



HORIZON 2020

The new framework programme "Horizon 2020" and.....



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Thessaloniki, 11/03/2014

What is Horizon 2020?

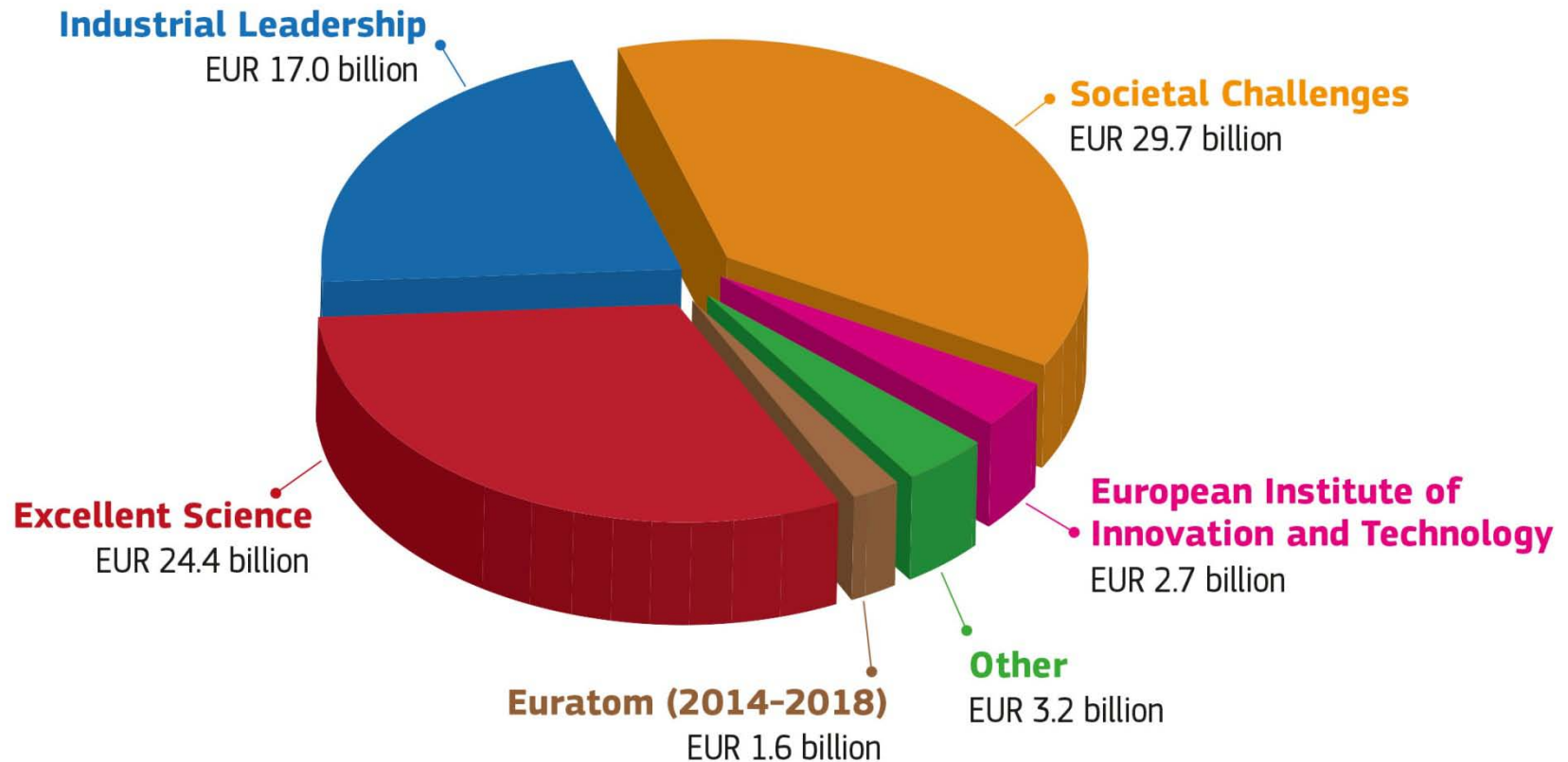
The new European Union programme for research and innovation for 2014-2020

- An integrated programme coupling research to innovation
- Challenge based
- Strong focus on SMEs
- Major simplification



