

The European Research Council



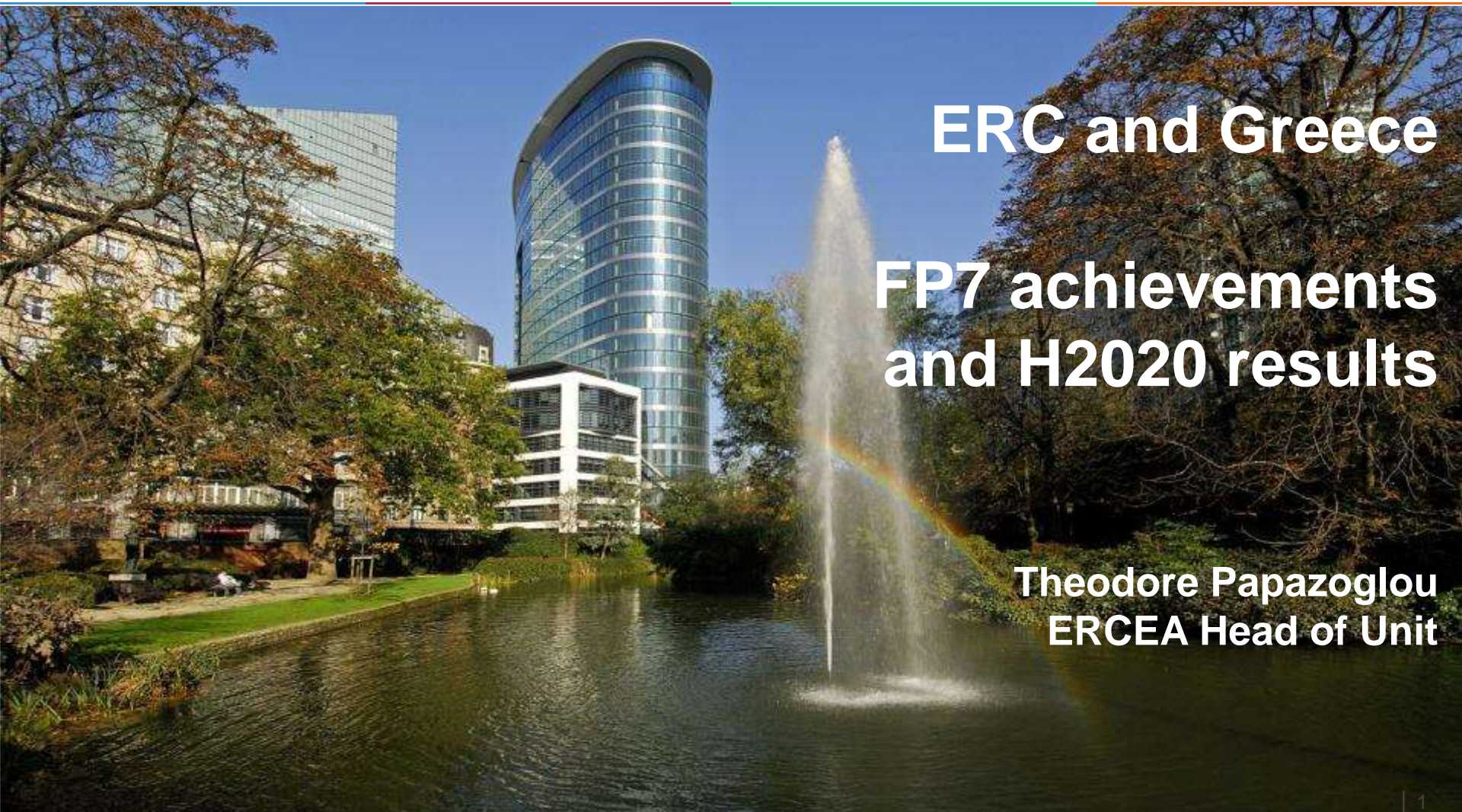
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Established by the European Commission

ERC and Greece

FP7 achievements and H2020 results

Theodore Papazoglou
ERCEA Head of Unit



What is ERC?



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The ERC supports excellence in frontier research through a bottom-up, individual-based, pan-European competition

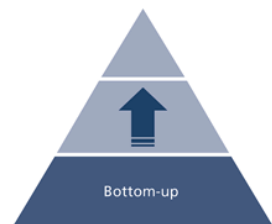
Budget: € 13 billion (2014-2020) - 1.9 billion €/year
€ 7.5 billion (2007-2013) - 1.1 billion €/year

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)
- Excellence as the only criterion

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





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ERC in the H2020 Structure

➤ The HORIZON 2020 main components:

- Excellent Science
 - ➔ *World class science is foundation of technologies, jobs, well-being*
 - ➔ *Europe needs to develop, attract, retain research talent*
 - ➔ *Researchers need access to the best infrastructures*
- Industrial leadership
- Societal challenges

➤ Excellent Science:

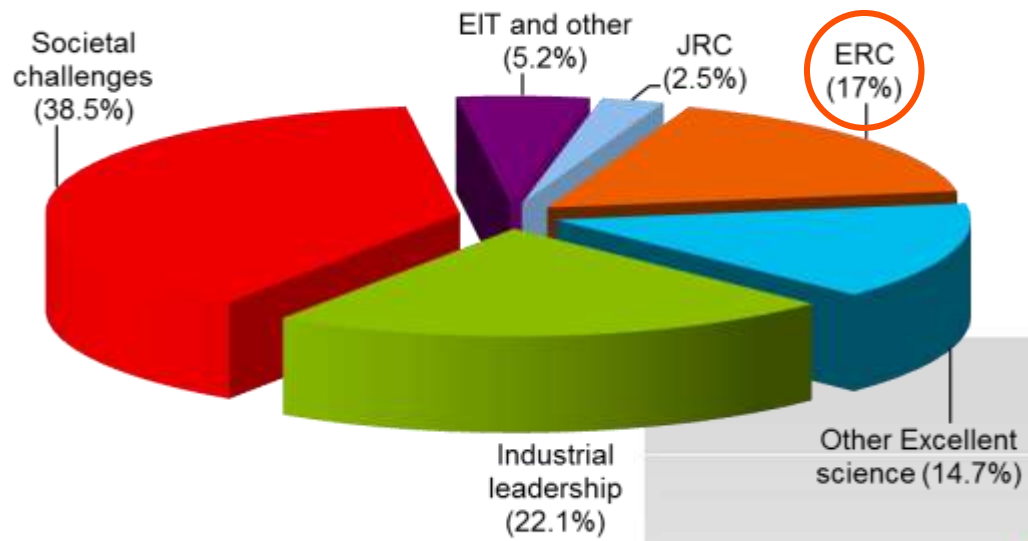
- **European Research Council** (budget under H2020: € 13 billion)
- Future and Emerging Technologies
- Marie Skłodowska Curie Actions
- Research Infrastructures



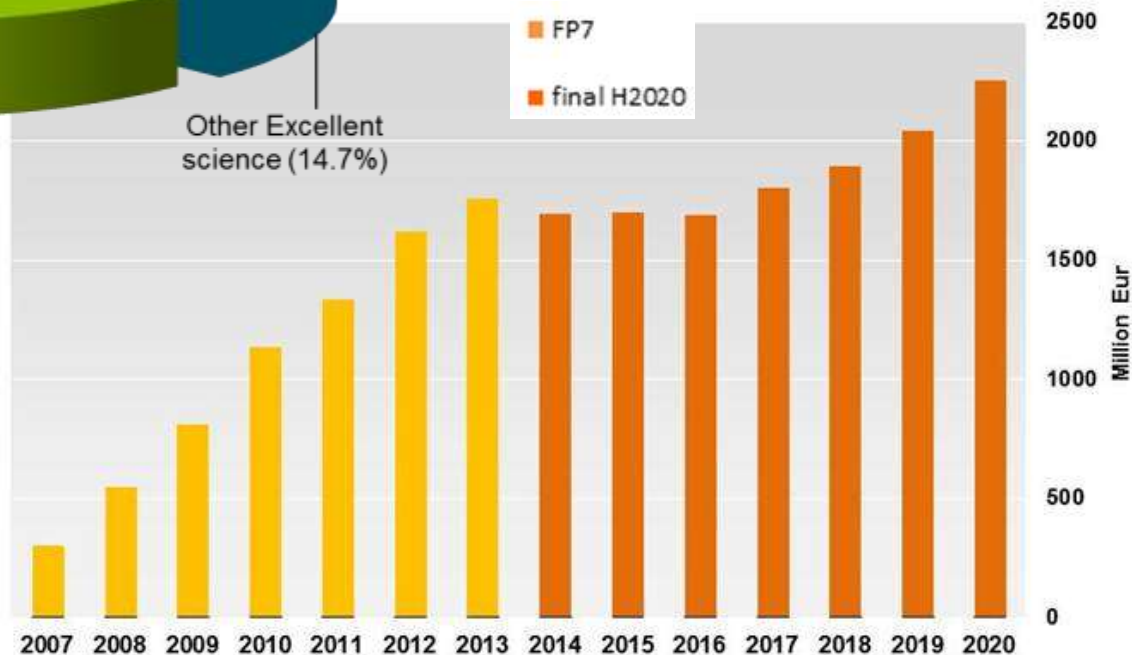
European
Commission

Horizon 2020
European Union funding
for Research & Innovation

ERC H2020 Budget



**ERC Budget
€ 13 billion**



ERC Scientific Council Members

ERC President



BOURGUIGNON Jean-Pierre

Vice-President



BOCK Klaus

Vice-President



SAARMA Mart

Vice-President



SEBASTIAN GALLES Núria



BUCKINGHAM Margaret



CLARK Christopher



DONALD Athene



ENSOLI Barbara



JUNGWIRTH Tomas



KLEINER Matthias



KONDOROSI Eva



KRAMER Michael



ROMANOWICZ Barbara



STENSETH Nils Chr.



