

# The European Research Council



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ERC  
in the European  
Research Landscape

Jean-Pierre BOURGUIGNON  
*ERC President*



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# The ERC after Seven Years



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# What is ERC?



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The ERC supports excellence in frontier research through a bottom-up, individual-based, pan-European competition with host institution in EU or Associated State.

## Strategy

- Support for the individual scientist – no networks!
- Global peer-review
- No predetermined subjects (bottom-up)
- Support of frontier research in all fields of science and humanities

## Legislation

- Scientific governance: independent Scientific Council with 22 members including the ERC President; full authority over funding strategy
- Support by the ERC Executive Agency (autonomous)
- Quality as the only criterion aiming for excellence



# ERC Achievements



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- 4 300 top researchers funded (65% are at an early-career stage); 64 nationalities represented
- **Highly competitive** (average success rate tending to 10%)
- Grants located in almost 600 different institutions in 29 countries
- 50% of grantees in 50 institutions
- **Benchmarking** effect: impact on national programmes and agencies; national funding for best "runners-up"
- Efficient and fast grant management
- Highly recognized by the research community beyond Europe

# ERC Funding Schemes



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## 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

## Proof-of-Concept

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

# ERC Calls



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## Starting and Consolidator grant calls 2007-2013

	Total number of applications	of which		
		Evaluated*	Funded	success rates**
Starting Grant 2007	9.167	8.787	299	3,4
Starting Grant 2009	2.503	2.392	245	10,2
Starting Grant 2010	2.873	2.767	436	15,8
Starting Grant 2011	4.080	4.005	486	12,1
Starting Grant 2012	4.741	4.652	566	12,2
Starting Grant 2013	3.329	3.255	300	9,2
Consolidator Grant 2013	3.673	3.604	311	8,6
<b>Starting and Consolidator Grant</b>	<b>30.366</b>	<b>29.462</b>	<b>2.643</b>	<b>10,2</b>

\* withdrawn and ineligible proposals not taken into account

\*\* percentage of funded proposals in relation to evaluated proposals



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# ERC Calls



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## Advanced grant calls 2008-2013

	Total number of applications	of which		
		Evaluated*	Funded	success rates**
Advanced Grant 2008	2.167	2.034	282	13,9
Advanced Grant 2009	1.584	1.526	245	16,1
Advanced Grant 2010	2.009	1.967	271	13,8
Advanced Grant 2011	2.284	2.245	301	13,4
Advanced Grant 2012	2.304	2.269	319	14,1
Advanced Grant 2013	2.408	2.363	290	12,3
<b>Advanced Grant</b>	<b>12.756</b>	<b>12.404</b>	<b>1.708</b>	<b>13,9</b>

\* withdrawn and ineligible proposals not taken into account

\*\* percentage of funded proposals in relation to evaluated proposals

# ERC Calls



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## Other calls 2011-2013

	Total number of applications	of which		
		Evaluated*	Funded	success rates**
Proof of Concept 2011 - 1&2	151	139	51	36,7
Proof of Concept 2012 - 1&2	143	120	60	50,0
Proof of Concept 2013 - 1&2	292	279	67	24,0
<b>Proof of Concept</b>	<b>586</b>	<b>538</b>	<b>178</b>	<b>36,9</b>
<b>Synergy Grant 2012</b>	<b>710</b>	<b>697</b>	<b>11</b>	<b>1,6</b>
<b>Synergy Grant 2013</b>	<b>449</b>	<b>427</b>	<b>13</b>	<b>3,0</b>

\* withdrawn and ineligible proposals not taken into account

\*\* percentage of funded proposals in relation to evaluated proposals



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# Evaluation Criteria



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## Quality of research as sole criterion, to apply to:

### The project

- **Ground-breaking nature of the research:** Important challenge? Substantially beyond the current state of art? High-gain/high-risk
- **Potential impact:** Possibility of a major breakthrough?
- **Scientific Approach:** Feasibility, novel concepts/methodology

### Principal Investigator

- **Intellectual capacity and creativity:** Track-record, evidence of creative independent thinking
- **Commitment:** Willing to devote a significant part of working time (50% minimum for StG, 40% for CoG, 30% for AdG)

# Who Evaluates the Proposals?



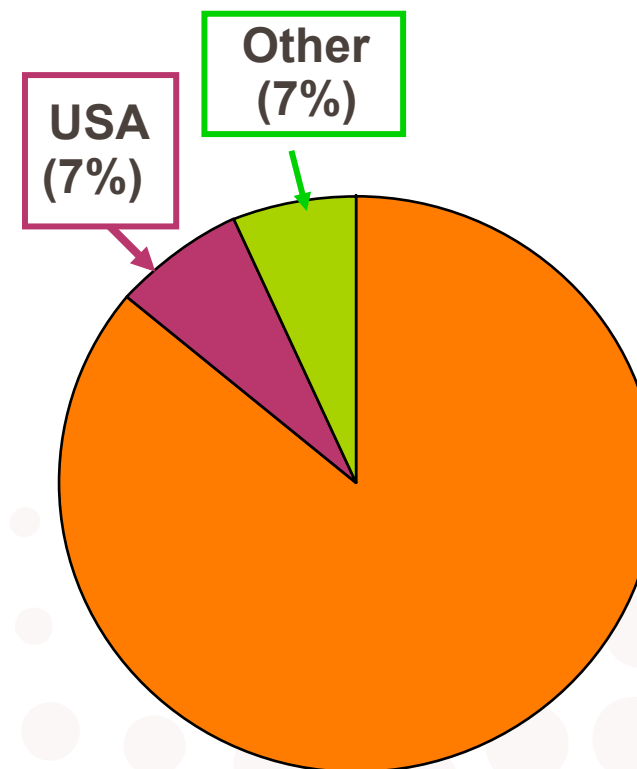
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## Panel members: typically 400 per call

- High-level scientists
- Recruited by ScC from all over the world
- Chairperson and 12-15 members

## Remote referees: typically 2000 per call

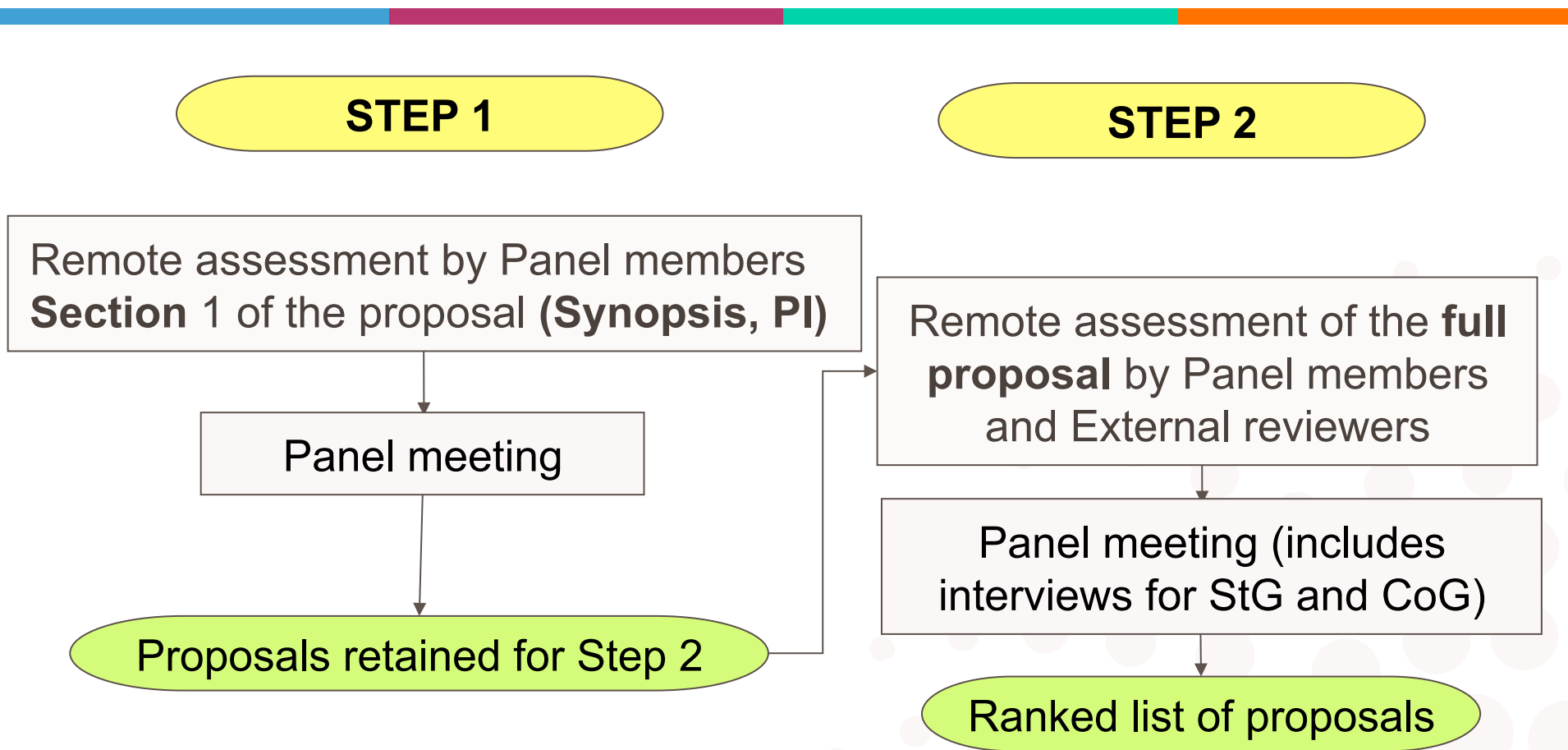
- Each referee evaluates only a small number of proposals



