of the Call!**
- **Extensions of eligibility window possible for StG and CoG for documented cases of:**
 - Maternity – 18 months per child (before or after PhD)
 - Paternity – actual time taken off
 - Military service
 - Medical specialty training
 - Caring for seriously ill family members
- **No limit to the total extension**

Preparing your proposal

Step 3: Decide whether to apply.

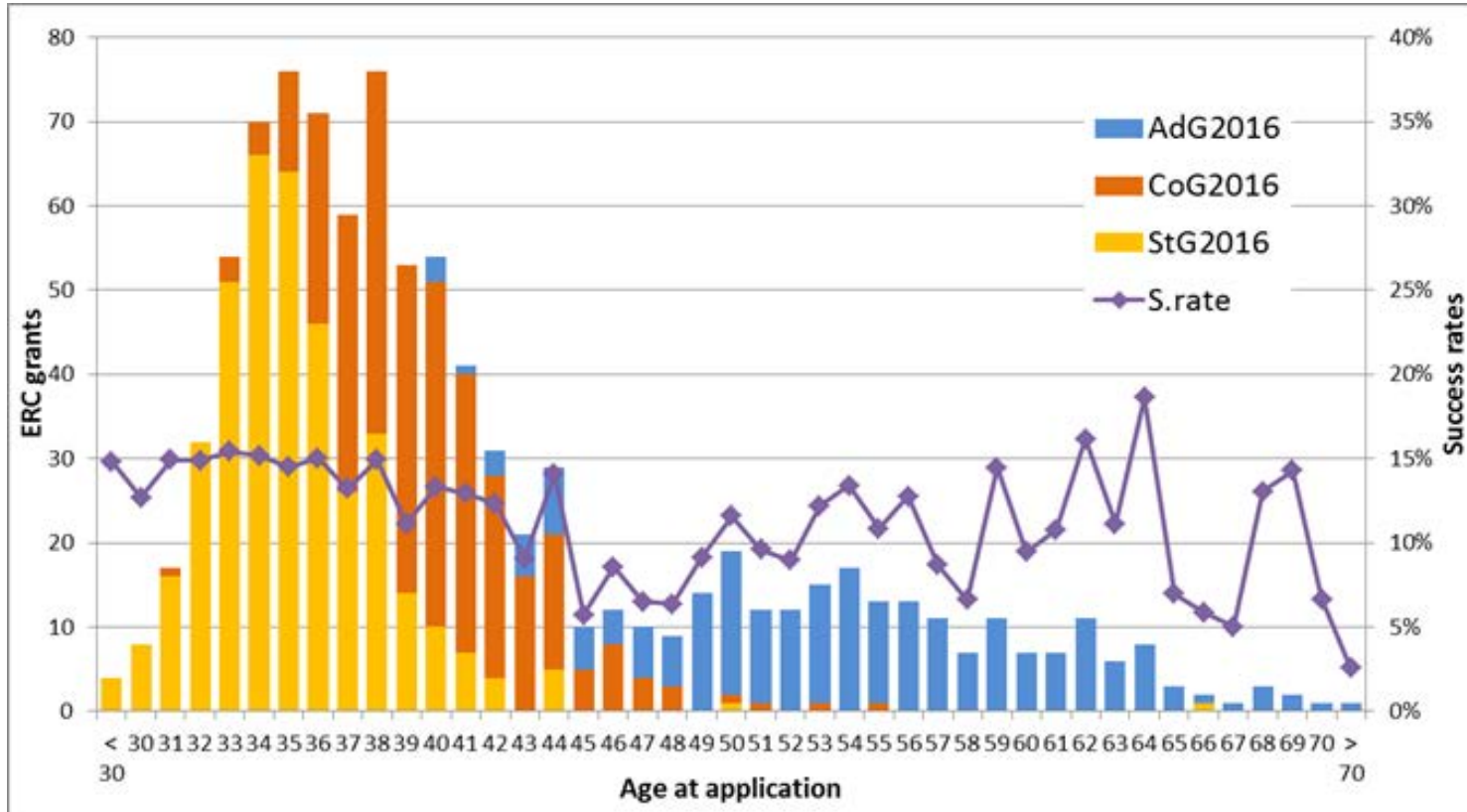


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💡 Shall I apply now or wait another year?

Rumour: I should wait until the end of the eligibility window since I will be more competitive then.

✗NOT true: The success rate is virtually flat across the eligibility window (StG, CoG)



Preparing your proposal

Step 4: Choose your Panel!

Evaluation Panel Structure (WP2017)

Life Sciences

- **LS1** Molecular and Structural Biology and Biophysics
- **LS2** Life Sciences and the Environment
- **LS3** Life Sciences and the Environment
- **LS4** Life Sciences and the Environment
- **LS5** Life Sciences and the Environment
- **LS6** Life Sciences and the Environment
- **LS7** Life Sciences and the Environment
- **LS8** Evolutionary, Population and Environmental Biology
- **LS9** Applied Life Sciences and Non-Medical Biotechnology

Big changes in the
LS panels coming
in WP2018!

Physical Sciences & Engineering

- **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 Process Engineering
- **PE9** Universe Sciences
- **PE10** Earth System Science

Social Sciences and Humanities

- **SH1** Individuals, Markets and Organisations
- **SH2** Institutions, Values, Environment and Space
- **SH3** The Social World, Diversity, Population
- **SH4** The Human Mind and Its Complexity
- **SH5** Cultures and Cultural Production
- **SH6** The Study of the Human Past

💡 Choosing the right Panel is very important!

- Proposals are assigned to the Panel of the PI's choice.
 - The PI can flag one “Secondary Review Panel” → the PI **must explain the interdisciplinary nature of the proposal in Part B1.**
 - **Transfer of proposals between panels** may occur if:
 - there is a clear mistake on part of the applicant.
 - the necessary expertise is available in a different panel.
- Both Panel Chairs must agree on the transfer.

Rumour: Choose the panel "strategically" in order to increase chances of success

- ✘ **NOT true:** The budget is distributed among the scientific panels as a function of demand → success rate is equal amongst panels → choose the Panel that is right for your proposal!
- If you choose the "wrong" one because it has an X, Y, Z reputation, you will most probably hurt your proposal's chances of success!

Preparing your proposal

Step 5: Start filling the different sections!