STOKHOF Martin



THORNTON Janet



VERNOS Isabelle



VEUGELERS Reinhilde



WIEVIORKA Michel



ZWIRNER Fabio

ERC Grant 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

Creative Freedom to Individual Grantee



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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 attract **top team members** (EU and non-EU) **and collaborators**
- 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

Evaluation Panel Structure (WP2016)



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Life Sciences

- LS1 Molecular and Structural Biology and Biochemistry
- LS2 Genetics, Genomics, Bioinformatics and Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology and Endocrinology
- LS5 Neurosciences and Neural Disorders
- LS6 Immunity and Infection
- LS7 Diagnostic Tools, Therapies and Public Health
- LS8 Evolutionary, Population and Environmental Biology
- LS9 Applied Life Sciences and Non-Medical Biotechnology

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

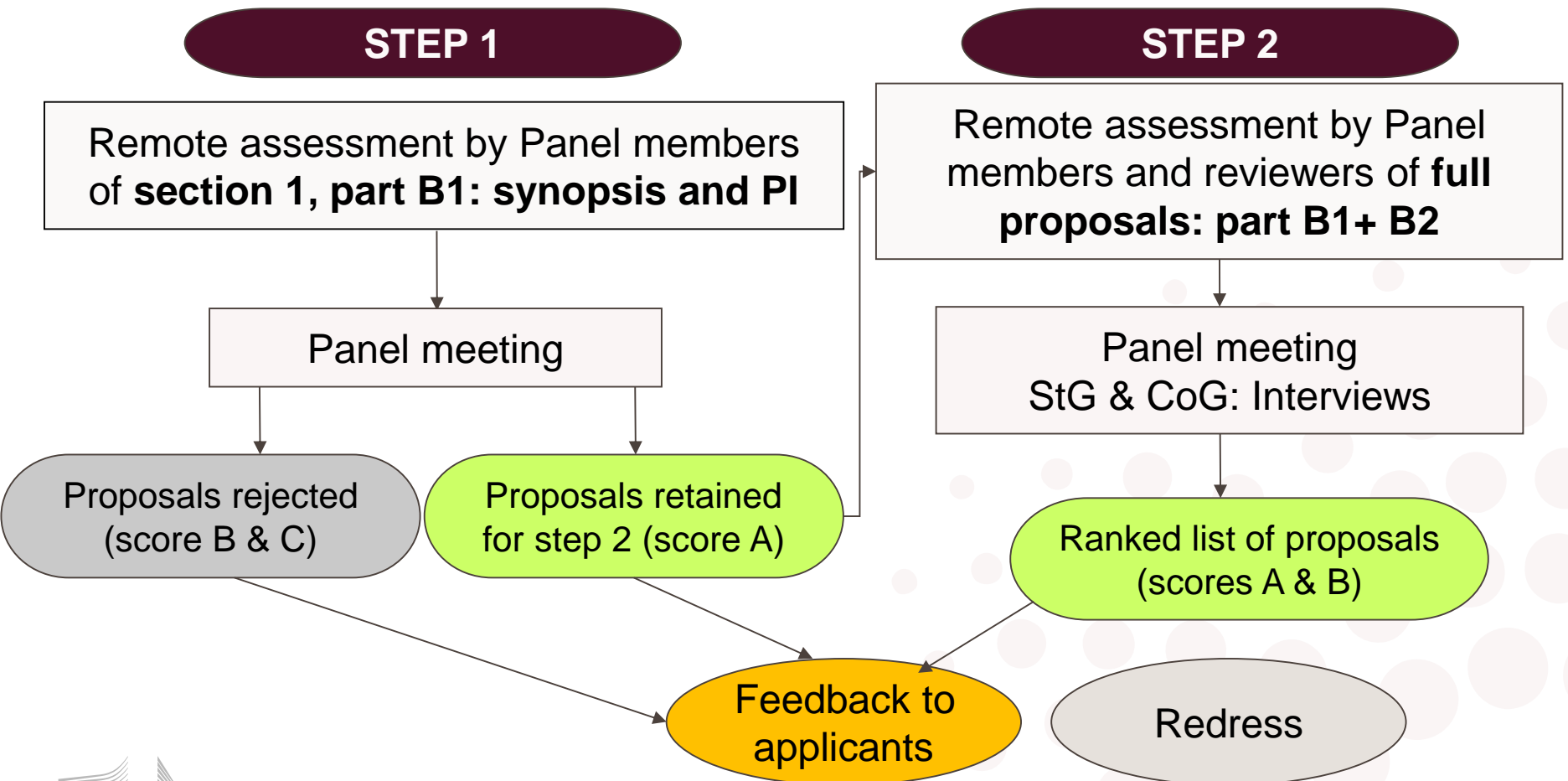
- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Values, Environment and Space
- SH3 The Social World, Diversity, Population
- SH4 The Human Mind and Its Complexity
- SH5 Cultures and Cultural Production
- SH6 The Study of the Human Past

How Are the Proposals Evaluated?



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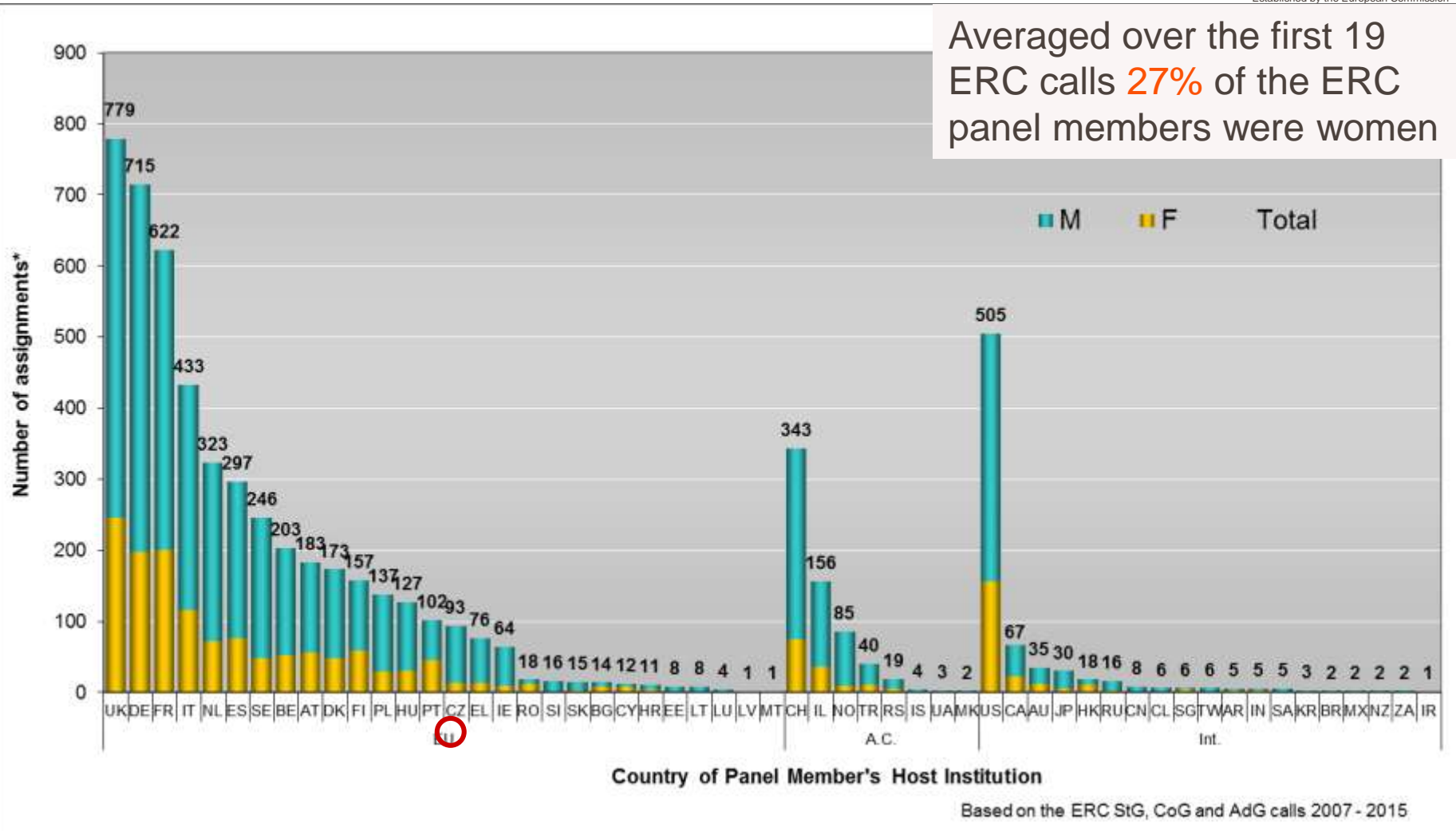
ERC Panel Members 2007-2015 By Country of HI and Gender