# Evaluation Process



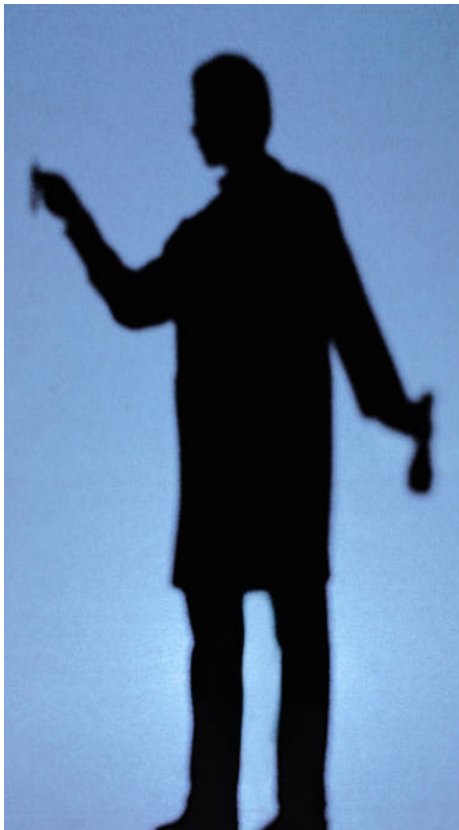
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# ERC Starting and Consolidator Grants



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## The applicant's profile

*“Am I competitive enough?”*

- Potential for research independence
- Evidence of scientific maturity
- At least one (StG) /several (CoG) publications without participation of PhD supervisor

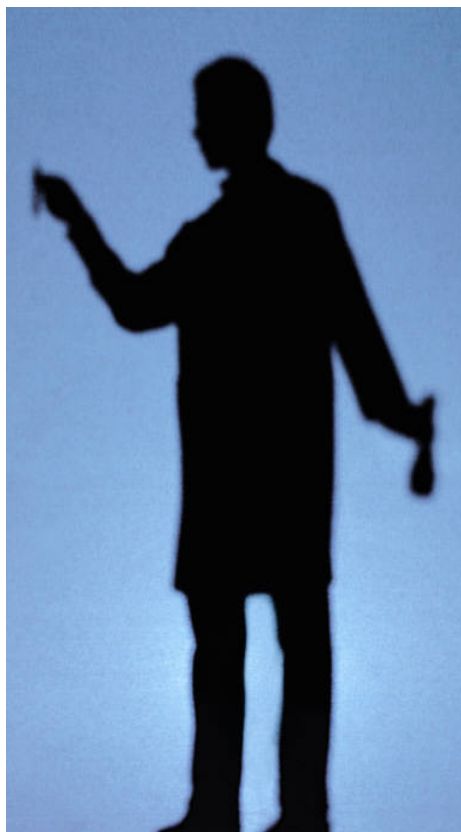
*Promising track-record of early achievements*

- Significant publications
- Invited presentations in conferences
- Funding, patents, awards, prizes

# ERC Advanced Grants



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## The applicant's profile

- *Track-record of significant research achievements in the last 10 years*
- *Exceptional leadership and mentorship*
- *International recognition*

# Creative Freedom for Grantees



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## ERC offers independence, recognition & visibility

- to work on a research topic of **own choice**, with a team of **own choice**
- to gain true **financial autonomy** for 5 years
- to negotiate with the host institution the **best conditions** of work
- to move with the grant to any place in Europe if necessary (**portability of grants**)
- to attract additional funding and gain recognition; ERC is a quality label
- to attract top team members (EU and non-EU) and collaborators
- **ERC calls are open to researchers of any nationality, age or current place of work in the world (but at least 50% of work time in Europe)**

\*) Host institution refers to the organisation with which the first grant agreement was signed

# Host Institution



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The institution that engages and hosts the PI.

Any type of legal entity: universities, research centres, business research units ... **as long as it is in MS or AC.**

For FP7 contracts, it receives **20% overhead.**

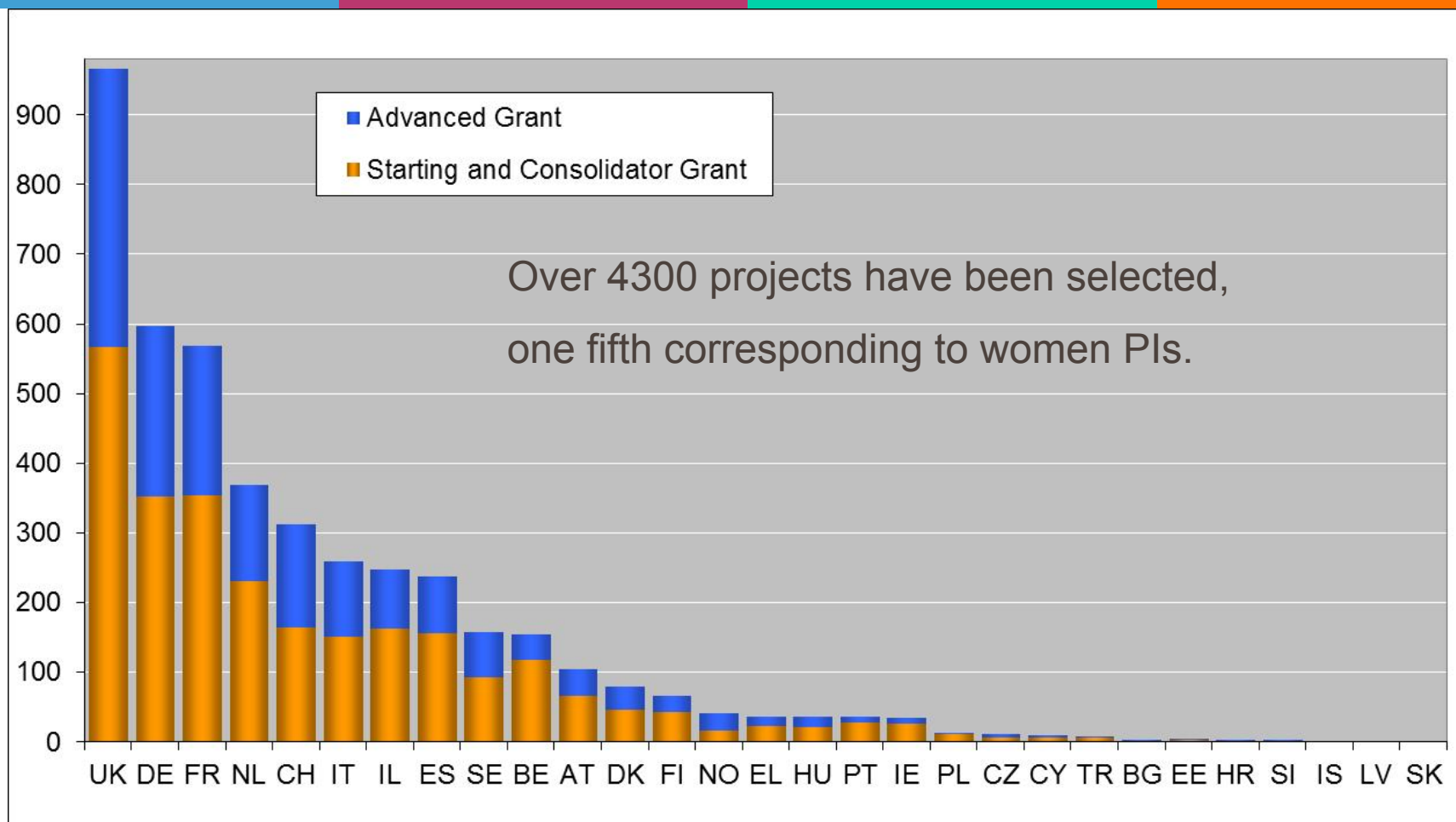
Commitment of HI: to ensure that the PI may

- apply for funding independently,
- manage research and funding for the project,
- publish independently as senior author,
- have access to reasonable space and facilities.