PART A – administrative online forms

- A1** Proposal and PI info
- A2** Host Institution info
- A3** Budget

PART B1 – submitted as .pdf

Abstract and Cross-Panel explanation	1 p.
Extended Synopsis	5 p.
(Recommended Model) CV	2 p.
Funding ID	1 p.
Track Record	2 p.

Annexes – submitted as .pdf

- Statement of support of HI
 - copy of PhD or equiv. (StG & CoG)
- If applicable:*
- document for extension of eligibility window (StG & CoG)
 - explanatory information on ethical issues

PART B2 – submitted as .pdf

Scientific Proposal 15 p.
(incl. budget table)

💡 Choose your descriptors and free keywords carefully in Part A!



💡 Descriptors and free keywords

- 💡 influence which Panel will evaluate your proposal
- 💡 are the **basis of allocation to the panel members**
- 💡 will determine whether a cross-panel evaluation is necessary

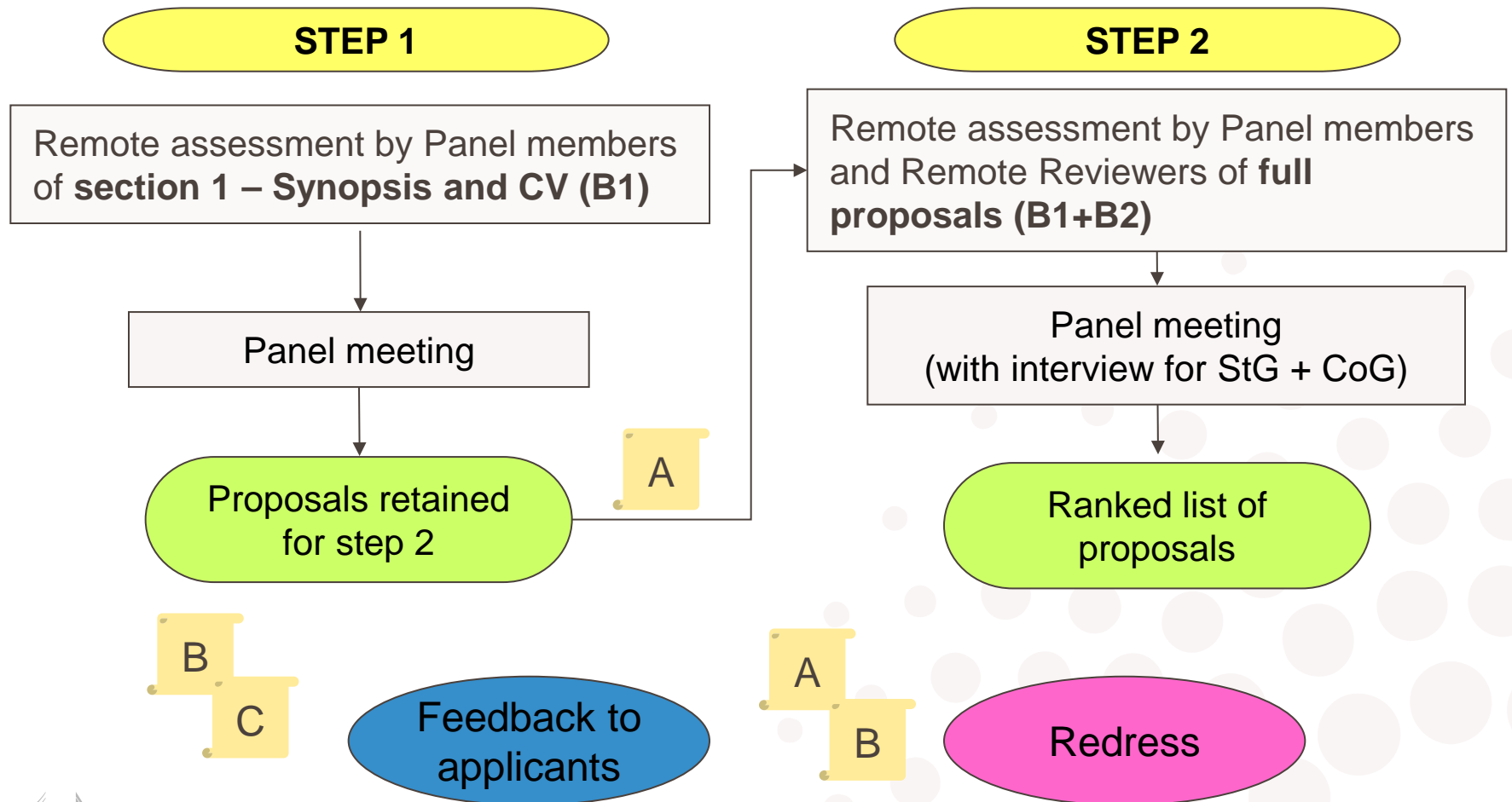
Rumour: The panel descriptors represent ERC scientific priorities

- ✗ **NOT true:** The panel descriptors are indicative so that applicants can see what expertise is in the Panel. It is the applicants that choose the subject of their proposal and the Panels use the excellence criterion to judge whether it should be funded.

Rumour: *The more cross-panel descriptors I indicate, the higher the funding chances, since I emphasize like this the interdisciplinarity of my proposal.*