€ 79 billion from 2014 to 2020

HORIZON 2020 BUDGET (in current prices)



New approach to work programmes and calls

- More strategic
- Two year work programmes
(2014-2015: > € 15 billion)
- Less prescriptive calls
(64 calls in 2014)
 - ✓ Broader and fewer topics
 - ✓ First call deadlines as from March 2014



Work Programme 2014

Funding for calls

Excellent Science Pillar: ~ € 3 billion

- **European Research Council** (4 calls) € 1 662 million
- **Marie Skłodowska-Curie actions** (6 calls) € 800 million
- **Future and Emerging Technologies (FET)** (4 calls) € 200 million
- **European Research Infrastructures (including e-Infrastructures)**
(4 calls) € 277 million

Work Programme 2014

Funding for calls

Industrial Leadership Pillar: ~ € 1.8 billion

Leadership in Enabling and Industrial Technologies (LEITs)

- **Information and Communication Technologies (ICT)**
(2 calls) € 700 million
- **Nanotechnologies, Advanced Materials, Biotechnology and Production** (5 calls) € 500 million
- **Space** (5 calls) € 128 million
- **Access to Risk Finance (financial instruments)** (2 calls) € 5 million
(€ 295 million NOT in calls)
- **Innovation in small and medium-sized enterprises** (1 call)
€ 10 million
- **SME Instrument** € 251 million

Work Programme 2014

Funding for calls

Societal Challenges Pillar: ~ € 2.8 billion

- Health, demographic change and wellbeing (2 calls) € 600 million
- Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research and the Bioeconomy (3 calls) € 300 million
- Secure, clean and efficient energy (4 calls) € 600 million
- Smart, green and integrated transport (3 calls) € 540 million
- Climate action, environment, resource efficiency and raw materials (3 calls) € 300 million
- Europe in a changing world – inclusive, innovative and reflective societies (5 calls) € 112 million
- Secure Societies (4 calls) € 200 million

In addition

- Spreading Excellence and Widening Participation (3 calls) € 50 million
- Science with and for Society (4 calls) € 45 million

First Horizon 2020 calls

12 focus areas

Some examples:

- ✓ Personalising health and care
(€ 549 million)
- ✓ Blue growth: unlocking the potential of seas and oceans
(€ 100 million)
- ✓ Overcoming the crisis: new ideas and strategies to overcome the crisis in Europe
(€ 35 million)



Cross-cutting issues across the Work Programmes

Social Sciences and Humanities (over € 400 million)

- ✓ >200 topics (at least 35% of the total topics in the Work Programme)
- ✓ Budget over € 400 million
- ✓ Topics 'flagged' by the system designed for searching the Work Programme

In addition

- ✓ ERC (around 17% of budget for SSH)
- ✓ Marie Skłodowska-Curie actions

Cross-cutting issues across the Work Programmes

Gender

- ✓ Explicitly integrated in all the sections of the Work Programme
- ✓ Specific call under Science with and for Society (€ 9.5 million)
- ✓ Topics are flagged to ease access for applicants

Climate Change

- ✓ ~35% of the budget for activities addressing climate change
- ✓ Climate topics are of particular importance in some of the focus areas of the Work Programme

International cooperation

Principle of general openness
the programme will remain the most open funding programme in the world

Open to the association of enlargement countries / EFTA / European Neighbourhood (and other)

Targeted actions to be implemented taking **a strategic approach to international cooperation**



Major Simplification for the benefit of applicants

1. A single set of rules for all funding under Horizon 2020

- ✓ Fewer, more flexible, funding instruments

2. Simpler reimbursement: 1 project = 1 funding rate

- ✓ 100% of the total eligible costs (70% for innovation actions)
- ✓ Non-profit legal entities can also receive 100% in innovation actions
- ✓ Single flat rate for indirect costs (25% of eligible costs)

3. Faster time to grant

- ✓ Within 8 months of call deadline



Major Simplification for the benefit of applicants

4. Fewer, better targeted controls and audits
5. Coherent implementation
 - ✓ Through dedicated agencies
 - ✓ Single IT system
6. Simplification in grant agreements



Evaluation criteria



- ✓ **ERC** frontier Research actions >> only EXCELLENCE
- ✓ **Innovation actions** >> higher weighting for "IMPACT"

**Proposal evaluated by the experts "as it is"
and not as "what could be" = no need for negotiation**

Simpler access through the Participant Portal

- **Single entry point** from calls to electronic submission of proposals
- **New tools for smart searches for the benefit of users,** including newcomers to the programme.