# Grant Distribution to Countries of HI



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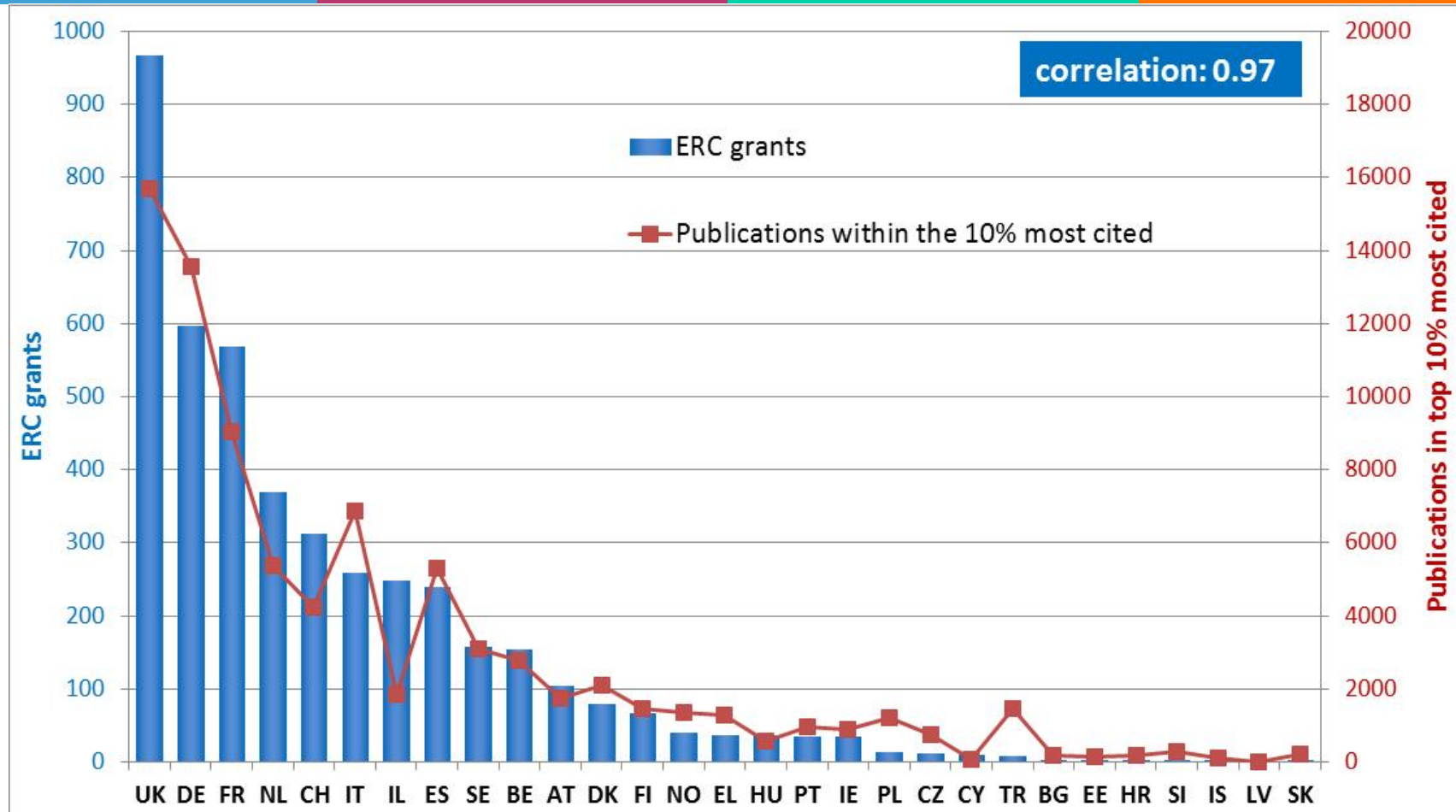
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# Grant Distribution to Countries of HI



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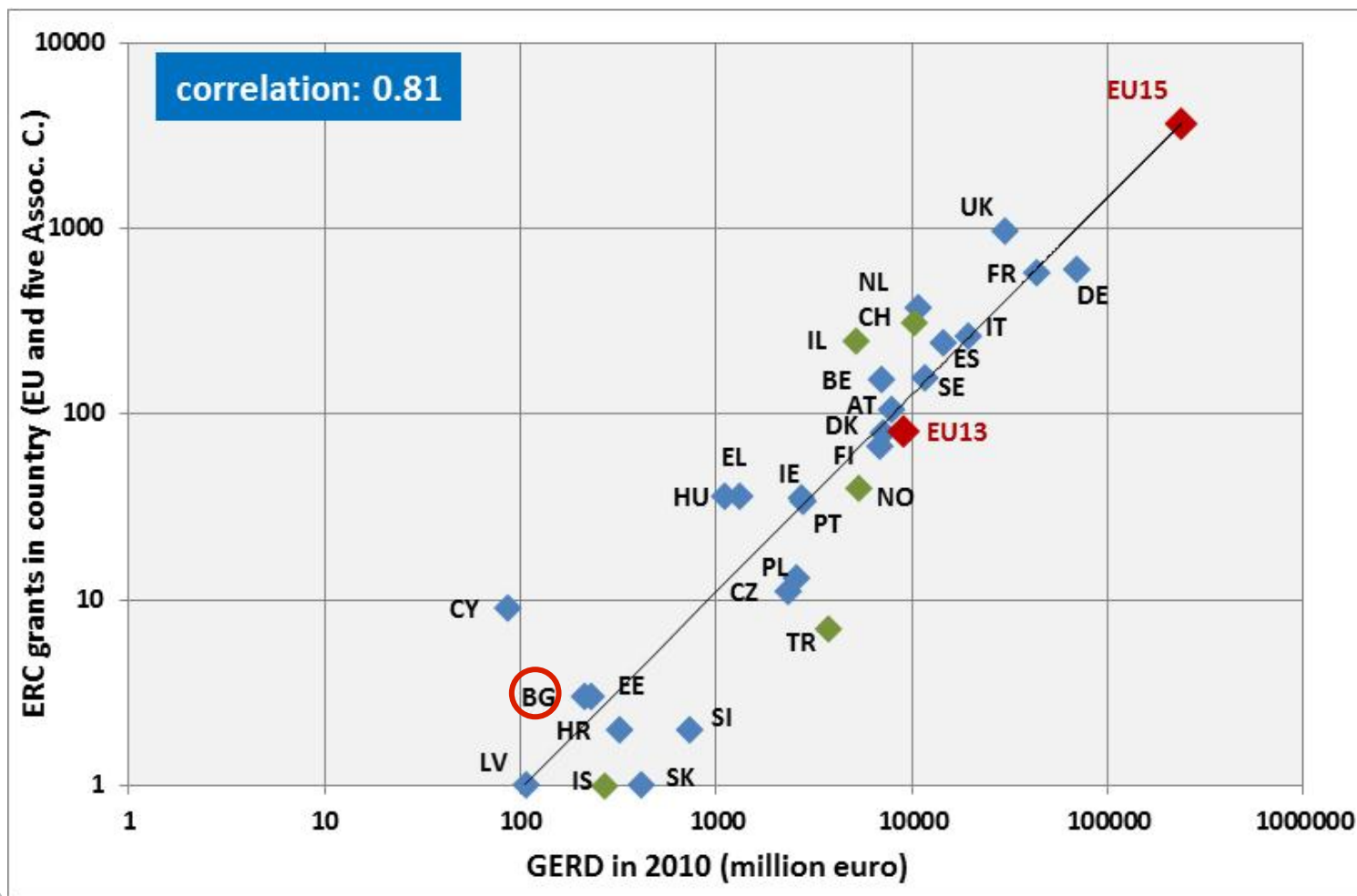
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# Grant Distribution vs. R&D Expenditure