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Averaged over the first 19 ERC calls **27%** of the ERC panel members were women



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



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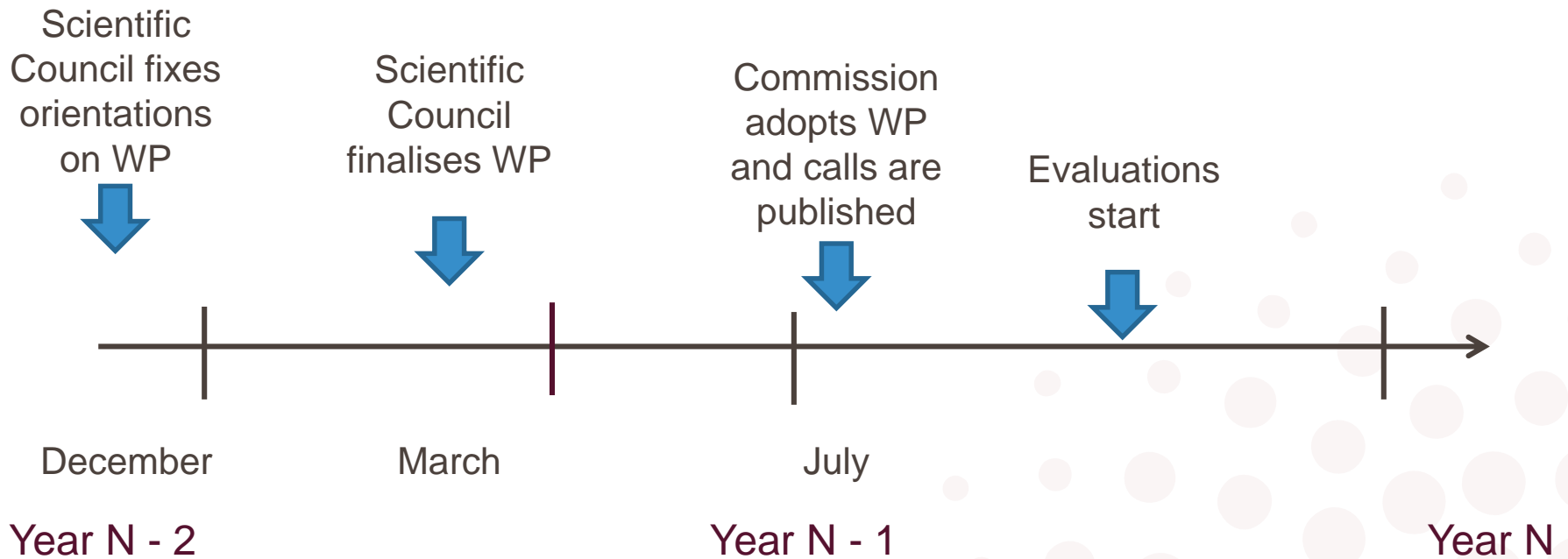
Horizon 2020
European Union funding
for Research & Innovation

ERC Work Programme timeline



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WP 2014 - 2016 main changes



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2016	28/07/15	<p>Restrictions on submissions eased (for applicants receiving “B” scores at step 2).</p> <p>Additional restriction on submissions introduced for applicants who have been rejected on the grounds of a breach of research integrity.</p>
2015	22/07/14	<p>Extension of the restrictions on submissions based on the results of the 2014 calls <u>applied</u>.</p> <p>Removal of indicative domain budgets.</p>
2014	10/12/13	<p>Extension of the restrictions on submissions from 2015 based on the results of the 2014 calls <u>announced</u>.</p> <p>SyG under review.</p>



WP 2017 main changes



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Frontier research grants

- To increase proportion of funding for StG to try to achieve more equal success rates between StG and CoG.
- For the first time under Horizon 2020, beneficiaries of ERC frontier research grants funded under WP 2017 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.

WP 2017 main changes



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Frontier research grants

- Highlight need to take all measures to promote equal opportunities between men and women and aim for a gender balance of personnel assigned to the action.
- For maternity, the effective elapsed time since the award of the first PhD will be considered reduced by 18 months or if longer by the documented amount of leave actually taken for each child born before or after the PhD award.

WP 2017 other actions



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- Continued qualitative evaluation of completed projects



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ERC ACHIEVEMENTS



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After 9 Years, a Success Story



Over **6,000**
top researchers funded since
the ERC's creation in 2007



Over **90,000**
articles from ERC projects published
in prestigious scientific journals



Over **40,000**
researchers and other professionals
employed in ERC research teams



677 research institutions
hosting ERC grantees – universities,
public or private research centres in
the EU or associated countries

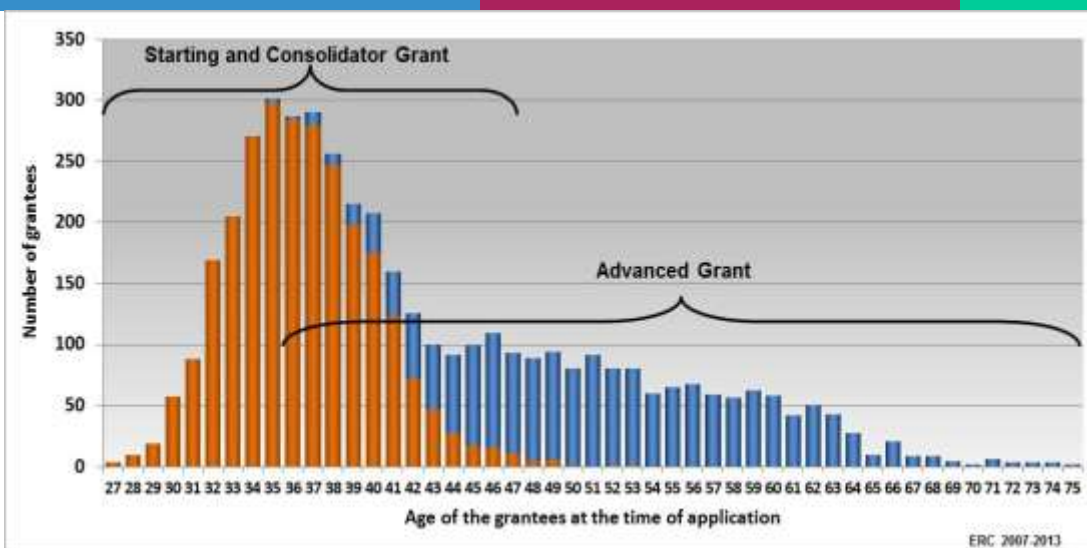


€ 13 billion
ERC budget for 2014-2020 under
Horizon 2020



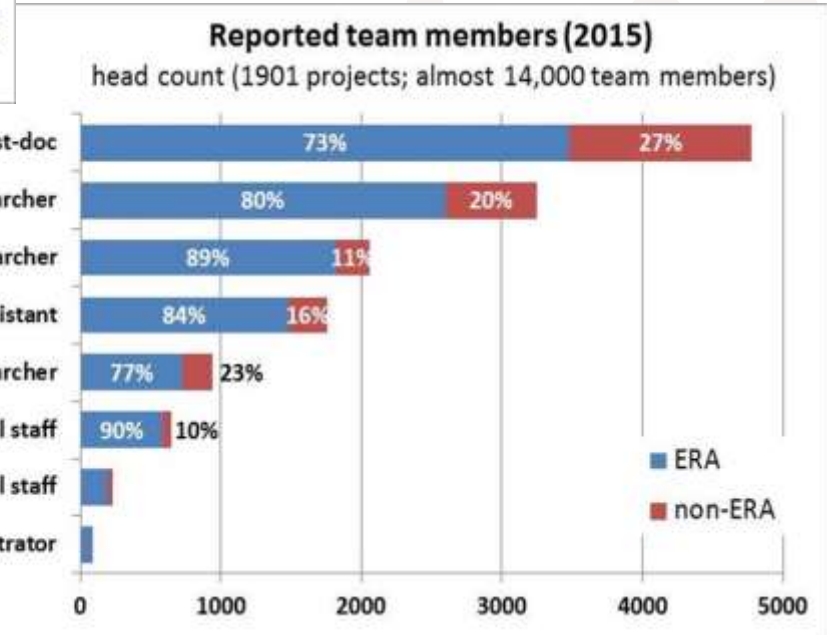
67
nationalities of
grant holders

Priority to Young Scientists



+ 30 000 PhD and post-doc researchers working in ERC teams.