The screenshot shows the main page of the Participant Portal. At the top, there is a navigation bar with the European Commission logo and the text 'RESEARCH & INNOVATION Participant Portal'. Below this, a main banner features a globe and the text 'Horizon 2020 Funding Starting from 1/1/2014'. The page is divided into several sections: 'On this site you can find and secure funding for research & innovation projects under the following EU programmes:' followed by a list of programmes (2014-2020 Horizon 2020, 2007-2013 7th research framework programme (FP7) and Competitiveness & Innovation Programme (CIP)). There are also sections for 'Non-registered users' and 'Registered users' with their respective capabilities. At the bottom, there is a row of six icons representing different user actions: 'WHAT'S NEW?', 'FUNDING OPPORTUNITIES', 'HOW TO PARTICIPATE', 'WORK AS AN EXPERT', 'MY PERSONAL AREA', and 'INFORMATION AND SUPPORT'. The footer includes 'RESEARCH ON EUROPA', 'CORDIS', 'OLAF', and '© European Communities'.

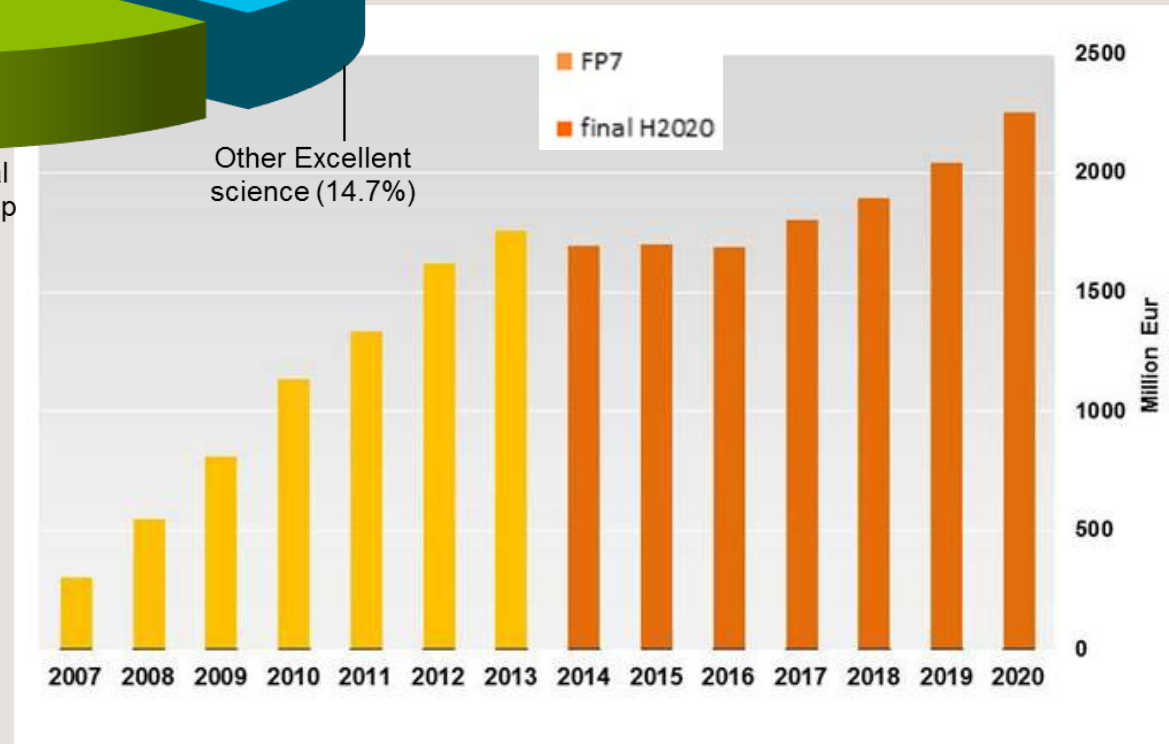
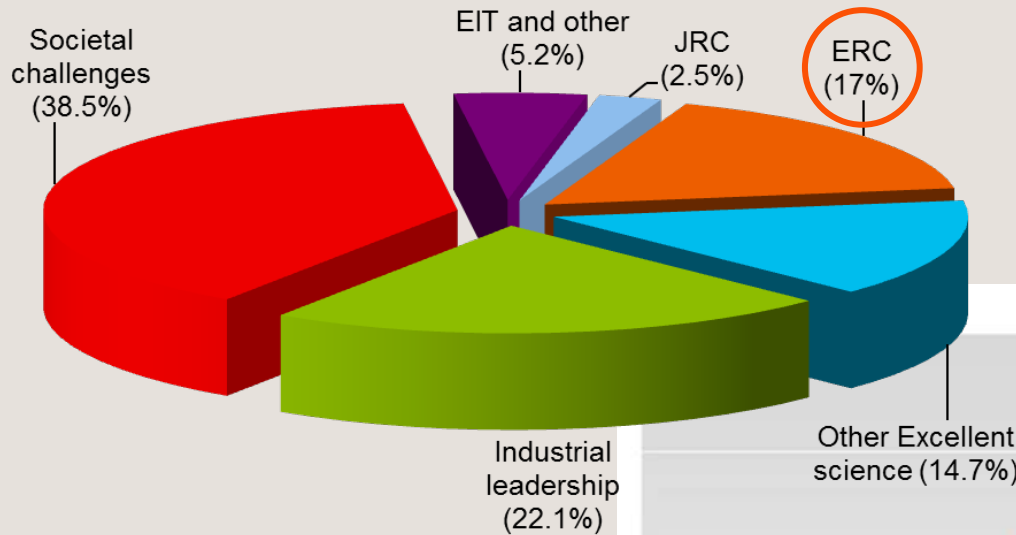
The screenshot shows the 'Funding Opportunities' page. It features a search bar at the top with options for 'Horizon 2020', 'FP7 & CIP Programmes', and 'COSME'. A prominent message states: 'Please note that the H2020 calls have not yet been published and thus this section is not available'. Below this, there is a 'Funding Opportunities' section with a sub-section for 'H2020 ONLINE MANUAL'. The page lists 'Horizon 2020' as the new EU funding programme for research and innovation running from 2014 to 2020, with a budget of €70 billion. It also lists 'FP7 and CIP - previous programmes' and 'COSME' as previous instruments. The page includes detailed information about the programmes, including their goals and how to access them. The footer is consistent with the main page.