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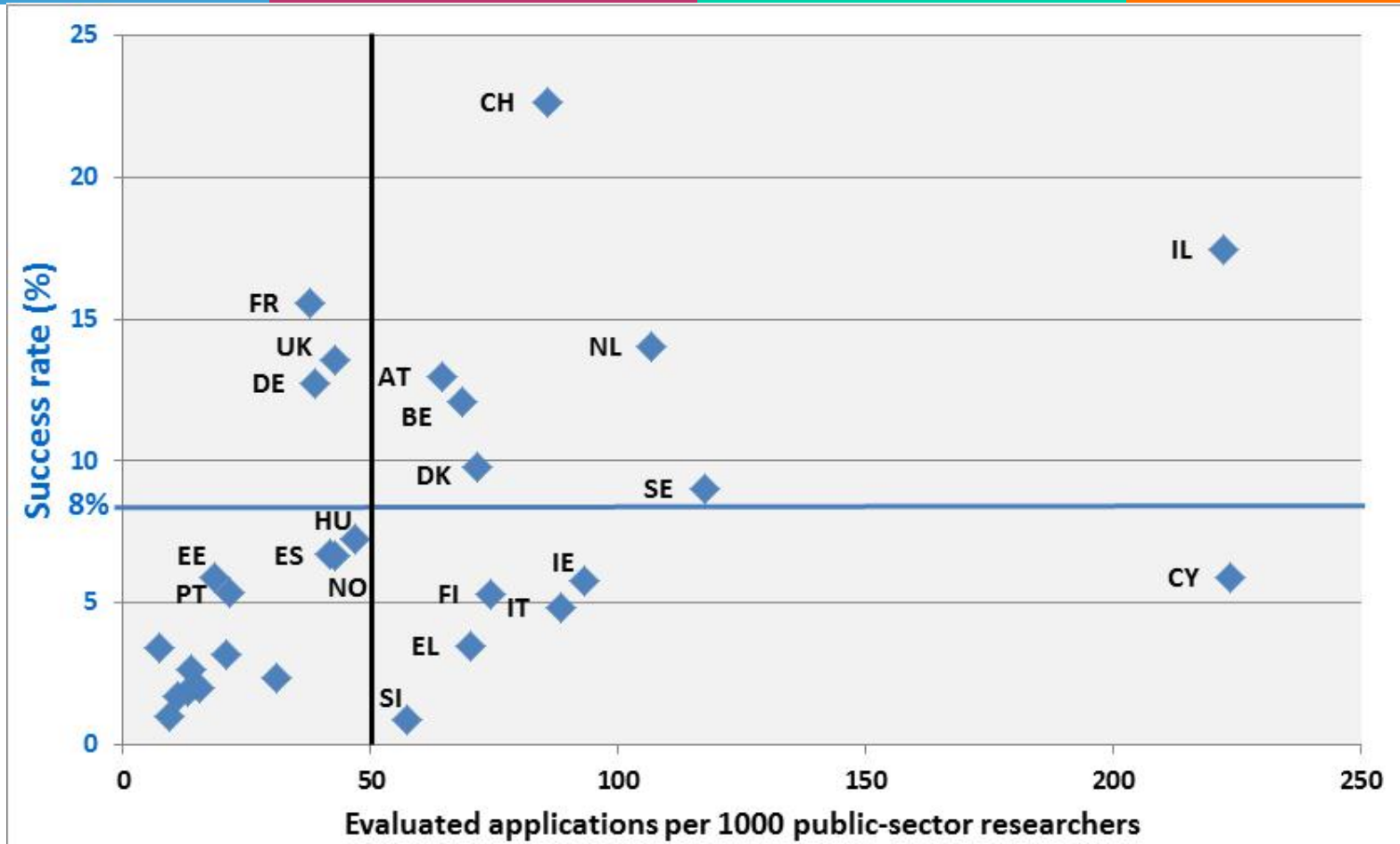
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# Success Rates per Country of HI



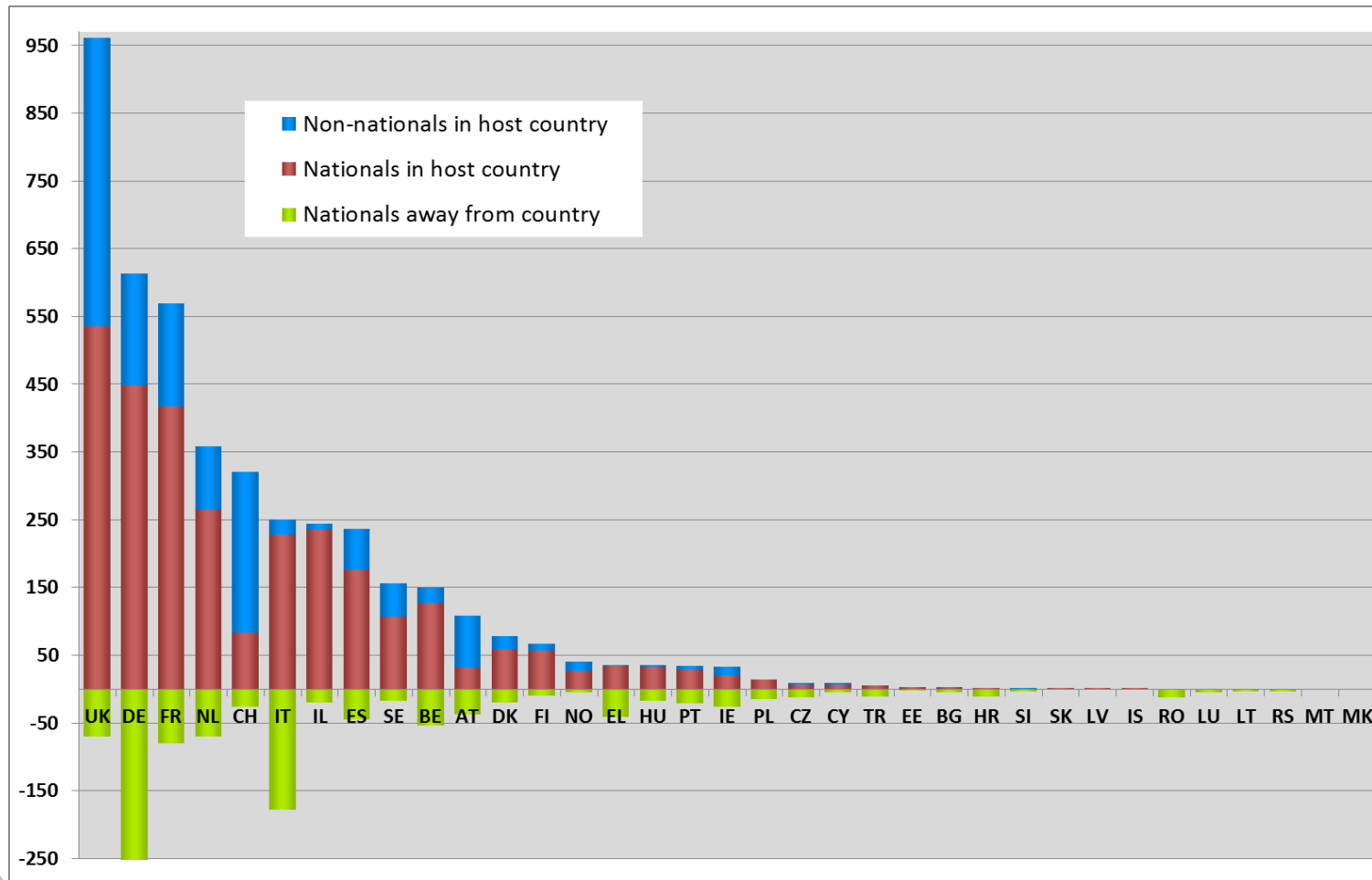
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# Mobility of Researchers