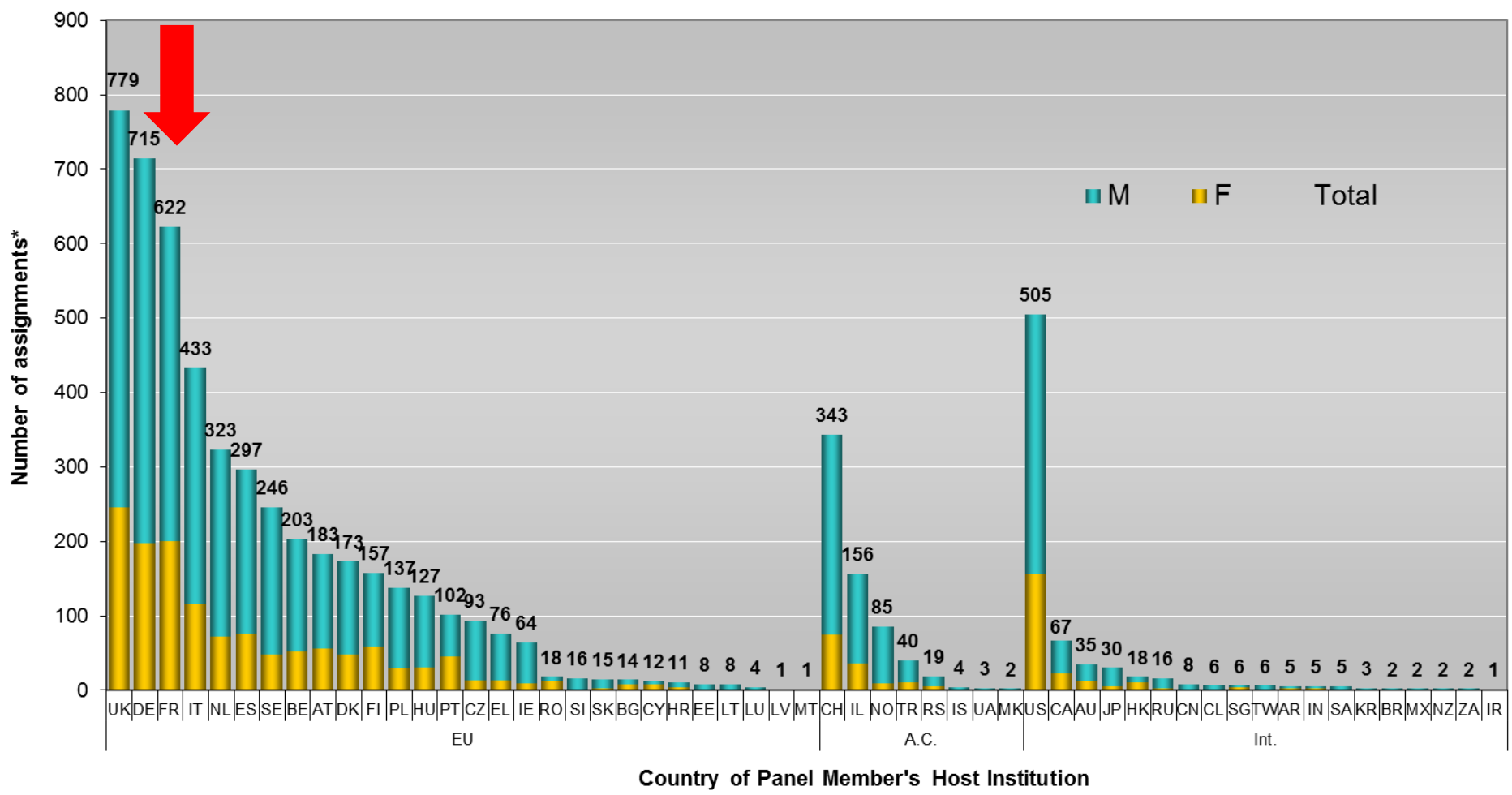
- ✗ **NOT true:** even though these are used to allocate proposals to Panel Members, once the proposals are allocated, the Panel Members do not see the keywords and descriptors used.

The ERC Evaluation procedure



Who evaluates the proposals ?

ERC Panel Members by Country of HI and Gender (typically 12-16 PMs/Panel)



Based on the ERC StG, CoG and AdG calls 2007 - 2015



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💡 Let's first talk about B1!

💡 Part B1 gives the **first impression of your project/yourself** and will determine if you pass to Step 2

💡 **Make sure it is carefully drafted**

💡 **No excessive highlighting**

This is a **ground-breaking idea**. It is the *first* time that this type of experiment has been tried. This represents **high risk/high gain** research.

💡 **Avoid jargon**

💡 **Do not oversell it**

☀ Questions to ask yourself when writing Part B1 a) Research Project



- ☀ Is my project new, **innovative**, bringing in new solutions/theories?
- ☀ Does it promise to go **substantially beyond the state of the art**? Focus on the ground-breaking nature – no incremental research! Something significant, that will last, not that will be improved in 5 years (one major step better than several small steps).
- ☀ Why is my project **important**? Answering a complete question (not only ‘what’ but also ‘why’) - **Think Big!** Make sure that your idea needs an ERC to do it!
- ☀ How can I **prove/support** my case? Do I have a **hypothesis**? Do I have **preliminary results**? Have I proven the project's **feasibility**? Are my goals **realistic**?
- ☀ Is it **timely**? (Why wasn't it done in the past?)
- ☀ What's the **risk**? Is it justified by a substantial potential gain? Do I have a plan for managing the risk? Make sure that your risk is not too early on in the project. Have I proposed **alternatives**? (proof of maturity?)
- ☀ Have I given a realistic picture of my **collaborations**? Show that you can drive the collaborations but that it is you who will be leading the project.

💡 Questions to ask yourself when writing

Part B1 b) Principal Investigator



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- 💡 Why am I the **best/only person** to carry it out? Know your competitors – what is the state of play and why is your idea and scientific approach outstanding compared to them?
- 💡 Am I able to work **independently**, and to manage a 5-year project with a substantial budget? *List prior research endeavours and funding, explain your role and contribution.*
- 💡 Am I **internationally recognised, active and competitive**? Serve on or chair technical program committees, associate editor, editor-in-chief, expert service, etc. Research mobility, international collaborations.
- 💡 Have I shown my **scientific leadership** in my CV?

💡 When writing your CV

- 💡 Remember that the CV/Track Record are as important as your project!
- 💡 Convince the panel that you are the forefront of your research field – this may be (very) different for different people.
- 💡 Highlight your key strengths and accomplishments.
- 💡 **Tell your story!**
 - 💡 Explain what has been your own contribution to your key publications and how they have impacted the field (incl. papers published without your PhD and postdoc supervisor). Quality is way more important than quantity!
 - 💡 Explain publishing habits in your field and country if needed.
 - 💡 If you know that you have gaps or other issues in your CV (e.g. co-authored publications), explain them.
 - 💡 Describe accurately any other activity which can indicate scientific maturity.
- 💡 Do not forget to put your h-index, total number of publications and citations (with and without self-citations)!
- 💡 Fully fill in your Funding ID.

💡 Now let's talk about Part B2! (1)

In Step 2, specialised external referees and panel members are looking at **BOTH** part B1 and B2!

- 💡 **Do not repeat the synopsis, go into details on your methodology and work plan!**
- 💡 Explain hypothesis or provide preliminary data (if it exists)
- 💡 Do and redo the structure of the WPs until you are fully convinced
- 💡 Make sure that the quantitative and qualitative differences to the state of the art are clear and referenced - show you did your homework!
- 💡 Provide alternative strategies to mitigate risks
- 💡 Make sure that there is an obvious link between B1 and B2 – Panel Members do not want surprises!
- 💡 Make use of the evaluation criteria (Ground breaking nature, Potential impact, Scientific Approach) - use them as title/subtitle

Rumour : *I need preliminary results.*

✗ **NOT true**: however explain how the literature supports your "hypothesis".