**"...and the European Research Council
in the priority of Excellence Science"**

Horizon 2020 budget €77 billion

ERC budget € 13 billion



ERC Structure



European Research Council

Established by the European Commission

The European Commission

- Provides financing through the EU framework programmes
- Guarantees autonomy of the ERC
- Assures the integrity and accountability of the ERC
- Adopts annual work programmes as established by the Scientific Council



The ERC Scientific Council

- 22 prominent researchers proposed by an independent identification committee
- Appointed by the Commission (4 years, renewable once)
- Establishes overall scientific strategy; annual work programmes (incl. calls for proposals, evaluation criteria); peer review methodology; selection and accreditation of experts
- Controls quality of operations and management
- Ensures communication with the scientific community



The ERC Executive Agency

- Executes annual work programme as established by the Scientific Council
- Implements calls for proposals and provides information and support to applicants
- Organises peer review evaluation
- Establishes and manages grant agreements
- Administers scientific and financial aspects and follow-up of grant agreements
- Carries out communications activities and ensures information dissemination to ERC stakeholders



"ERC 101"

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: Substantial grants to fund frontier research



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➤ Frontier research project

- **All fields of fundamental research:** Physical Sciences & Engineering, Life Sciences, Social Sciences & Humanities
- **Bottom-up:** no predetermined subjects, no priorities
- **High risk/high gain**
- **Typically 5 years projects**
- **No consortia – no networks !!!**

➤ Host Institution (HI) in Europe

- **The one where the researcher already works, or any other institution established in the EU or associated countries**
- **Grants are portable (= the PI can change Host Institution)**
- **Universities, research centres; public or private**

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

"Excellence is the Sole Criterion of Evaluation"

(Horizon 2020 and ERC Work Programme)

Evaluation on the basis of Excellence at two levels:

➤ Quality of the Research Project

- ✓ Ground-breaking nature
- ✓ Potential impact
- ✓ Scientific approach

➤ Quality of the Principal Investigator

- ✓ Intellectual capacity
- ✓ Creativity
- ✓ Commitment

Referees and panels **evaluate and score** each element, and then **rank** the proposals according to these results.