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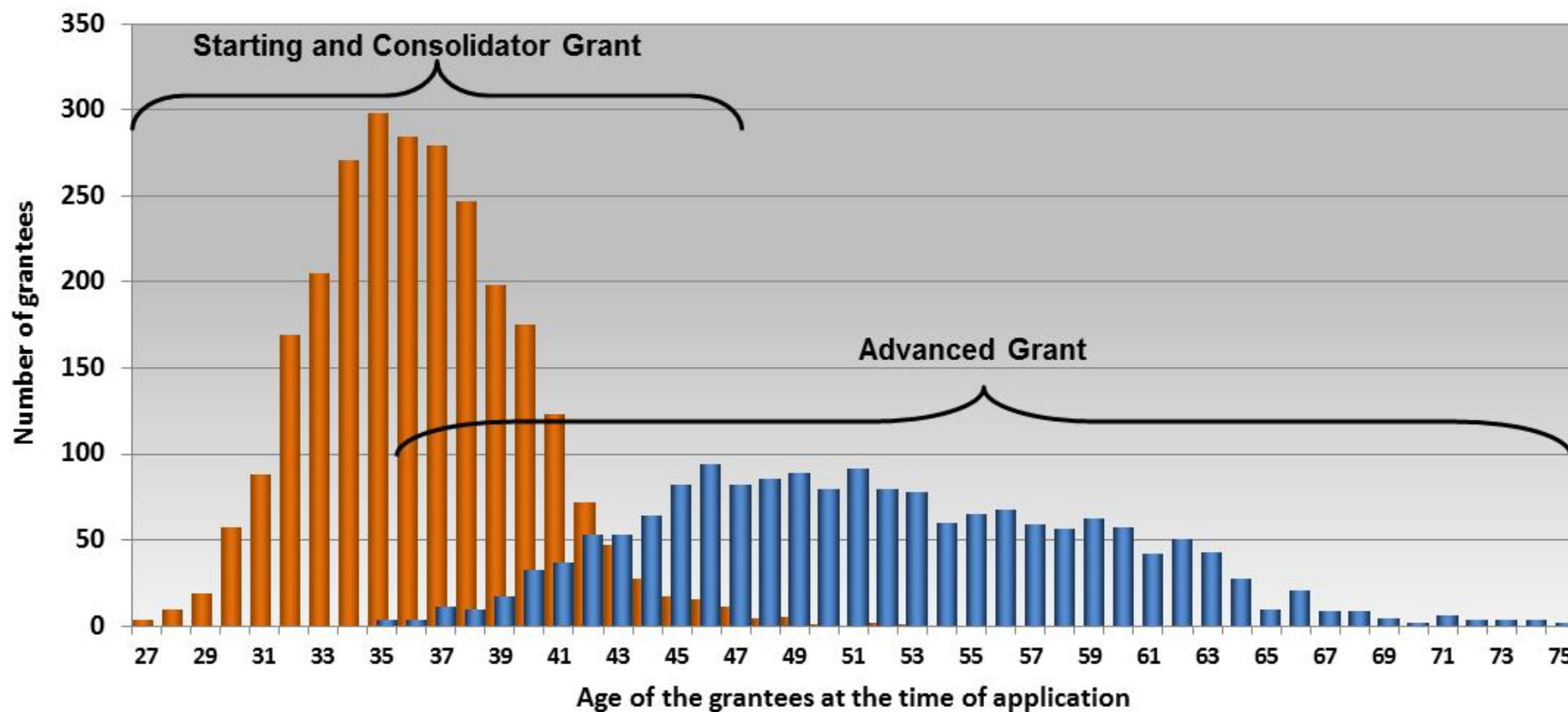
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# ERC Grantees Age Distribution



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ERC 2007-2013



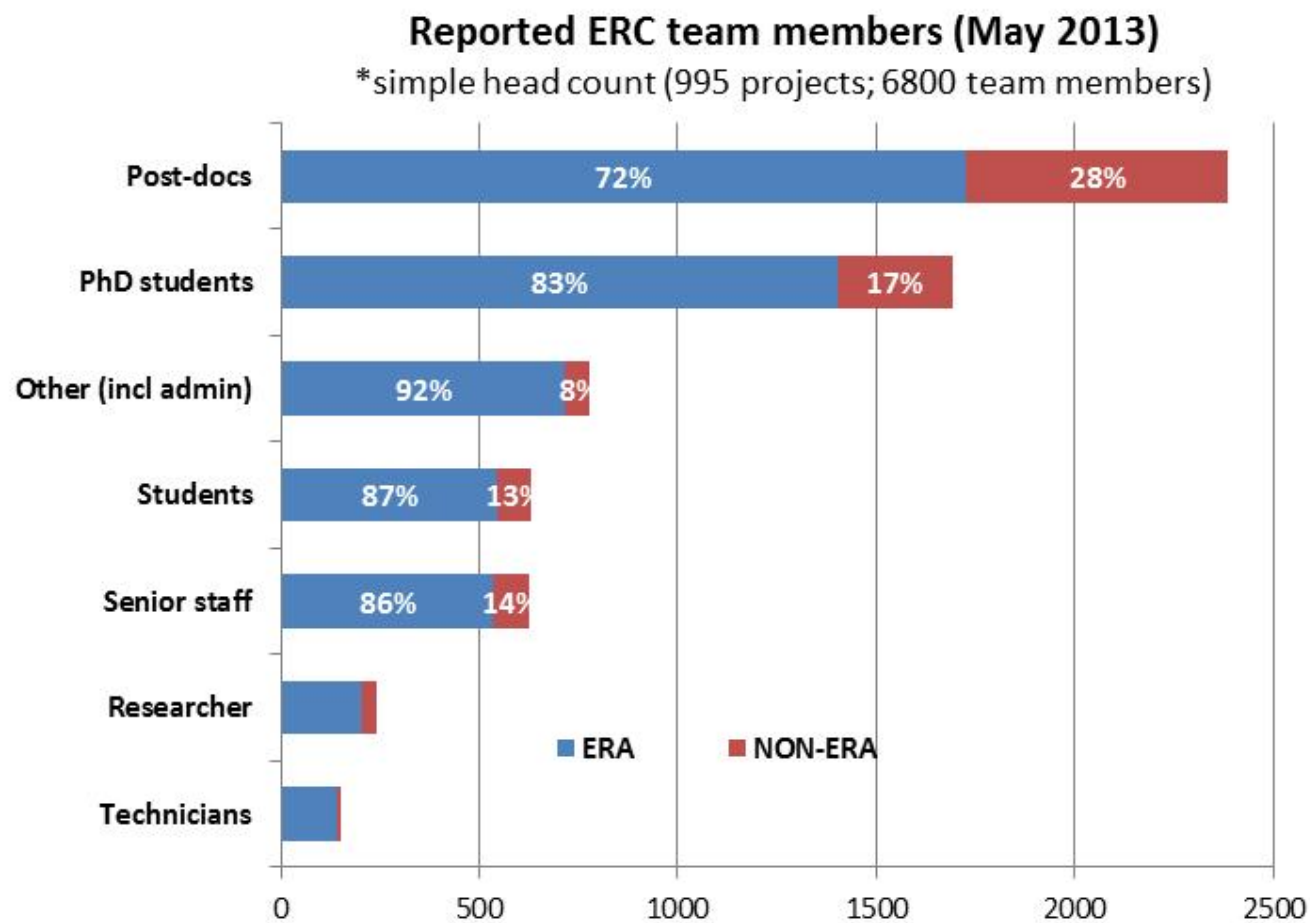
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# Developing a New Generation