💡 Now let's talk about Part B2! (2)

- 💡 Make the project "easy to read and attractive" – use paragraphs and correct typos!
- 💡 Check **coherency** of figures
- 💡 Use full space available (15 p.)
- 💡 Make sure you give full references (these are excluded from page count so there is no excuse)
- 💡 You must add some sort of timeline
- 💡 Think the project as a team - explain involvement of **team members and collaborators** (be careful though: ERC proposals are NOT collaborative)
- 💡 Justify requested **resources** – **explain your budget properly** →

💡 Explain your budget in Part B2 properly!

- Budget analysis carried out in Step 2 evaluation.
- Panels have responsibility to ensure that resources requested are reasonable and well justified.
- Budget cuts need to be justified on a proposal-by-proposal basis (no across-the-board cuts).
 - ➔ **Not explained costs are often cut!**
- Panels do not “micro-manage” project finances.
- Awards made on a “take-it-or-leave-it” basis: no negotiations.
- 💡 **Ask for funding for Open Access – this is obligatory in Horizon2020!**

Rumour : Ask for more money, the reviewers will anyhow cut it down.

- ✗ **NOT true:** unexplained or non-motivated requests can be cut down, so if you artificially inflate your budget, the extra funding will be indeed cut.

💡 Beware of Open Access!

- The ERC supports the principle of open access to
 1. the published output of research, including in particular peer-reviewed articles and monographs
 - Under Horizon 2020, **beneficiaries of ERC grants must ensure open access to all peer-reviewed scientific publications relating to their results** as set out in **Article 29.2** of the ERC Model Grant Agreement.
 2. research data & data-related products eg computer code.
 - In 2017, for the first time under Horizon 2020, beneficiaries of ERC grants **will automatically be covered by the provisions on research data sharing** as set out in **Article 29.3** of the ERC Model Grant Agreement **unless they specifically decide to opt-out.**
 - Beneficiaries that do not opt-out should also ensure appropriate management (including preservation and curation) of the research data they generate in order to **ensure its sustainability.**

Preparing your proposal

Step 6: Proof-Read the proposal and Submit!

- A submitted proposal can be **revised until the call deadline** by submitting a new version and overwriting the previous one.
- Once you submit, all you need to do is wait!



It's our turn to do the work!

💡 I have been invited for an interview – now what? (1)

- 💡 Have clear and representative slides and focus on SCIENCE! Don't try to make a business presentation – you are talking to scientists.
- 💡 Anticipate questions.
 - 💡 What to do if you do not know an answer? Prepare this situation
- 💡 Know the details of your proposal and methods, as well as your research area – who are your main competitors/collaborators?
- 💡 Visit your collaborators and discuss your preliminary data with them
- 💡 Bring additional slides on new supporting data, if you have, and for possible explanations.
- 💡 Be able to answer the questions: Which 2 sentences you hope will be added to a textbook about your research in 5 years? Where do you want to be in 5 years?

💡 I have been invited for an interview – now what? (2)

- 💡 Don't over-explain your CV!
- 💡 When the panel asks questions, don't answer with "excellent question" – it can come across as arrogant.
- 💡 Keep the time.
- 💡 **PRACTICE, PRACTICE, PRACTICE, PRACTICE!!!!!!**

Rumour 1: Choose your Acronym in alphabetical order, interviews are planned alphabetically.

✘ **NOT true:** the important thing is to choose an easy-to-remember acronym since this helps identifying the project during discussions!

Rumour 2: Late afternoon interviews have less chance, PMs are tired.

✘ **NOT true:** you need to "shake" the PMs up no matter what time of day!

Typical reasons for rejection

Research Project

- **Scope**: Too narrow \leftrightarrow too broad/unfocussed
- Incremental research
- Collaborative project, **several PIs**
- **Work plan** not detailed enough/unclear
- Insufficient **risk** management

Principle Investigator (PI)

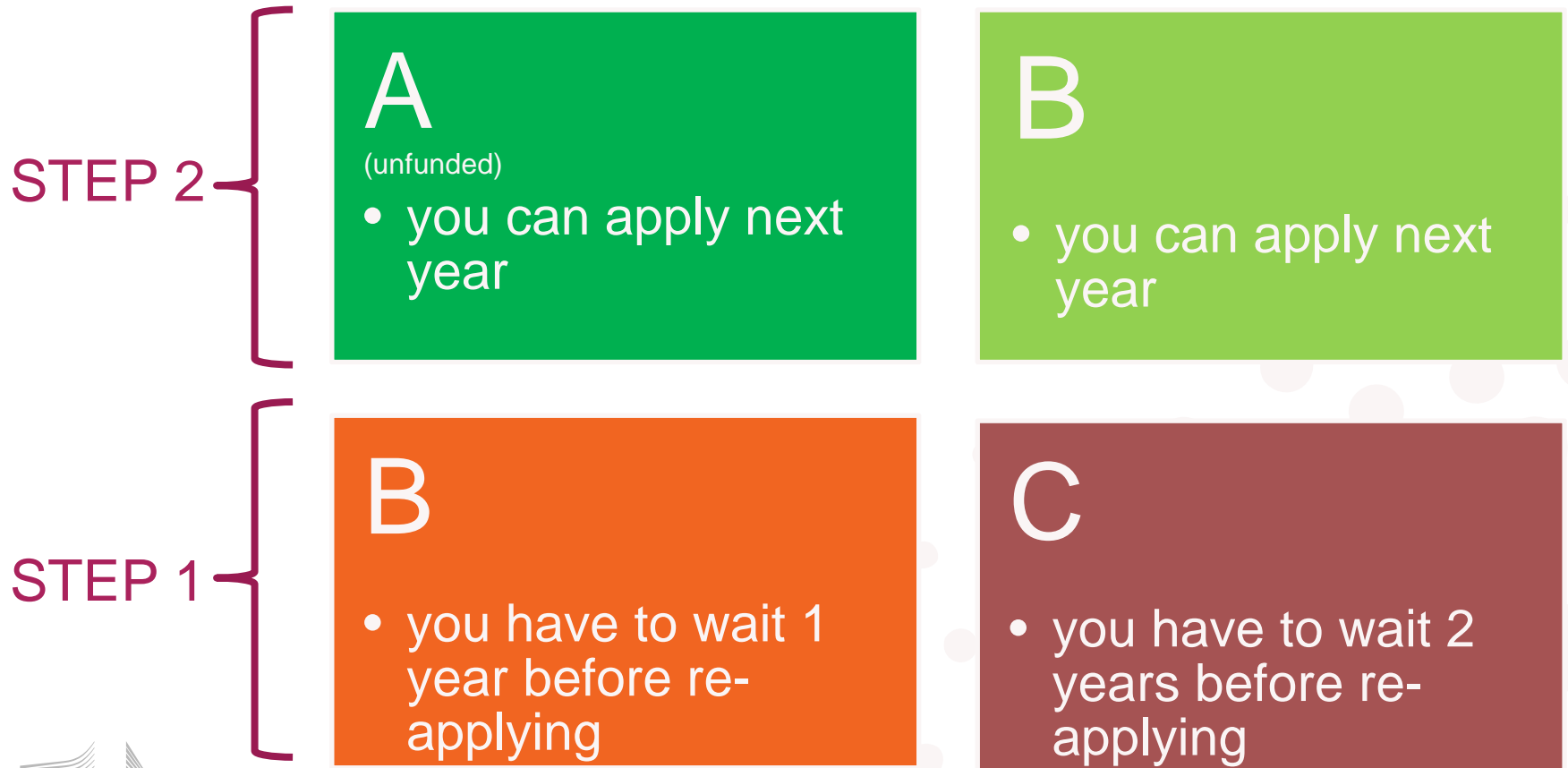
- Insufficient **track-record**
- Insufficient (potential for) **independence**
- Insufficient experience in **leading** projects