Two-thirds of ERC grants to early-stage Principal Investigators.





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ERC Delivers

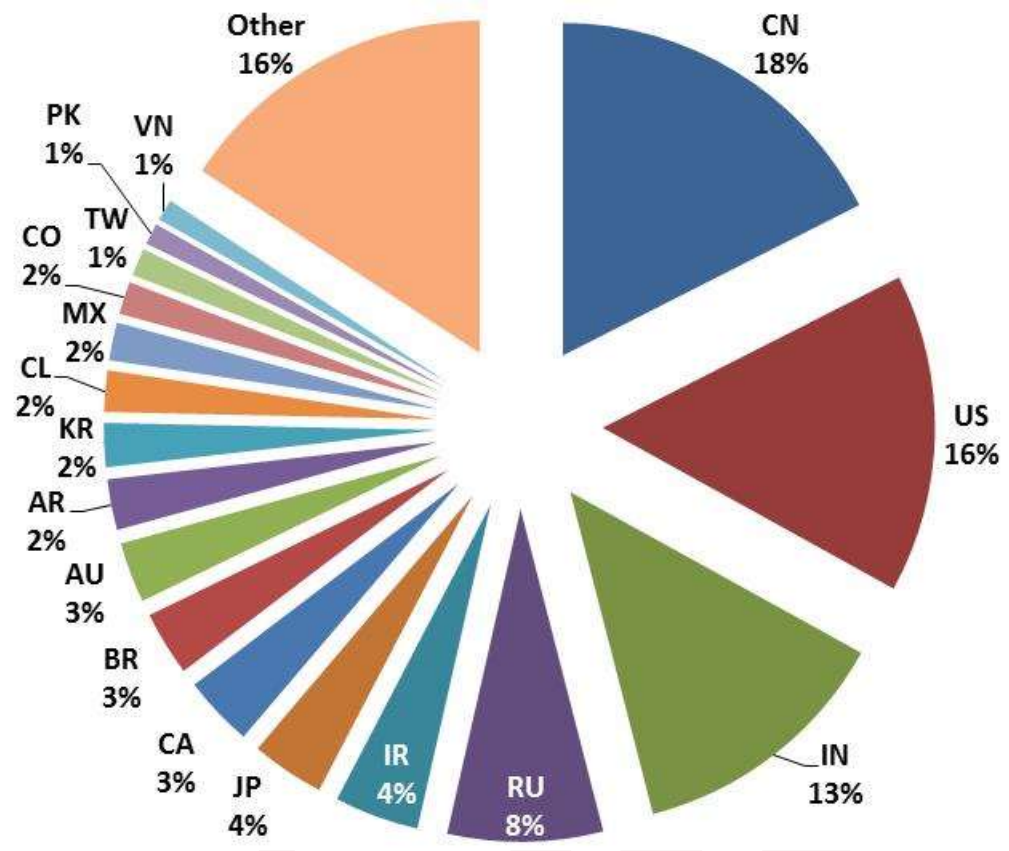
- **71%** of the first 200 completed ERC-funded projects made scientific breakthroughs and major advances in science (as judged by panels of peer reviewers)
- **7%** of the ERC-acknowledging publications were among the **top 1%** most cited in their scientific field and publication year
- **20%** of completed LS and PE projects reported at least one patent (on average **2** patents reported per project)

Attracting Researchers to Europe

Nationality of ERC project teams (PIs not included)
 Analysis of 1,901 Starting and Advanced Grants

EU: 71%
Assoc. Countries: 10%
non-ERA: 17%
 unknown: 2%

In all ERC grants
 + 7,500 non-ERA team members
 most from
China, US, India, and Russia



Nobel Prize to ERC grantees



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ERC Grantee
AdG 2010



May-Britt
Moser
Nobel 2014

ERC Grantee
AdG 2008



Edvard
Moser
Nobel 2014

ERC Grantee
AdG 2013

ERC Grantee
AdG 2009



Jean Tirole
Nobel 2014

The Nobel Prize in Economic Sciences 2014 was awarded to Jean Tirole "for his analysis of market power and regulation".

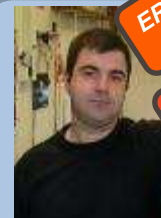
ERC Grantee
AdG 2009



Serge
Haroche
Nobel 2012

ERC Grantee
StG 2007

ERC Grantee
SyG 2012



Konstantin
Novoselov
Nobel 2010

The Nobel Prize in Physiology or Medicine 2014 was awarded to May-Britt Moser and Edvard Moser, together with John O'Keefe, "for their discoveries of cells that constitute a positioning system in the brain".

The research leading to these discoveries* was supported by FP5.

*) "Spatial Representation in the Entorhinal Cortex", *Science*, 2004

- 2 other ERC grantees received the Nobel prize in 2010 and 2012
- Other 6 ERC grantees were already Nobel laureates at the moment they received the ERC grant



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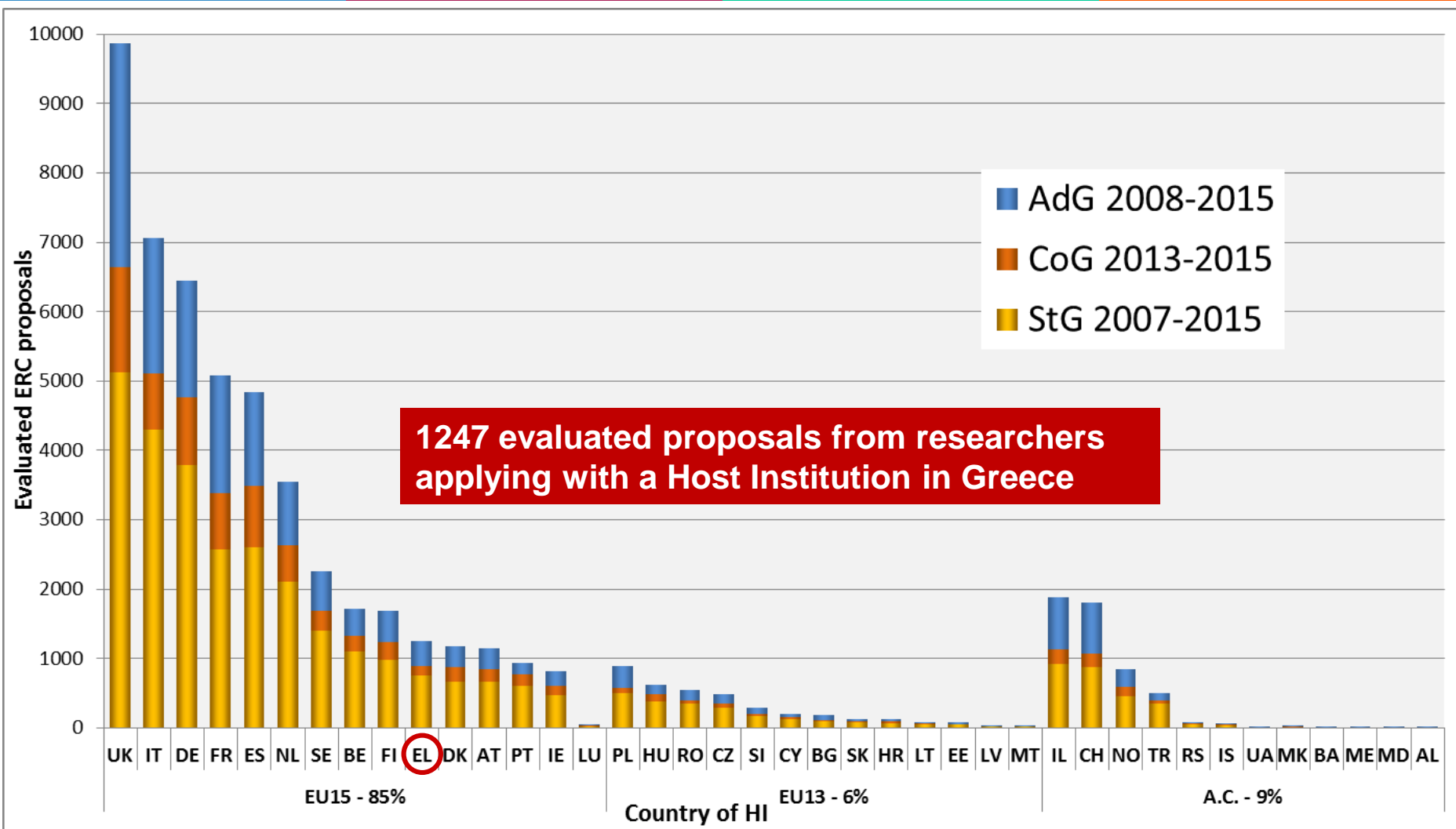
ERC AND GREECE