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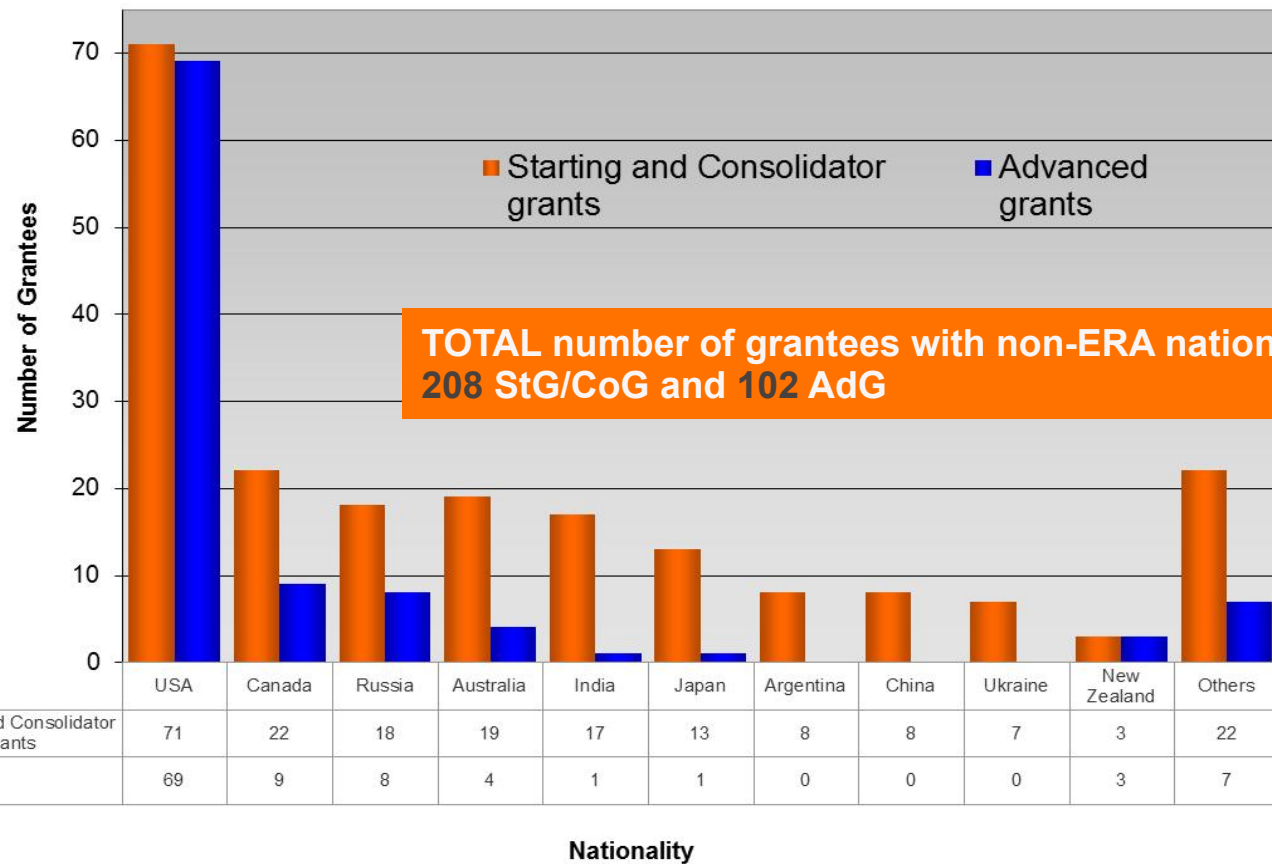
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# ERC Grantees with non-ERA Nationality



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# The ERC

## *The Next Seven Years*



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# ERC Scientific Council



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- Prof. Klaus BOCK (Chemistry)
- **Prof. Jean-Pierre BOURGUIGNON** (Mathematics), **ERC President**
- Prof. Nicholas CANNY (History)
- Prof. Sierd A.P.L. CLOETINGH (Earth Sciences)
- Prof. Tomasz DIETL (Physics)
- Prof. Daniel DOLEV (Computer Sciences)
- Prof. Athene DONALD (Biological Physics)
- Dr. Barbara ENSOLI (Medicine)
- Prof. Pavel EXNER (Applied Mathematics & Mathematical Physics), **ERC Vice-President**
- Prof. Reinhard GENZEL (Astrophysics)
- Prof. Carl-Henrik HELDIN (Molecular Cell Biology), **ERC Vice-President**
- Prof. Timothy HUNT (Biology)
- Prof. Matthias KLEINER (Engineering)
- Prof. Eva KONDOROSI (Biology)
- Prof. Mart SAARMA (Biology)
- Prof. Nuria SEBASTIAN GALLES (Psychology), **ERC Vice-President**
- **Prof. Nils Christian STENSETH** (Ecology & Evolution)
- **Prof. Martin STOKHOF** (Philosophy)
- Prof. Anna TRAMONTANO (Biochemistry)
- Prof. Isabelle VERNOS (Molecular and Cell Biology)
- Prof. Reinhilde VEUGELERS (Economics)
- **Prof. Michel WIEVIORKA** (Sociology)

# ERC Panel Evaluation Structure



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## Life Sciences

- LS1 Molecular & Structural Biology & Biochemistry
- LS2 Genetics, Genomics, Bioinformatics & Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology & Endocrinology
- LS5 Neurosciences & neural disorders
- LS6 Immunity & infection
- LS7 Diagnostic tools, therapies & public health
- LS8 Evolutionary, population & environmental biology
- LS9 Applied life sciences & biotechnology

## Social Sciences and Humanities

- SH1 Individuals, institutions & markets
- SH2 The social world, diversity and common ground
- SH3 Environment, space and population
- SH4 The Human Mind and its complexity
- SH5 Cultures & cultural production
- SH6 The study of the human past

## Physical Sciences & Engineering

- PE1 Mathematics
- PE2 Fundamental constituents of matter
- PE3 Condensed matter physics
- PE4 Physical & Analytical Chemical sciences
- PE5 Materials & Synthesis
- PE6 Computer science & informatics
- PE7 Systems & communication engineering
- PE8 Products & process engineering
- PE9 Universe sciences
- PE10 Earth system science



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# ERC in Horizon 2020



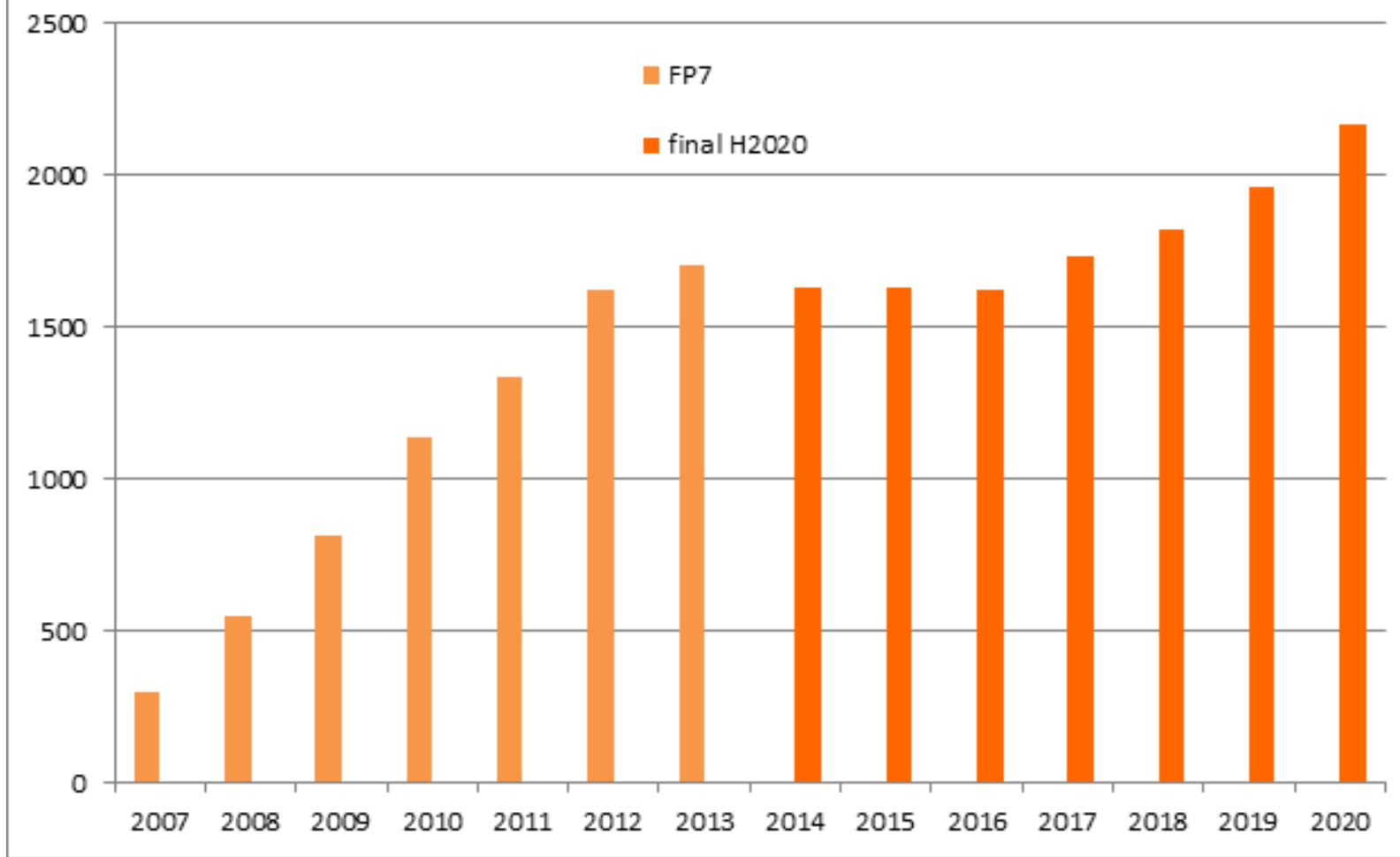
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- **Essential features maintained:**
  - *Same schemes, same principles, same selection procedures/criteria*
  - *Independent Scientific Council with full authority over funding strategy*
  - *Executive Agency with autonomous operation*
  