Before Redressing: see what you could you have done/explained/presented better before blaming the process!

- Diverting scientific opinion is not a motivation for redress
- An obvious mistake however might result in a re-evaluation

I did not get the grant, can I apply next year?

- In order to make the evaluation process more effective, the Scientific Council has introduced re-submission restrictions.



Timetable of the 2017 Calls



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ERC calls	Budget million EUR (estimated number of grants)	Call Publication	Submission Deadline	Planned dates to inform applicants
Starting Grants ERC-2017-StG	605 (415)	29 July 2016	18 Oct 2016	Step 1: 31 May 2017 Step 2: 6 Sept 2017
Consolidator Grants ERC-2017-CoG	575 (320)	20 Oct 2016	9 Feb 2017	Step 1: 13 July 2017 Step 2: 6 Dec 2017
Advanced Grants ERC-2017-AdG	567 (245)	16 May 2016	31 Aug 2017	Step 1: 31 Jan 2018 Step 2: 9 April 2018

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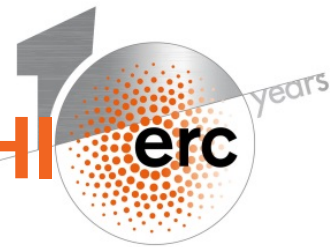


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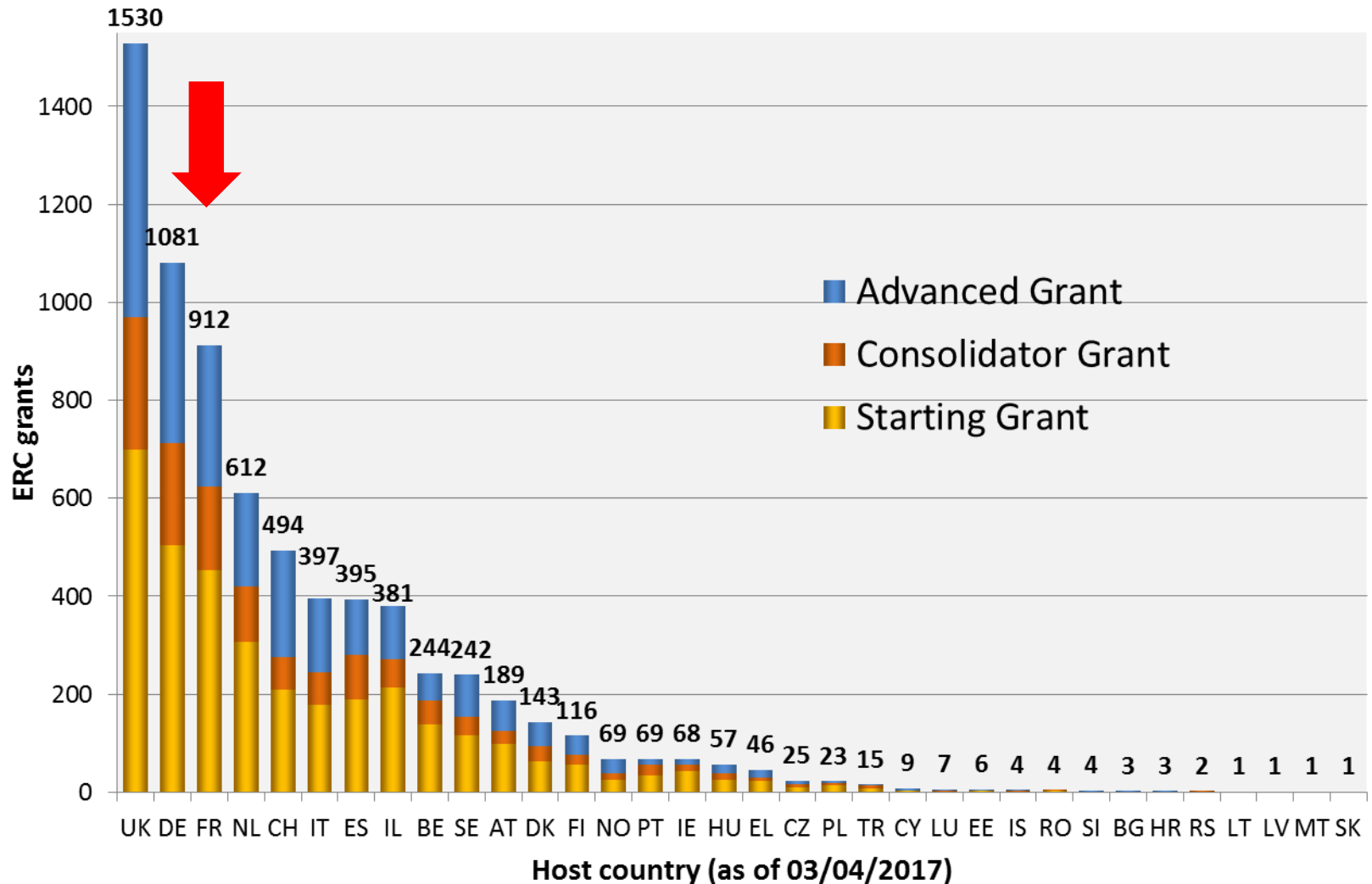
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- How to apply
- **France Performance in ERC schemes**