Evaluated ERC Proposals by HI Country

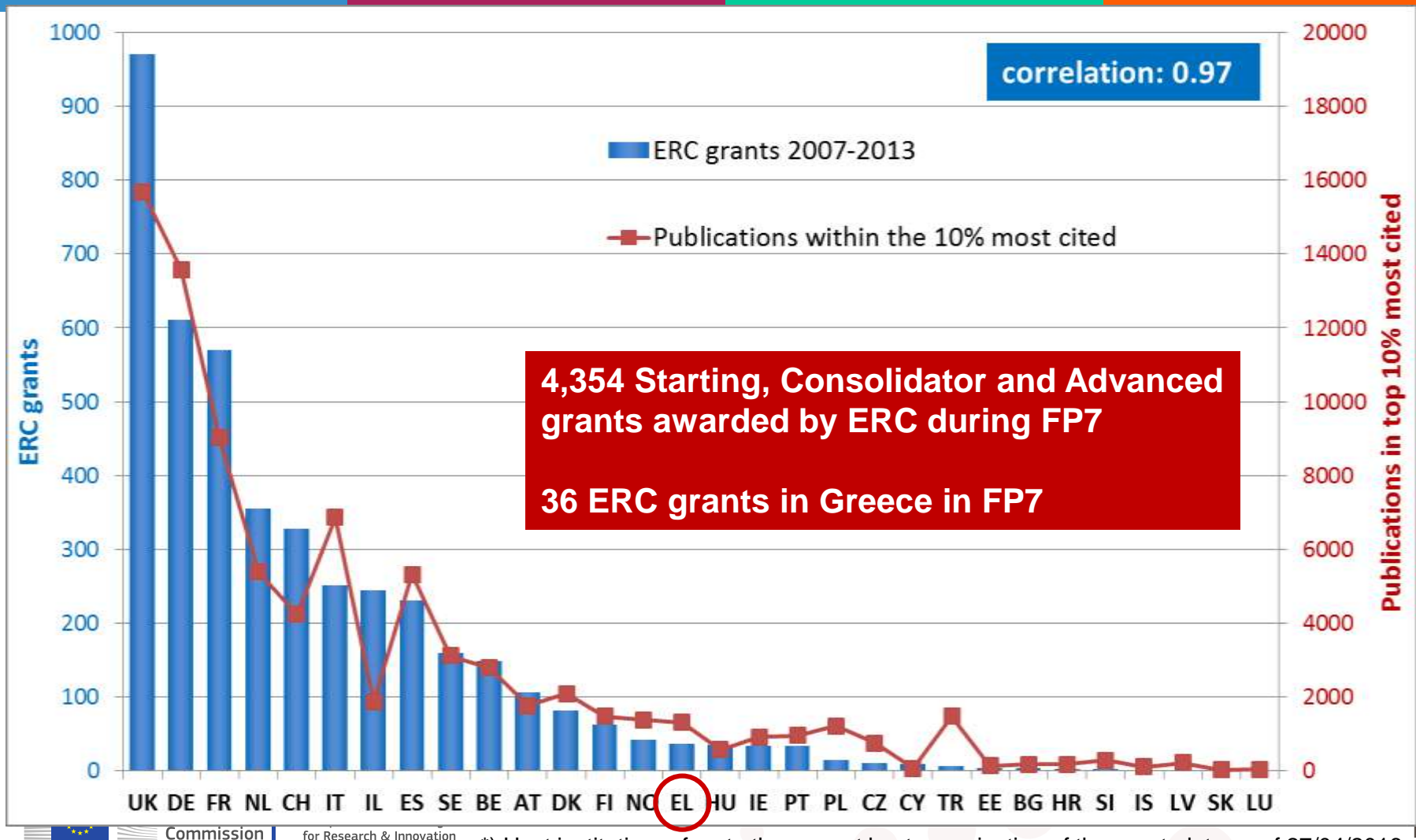


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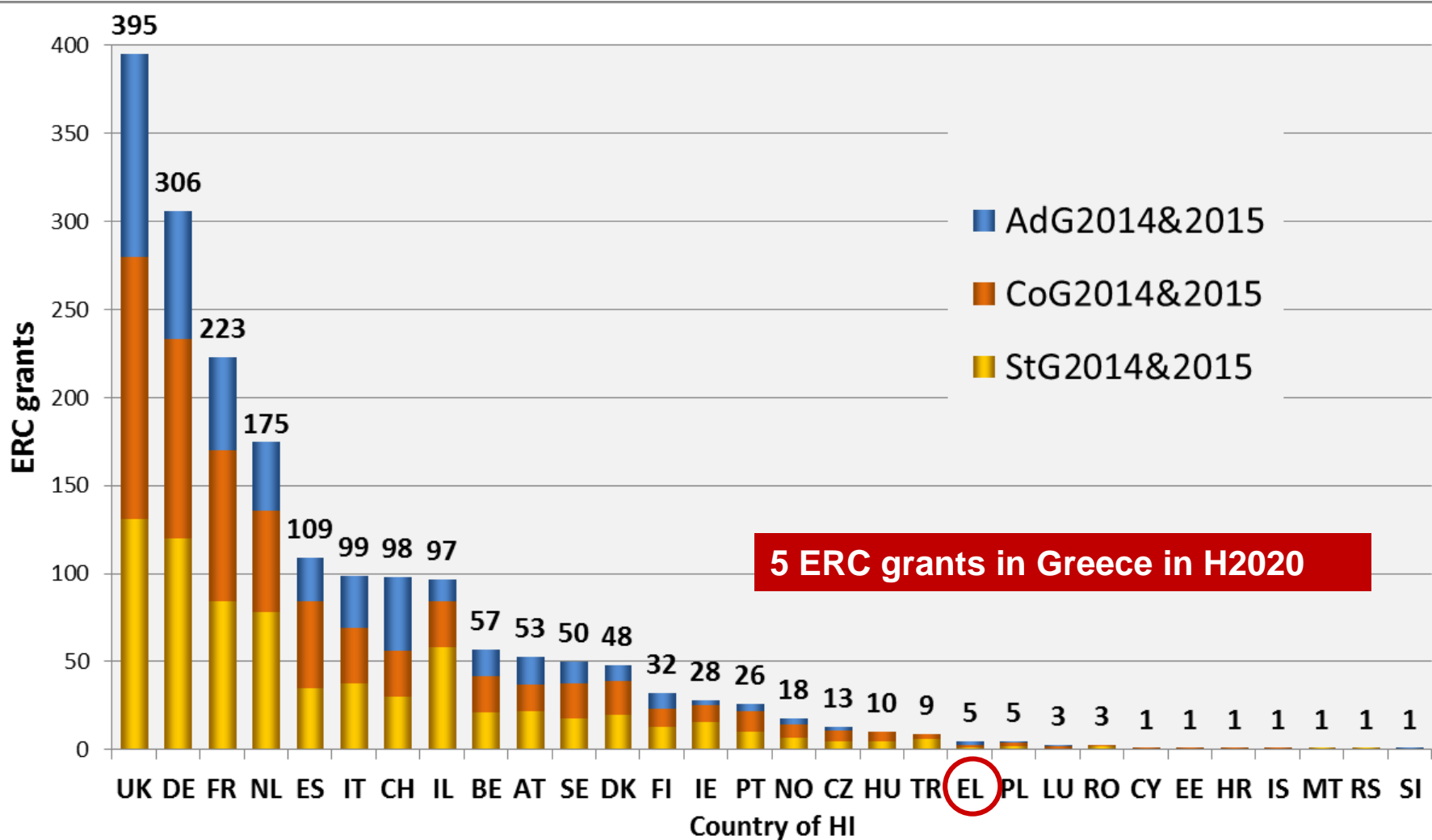
FP7 ERC Grants versus Top Publications