- **Increased overall budget (13.1 Bn € in current prices for 2014-2020):**
  - *Still excellent opportunities for top research talents*
  
- **Strengthening the Scientific Governance of the ERC:**
  - *Strengthening the links between the Scientific Council and the Executive Agency*
  - *Merging positions of President of ERC and Secretary General*
  - *(Almost) full-time President based in Brussels*
  - *3 Vice-Chairs elected from amongst the Scientific Council members*

# ERC in Horizon 2020



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*"The ERC must have a funding capacity that exceeds at least 5% of existing (sub)national funding, at a minimum of 4bn € per year".*  
**LERU input to the independent review of the ERC (2009)**



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# ERC 2014



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## Budget 2014

- StG 485 M€ ~ 370 grants
- CoG 713 M€ ~ 400 grants
- AdG 450 M€ ~ 200 grants
- Proof of Concept 15 M€ ~ 100 grants

# ERC 2015



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## Budget 2015 (provisional)

- StG 411 M€ ~ 315 grants
- CoG 603 M€ ~ 340 grants
- AdG 640 M€ ~ 285 grants
- Proof of Concept 15 M€ ~ 100 grants

# Work Programme 2015



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- **Publication date of first calls planned for Autumn 2014.**
- **Three ERC grants will again be available: Starting (StG), Consolidator (CoG), and Advanced Grants (AdG).**
- The Scientific Council will analyse the pilot phase of the **ERC Synergy Grant** before deciding on future calls. No Synergy call under Work Programme 2015.
- **Restrictions on applications will apply to the 2015 calls based on the outcome of the evaluation of the 2014 calls** (same in Work Programme 2014).
- **Overhead rate: 25%**

# Work Programme 2015



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ERC calls	Budget	Call Publication	Submission Deadline(s)
<b>Starting Grants</b> ERC-2015-StG	410 M€	October 2014	February 2015
<b>Consolidator Grants</b> ERC-2015-CoG	605 M€	November 2014	March 2015
<b>Advanced Grants</b> ERC-2015-AdG	630 M€	February 2015	June 2015
<b>Proof of Concept</b> ERC-2015-PoC	19 M€	January 2015	DL1: February 2015 DL2: May 2015 DL3: October 2015



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# A view of Bulgaria in ERC



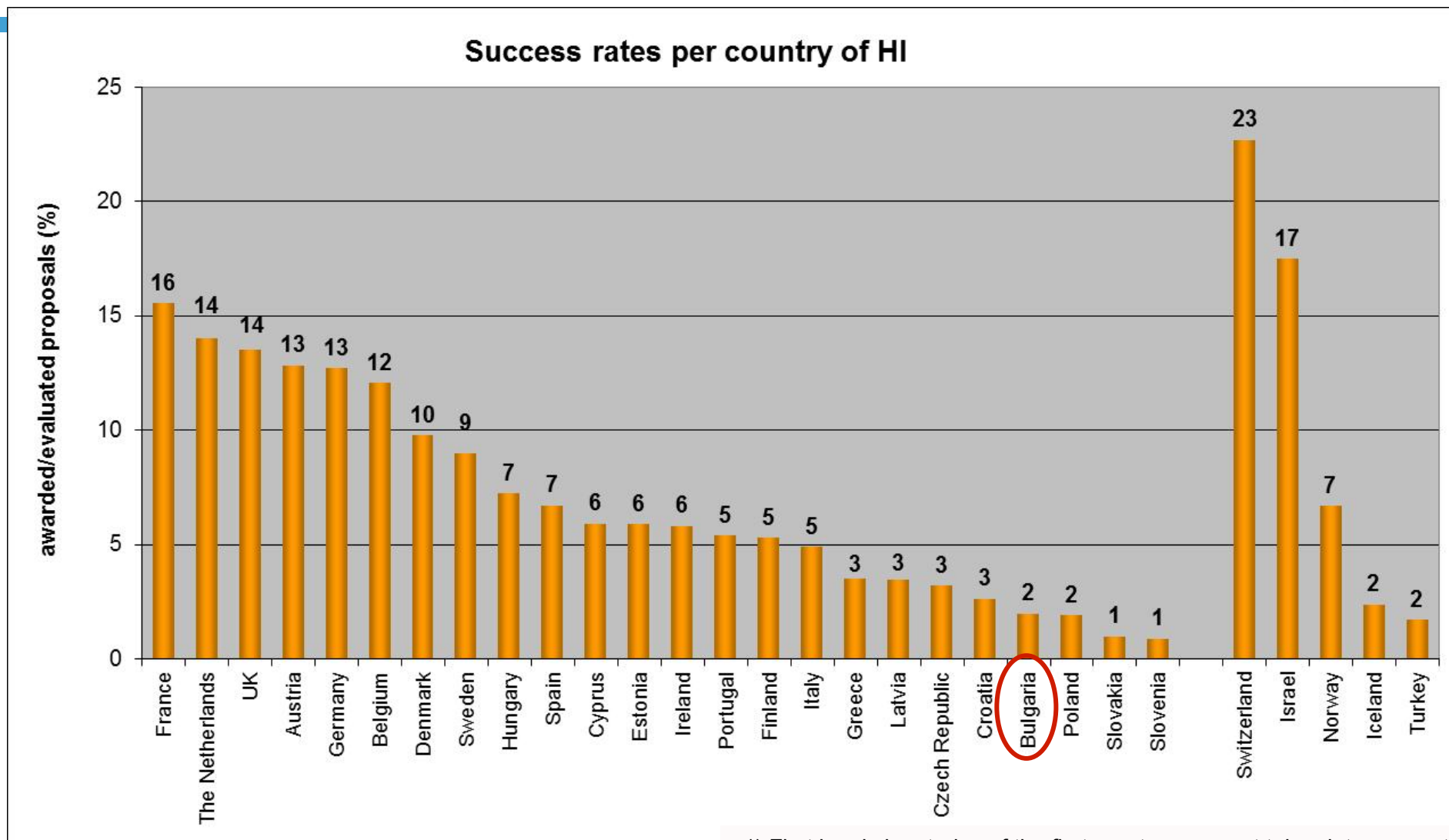
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# Success Rates per Country of HI



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\*) First legal signatories of the first grant agreement taken into account

# ERC Grants Based in Bulgaria



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ERC Call	HI name	Project Title	Domain	PI name
ERC-2007-StG	Centre for Advanced Study Sofia	Negotiating Modernity: History of Modern Political Thought in East-Central Europe	Social Sciences & Humanities	Dr. Balázs Trencsényi
ERC-2008-AdG	New Bulgarian University	Balkan Histories: Shared, Connected, Entangled	Social Sciences & Humanities	Prof. Roumen Daskalov
ERC-2010-AdG	Sofia University	Regime and Society in Eastern Europe (1956 - 1989). From Extended Reproduction to Social and Political Change	Social Sciences & Humanities	Prof. Ivaylo Boyanov Znepolski