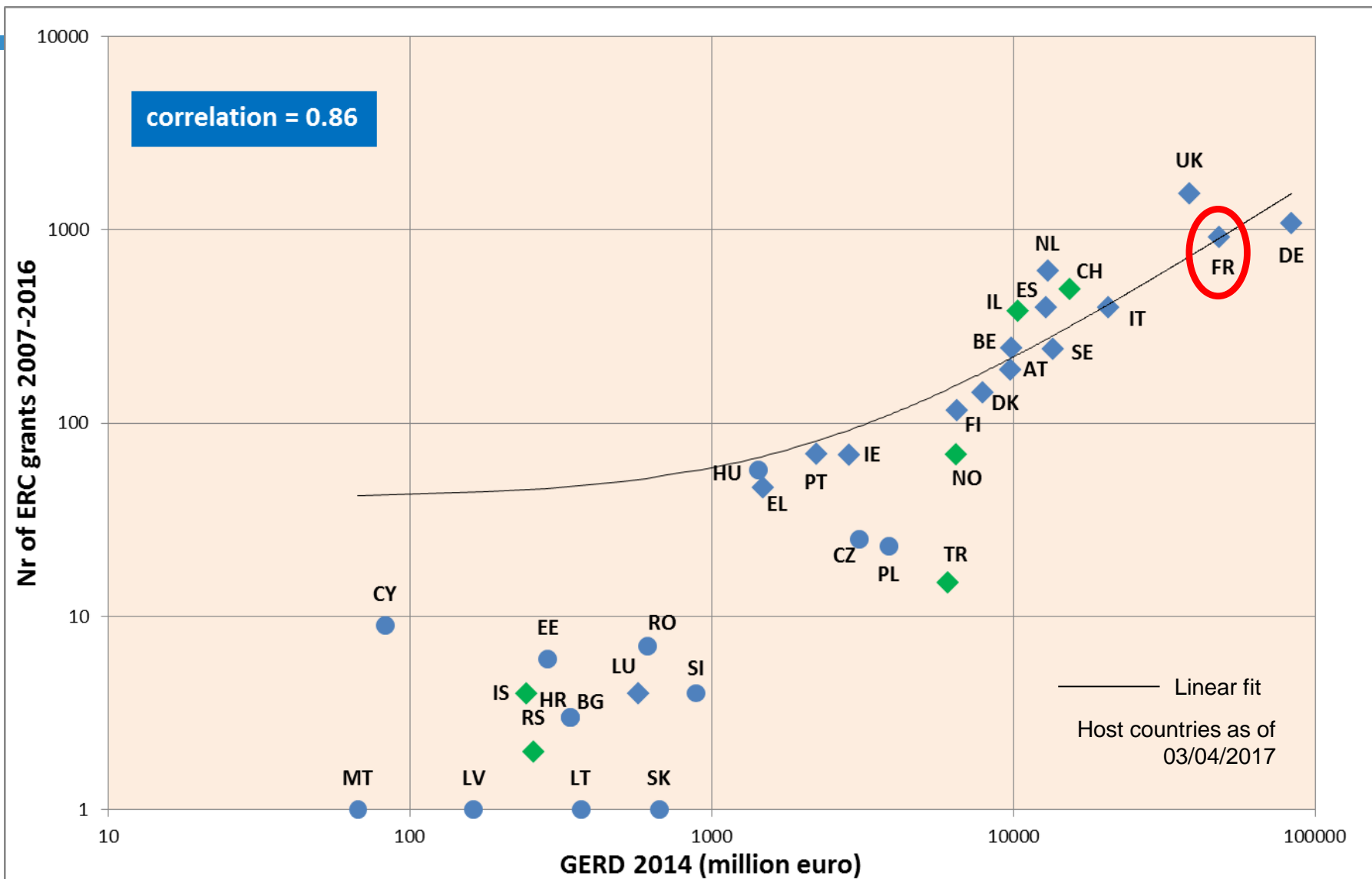
ERC Funded Projects by Country of Host



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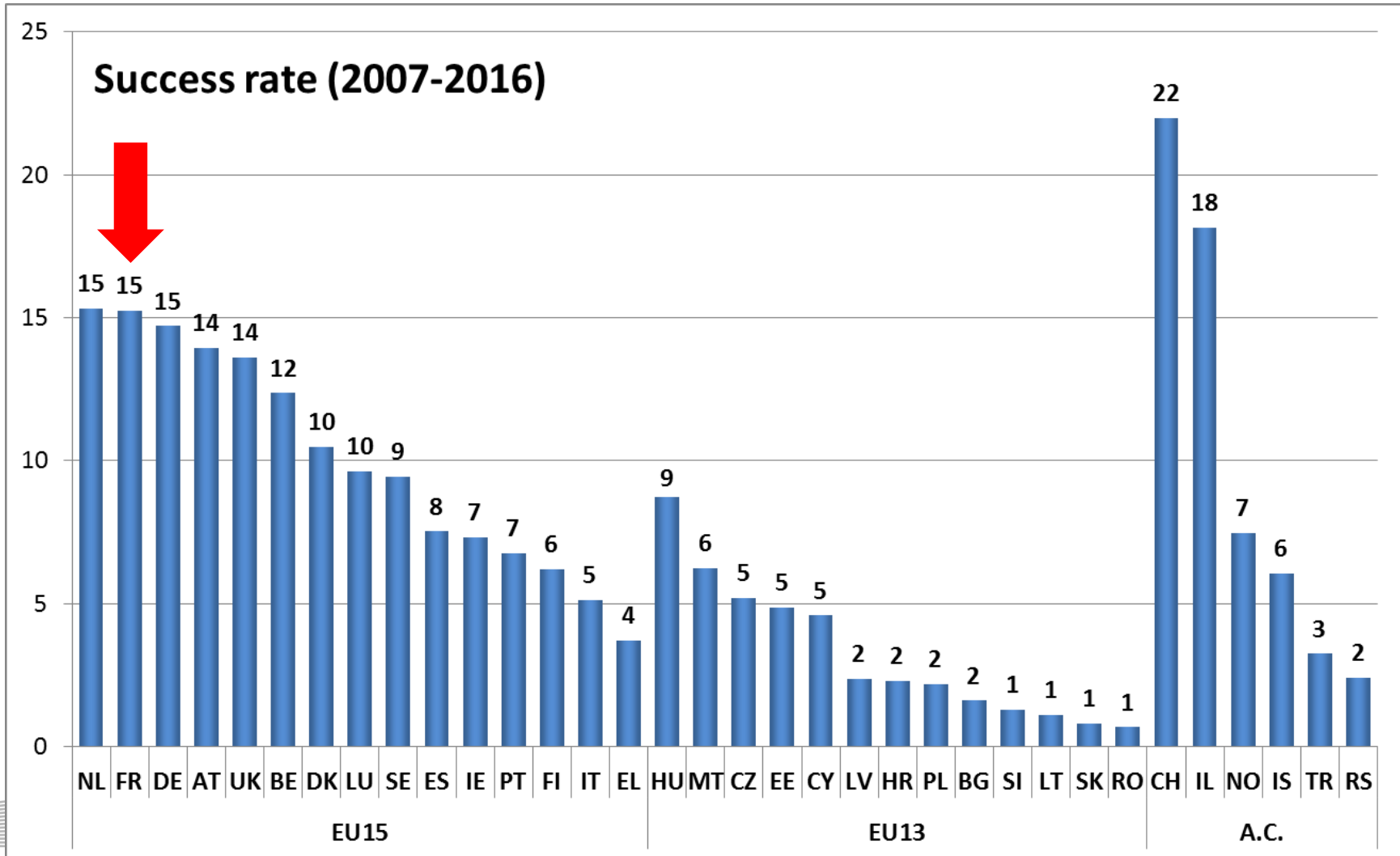
ERC Grants versus GERD



Success Rate by Country of HI



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Country	Higher-Education Institution	No	StG	CoG	AdG	Total	LS	PE	SH
UK	University of Cambridge	1	81	33	78	192	68	92	32
UK	University of Oxford	2	75	36	79	190	55	77	58
UK	University College London	3	68	27	47	142	56	41	45
CH	Swiss Federal Institute of Technology Lausanne (EPFL)	4	53	15	50	118	33	83	2
CH	Swiss Federal Institute of Technology Zurich (ETH Zurich)	5	45	7	65	117	35	78	4
IL	Weizmann Institute	6	55	23	36	114	66	46	2
IL	Hebrew University of Jerusalem	7	55	15	37	107	45	44	18
UK	University of Edinburgh	8	33	14	38	85	28	33	24
UK	Imperial College	9	48	13	23	84	29	53	2
NL	University of Amsterdam	10	38	14	22	74	7	25	42
DK	University of Copenhagen	11	31	21	18	70	30	25	15
DE	University of Munich (LMU)	12	30	4	33	67	27	23	17