H2020 ERC Funded Projects by Country of HI



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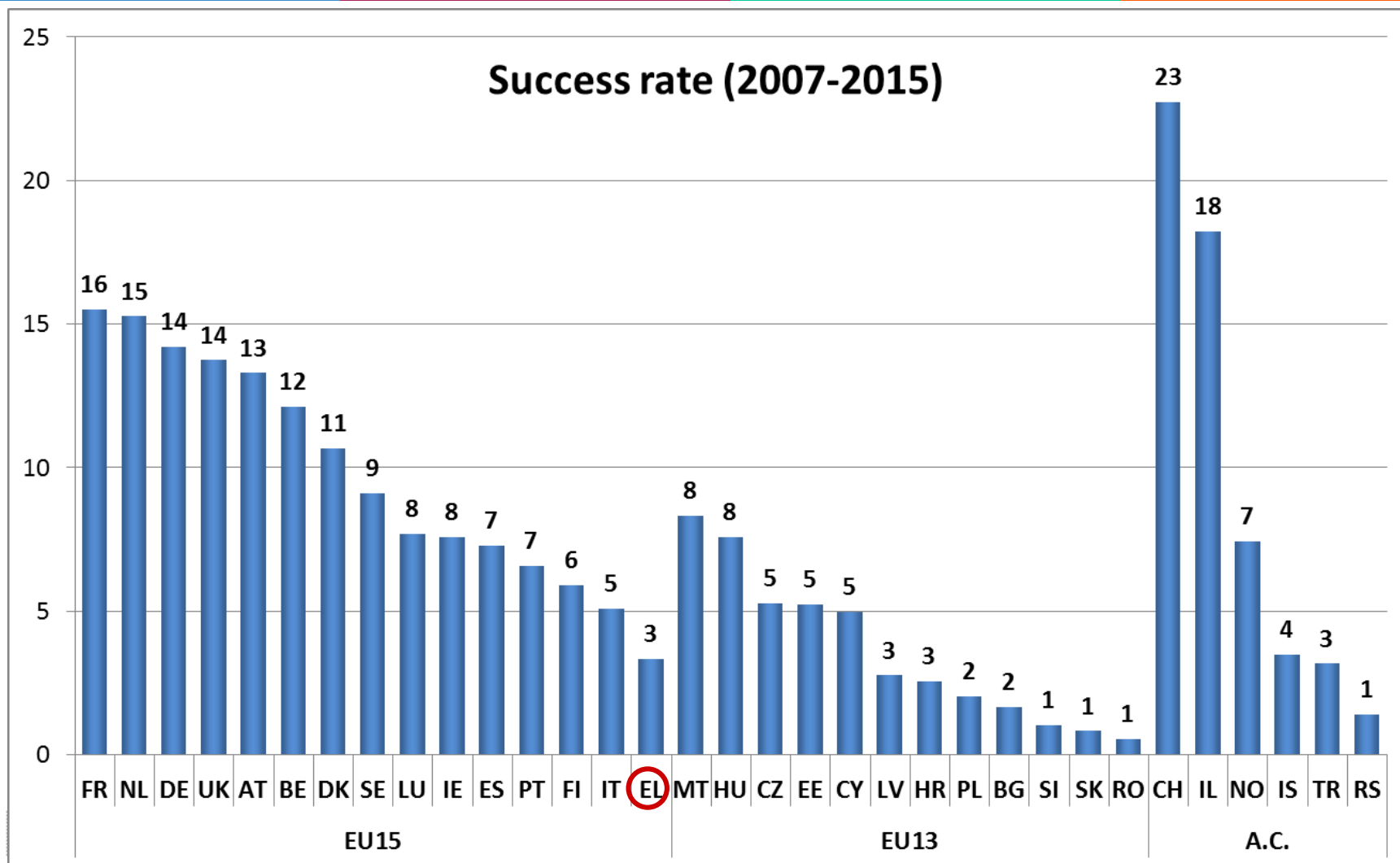