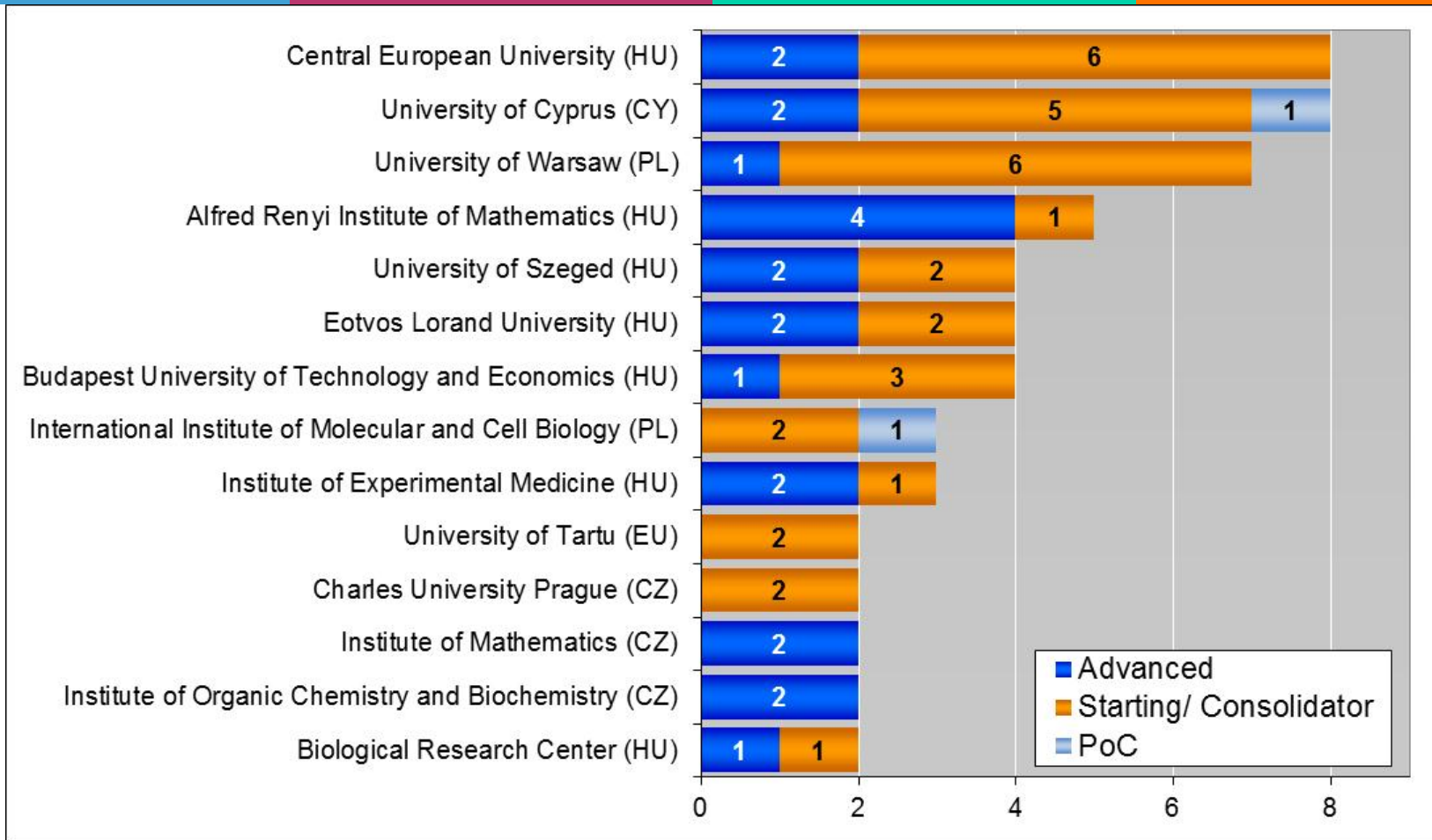
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# Top HIs in Newer EU Member States



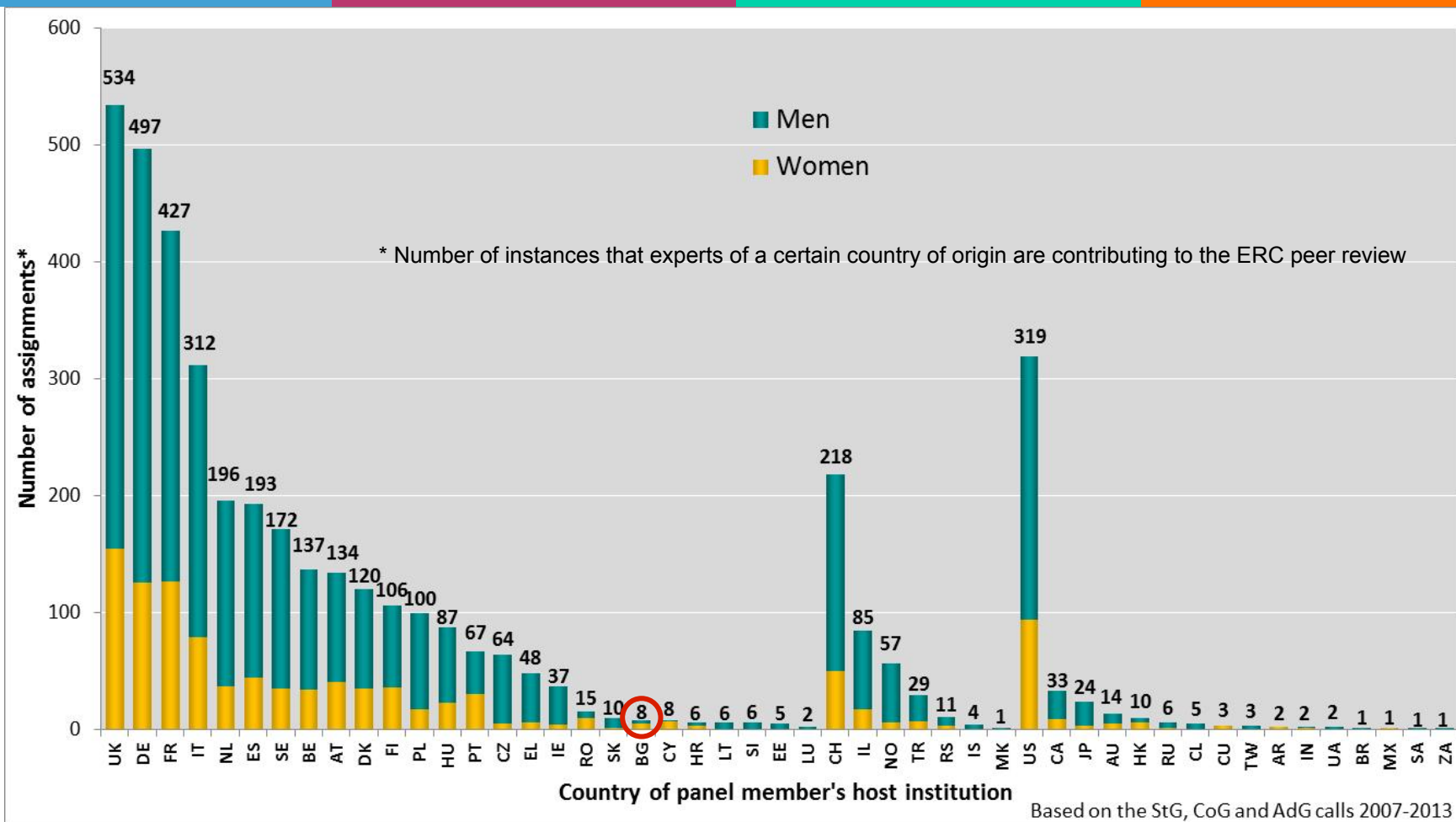
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# Panel Members by Country of HI



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# Some Issues Raised for the Future of ERC



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# Some Technical Issues Raised



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- *How significant are the limitations of peer review and what can be done to mitigate these?*
- *How can the highest quality of experts be motivated to engage?*
- *How to tackle the gender issue in an effective way?*

# Some more Political Issues Raised



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- *Does Europe have too much or too little competition for research funding?*
- *Do European universities and research entities provide the appropriate career paths for the next generation of researchers?*
- *Does Europe have too much or too little concentration of research funding on elite institutions?*
- *How can ERC contribute to enhance capacity building and quality research in countries not yet so successful in the ERC calls?*
- *Can we move beyond a "techno-nationalist" discourse in research policy?*



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