IL	Tel Aviv University	13	39	10	16	65	29	30	6
BE	University of Leuven	13	34	10	21	65	17	35	13
UK	University of Bristol	14	22	7	30	59	10	38	11
NL	Delft University of Technology	15	28	14	16	58	7	45	6
CH	University of Zurich	16	23	9	25	57	32	11	14
NL	Utrecht University	16	26	16	15	57	10	26	21
NL	Radboud University Nijmegen	17	32	9	15	56	21	13	22
NL	Leiden University	18	25	10	18	53		21	32
FI	University of Helsinki	19	25	9	18	52	33	14	5
IL	Technion - Israel Institute of Technology	20	32	6	12	50	16	33	1
UK	University of Manchester	21	20	8	20	48	10	30	8
Country	Research Organisation	No	StG	CoG	AdG	Total	LS	PE	SH
FR	National Centre for Scientific Research (CNRS)	1	188	82	94	364	105	218	41
DE	Max Planck Society	2	85	23	82	190	98	81	11
DE	Helmholtz Association of German Research Centres	3	50	29	25	104	64	39	1
FR	National Institute of Health and Medical Research (INSERM)	4	41	24	24	89	83	3	3
ES	Spanish National Research Council (CSIC)	5	28	17	18	63	20	36	7
FR	French Alternative Energies and Atomic Energy Commission	6	40	5	17	62	10	50	2