Success Rate by Country of HI

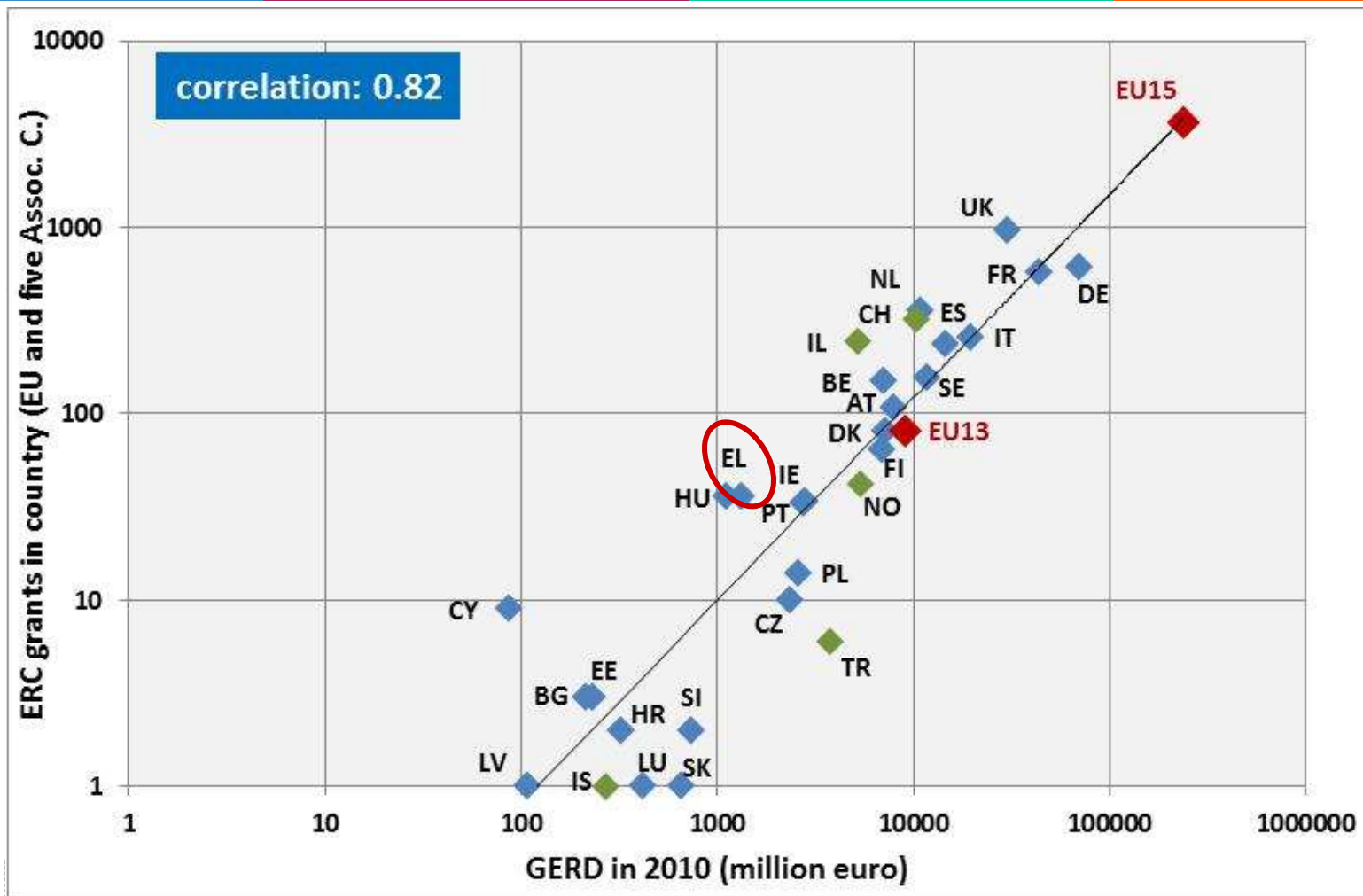


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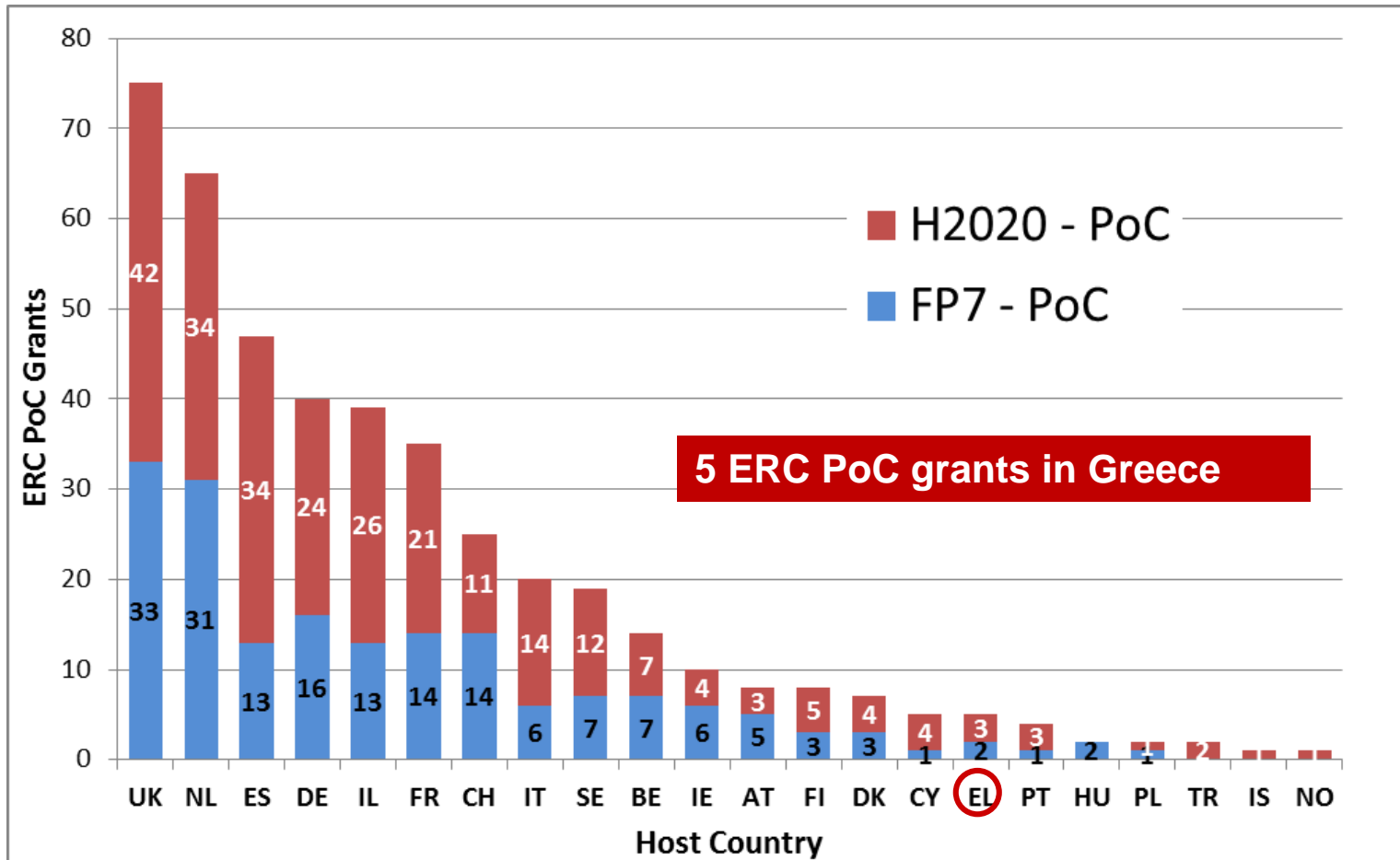
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FP7 ERC Grant Distribution vs. R&D Expenditure



ERC Proof of Concept



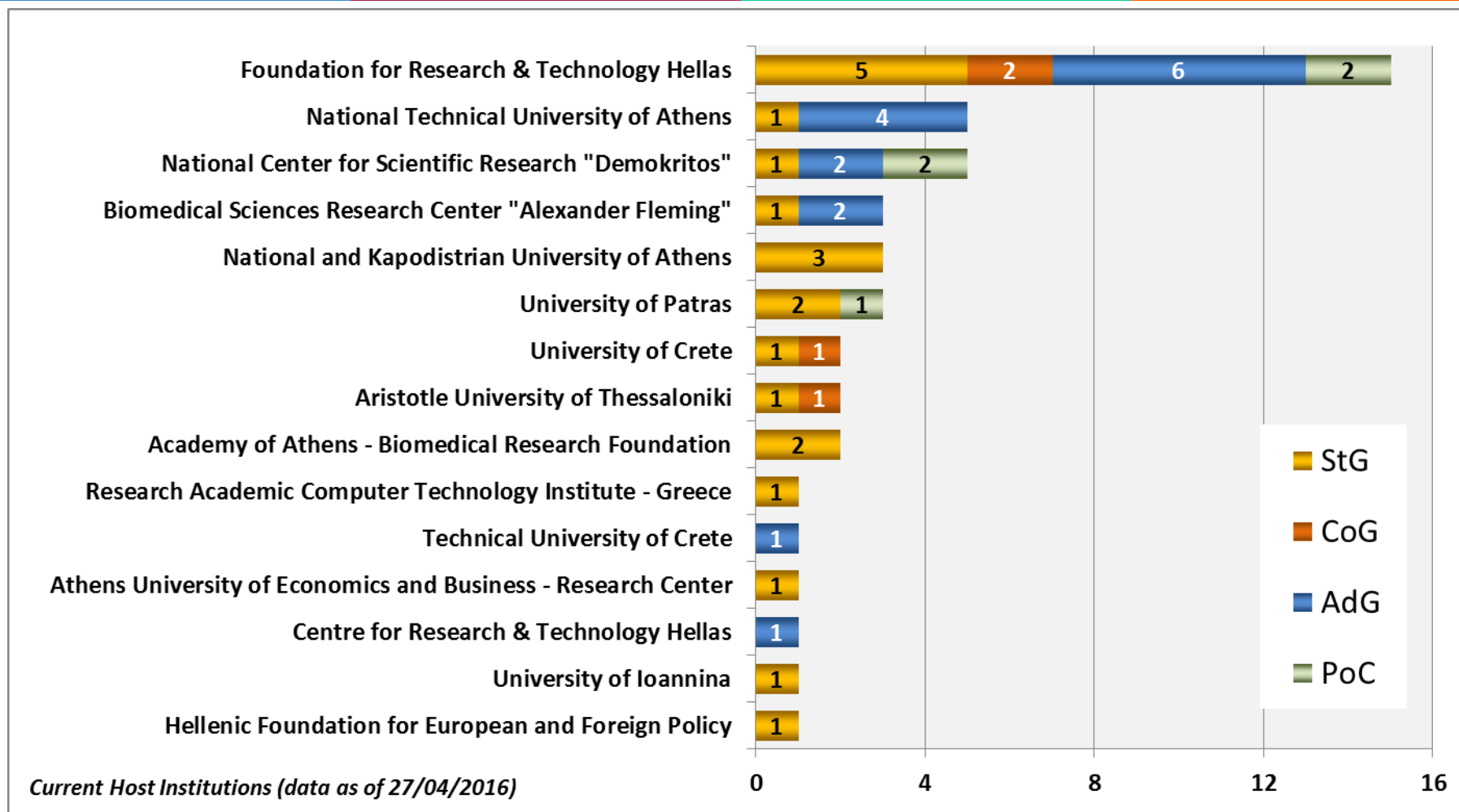
FP7 – H2020 ERC Calls

Host Institutions in Greece



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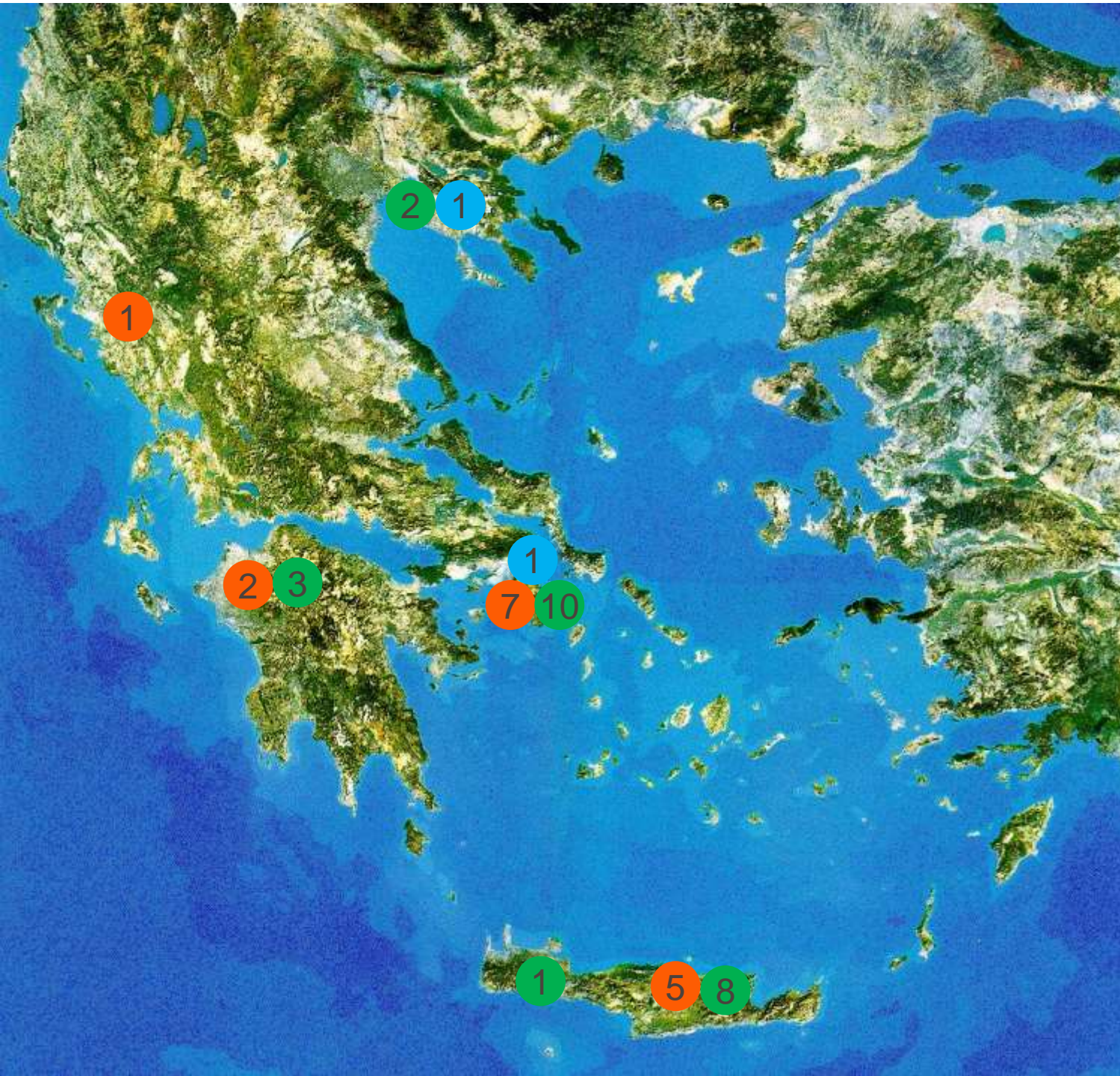