Top European Institutions Hosting ERC Grantees by Funding Schemes

ERC calls 2007-2016

Current signatories of the grant agreement

Data as of 03/04/2017

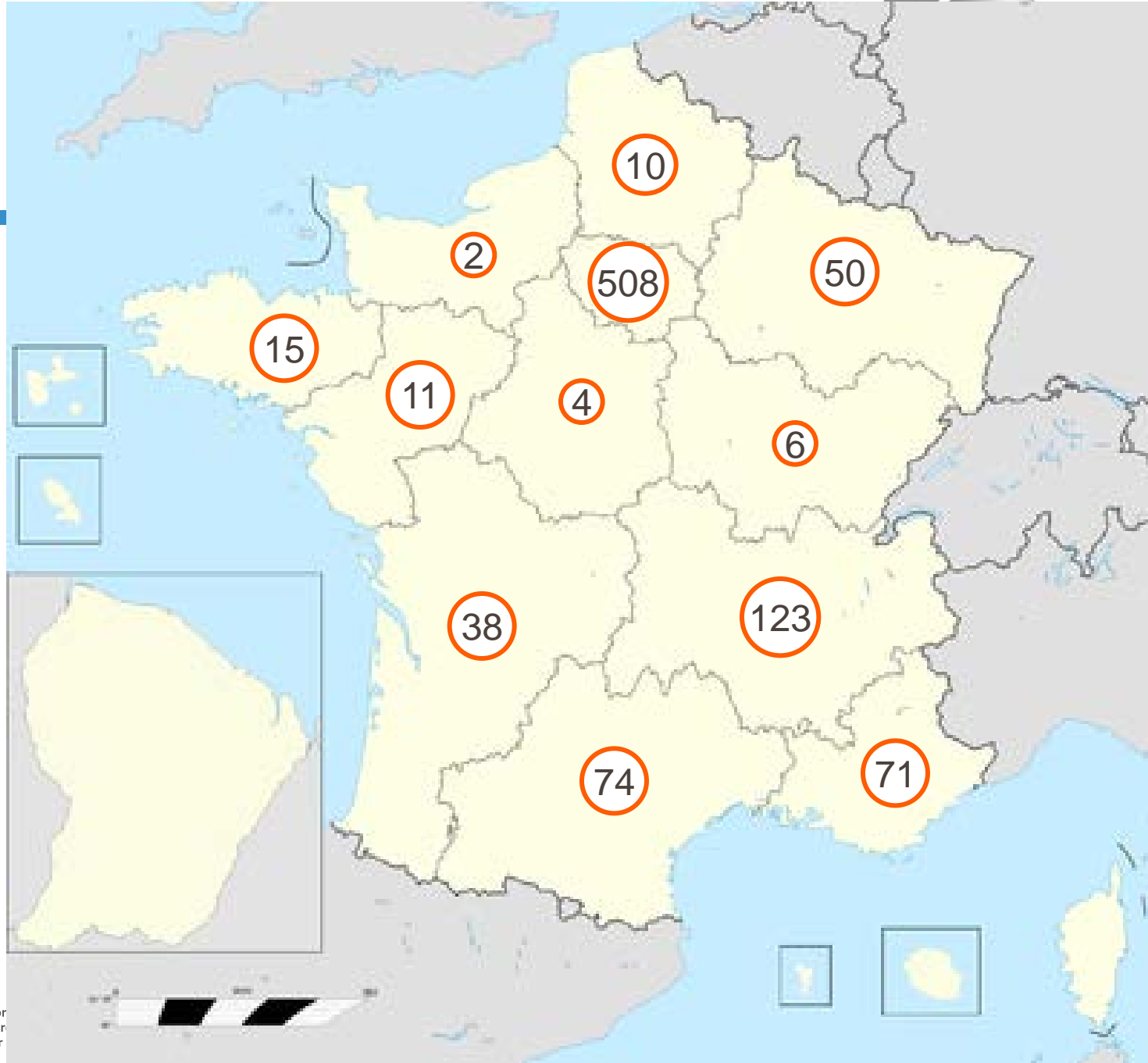
ERC Grants in France by Region

912 projects in France at the moment

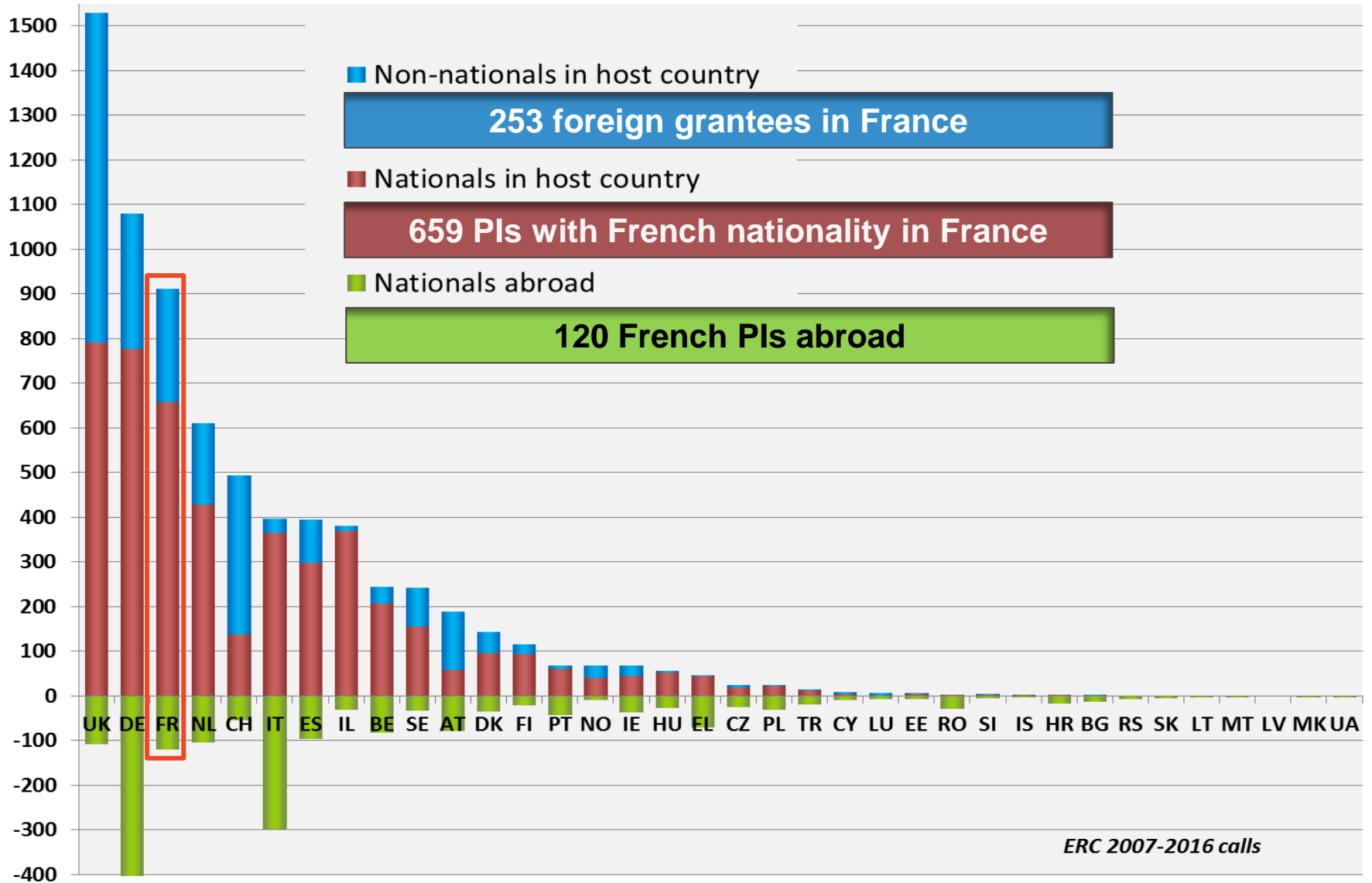
Distribution of grantees per region

Data as of 03/04/2017

Note: CNRS, INSERM, CEA, INRIA and INRA grants distributed at actual location



Grantees at Home and Abroad



The European Research Council



- More information: erc.europa.eu
 - ➔ ERC Work Programme (published annually)
 - ➔ Information for Applicants (published with each call)
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