Current Host Institutions (data as of 27/04/2016)

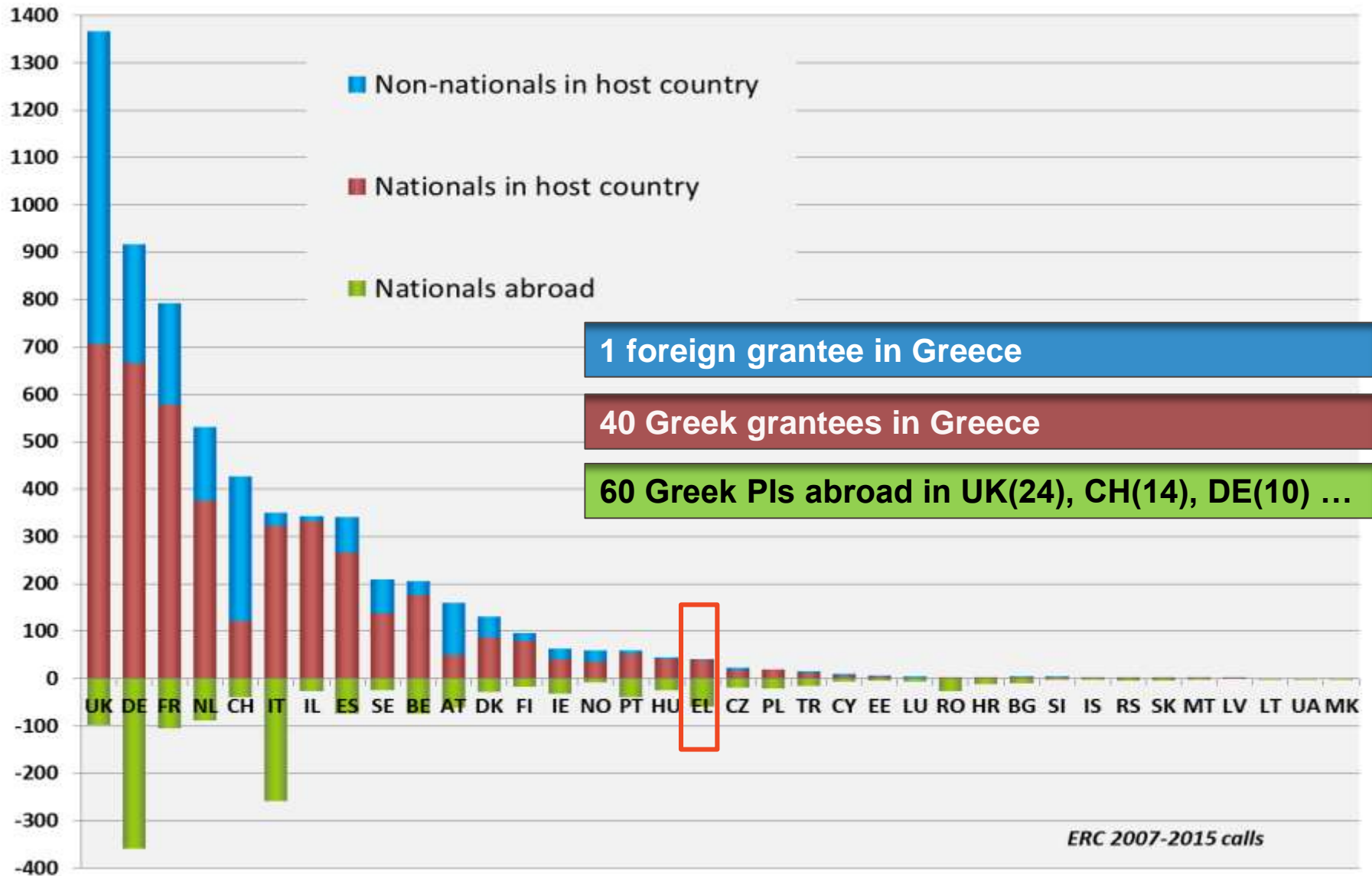


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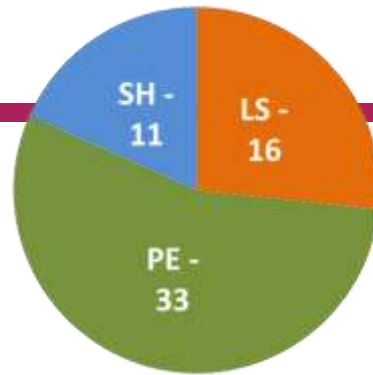


Grantees at Home and Abroad

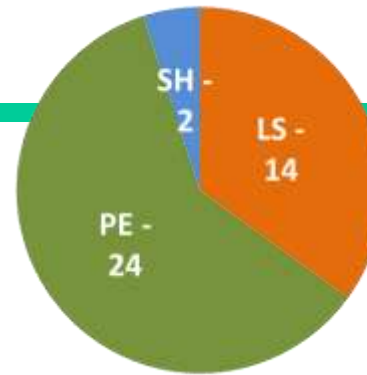


Greek ERC grantees outside Greece

Greek PIs outside Greece
(current HIs)

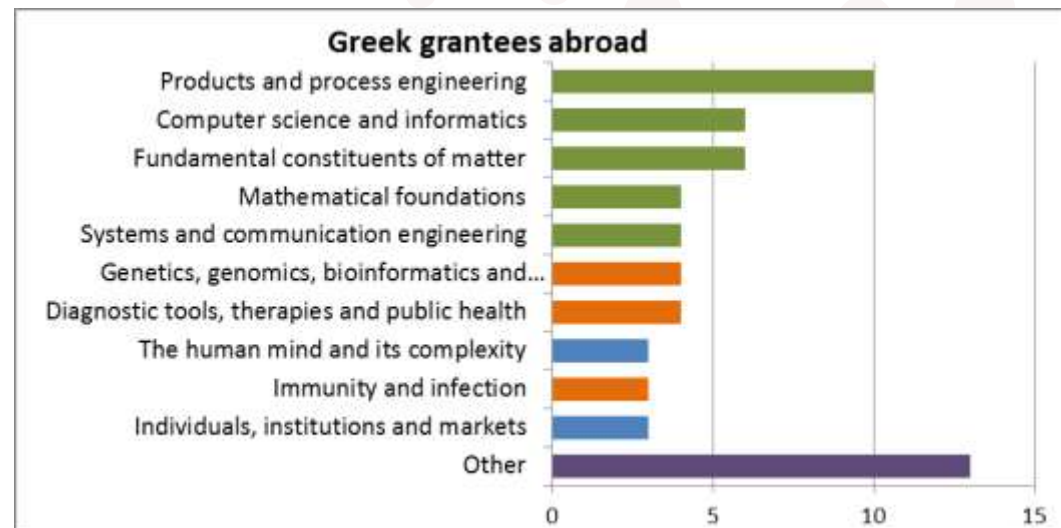


Greek PIs in Greece
(current HIs)



Greeks applying with a HI outside Greece				Greeks applying with a HI in Greece			
	evaluated	grantees	s.rate		evaluated	grantees	s.rate
resident in Greece	41	4	10%	resident in Greece	1124	35	3%
resident in other ERA countries	502	53	11%	resident in other ERA countries	23	1	4%
resident outside ERA	12	2	17%	resident outside ERA	47	5	11%
Total	555	59	11%	Total	1194	41	3%

Host institution	Greek PIs
ETH Zurich	6
University of Oxford	5
Imperial College	5
University of Cambridge	4
EPFL	4
CNRS	4
University of Geneva	3
University College London	3
Other	26
TOTAL	60



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