ERC basics

Evaluation of proposals: panel 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

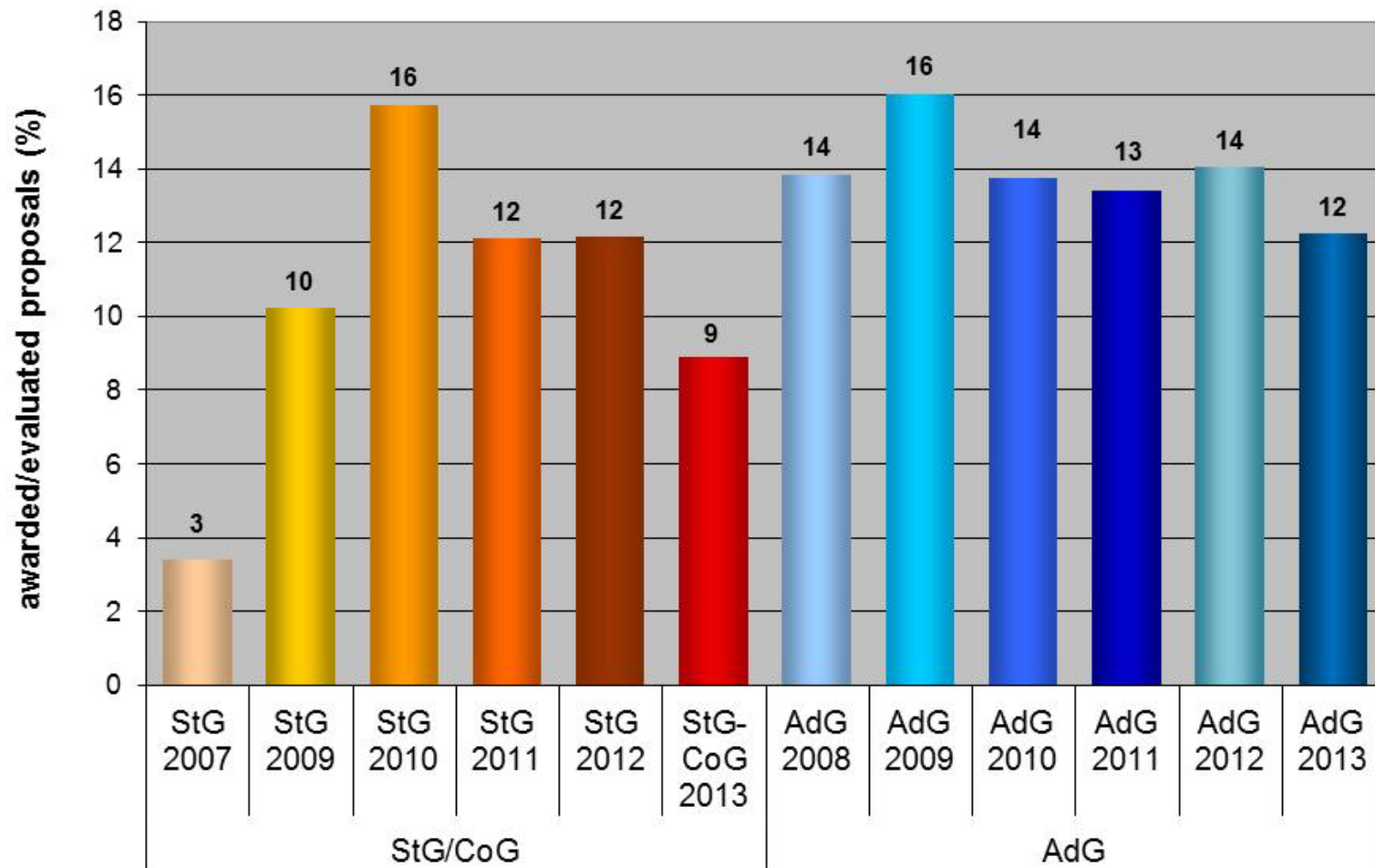
Highly competitive: Average success rate 12%



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success rates ERC calls



Success rates per country of Host Institution

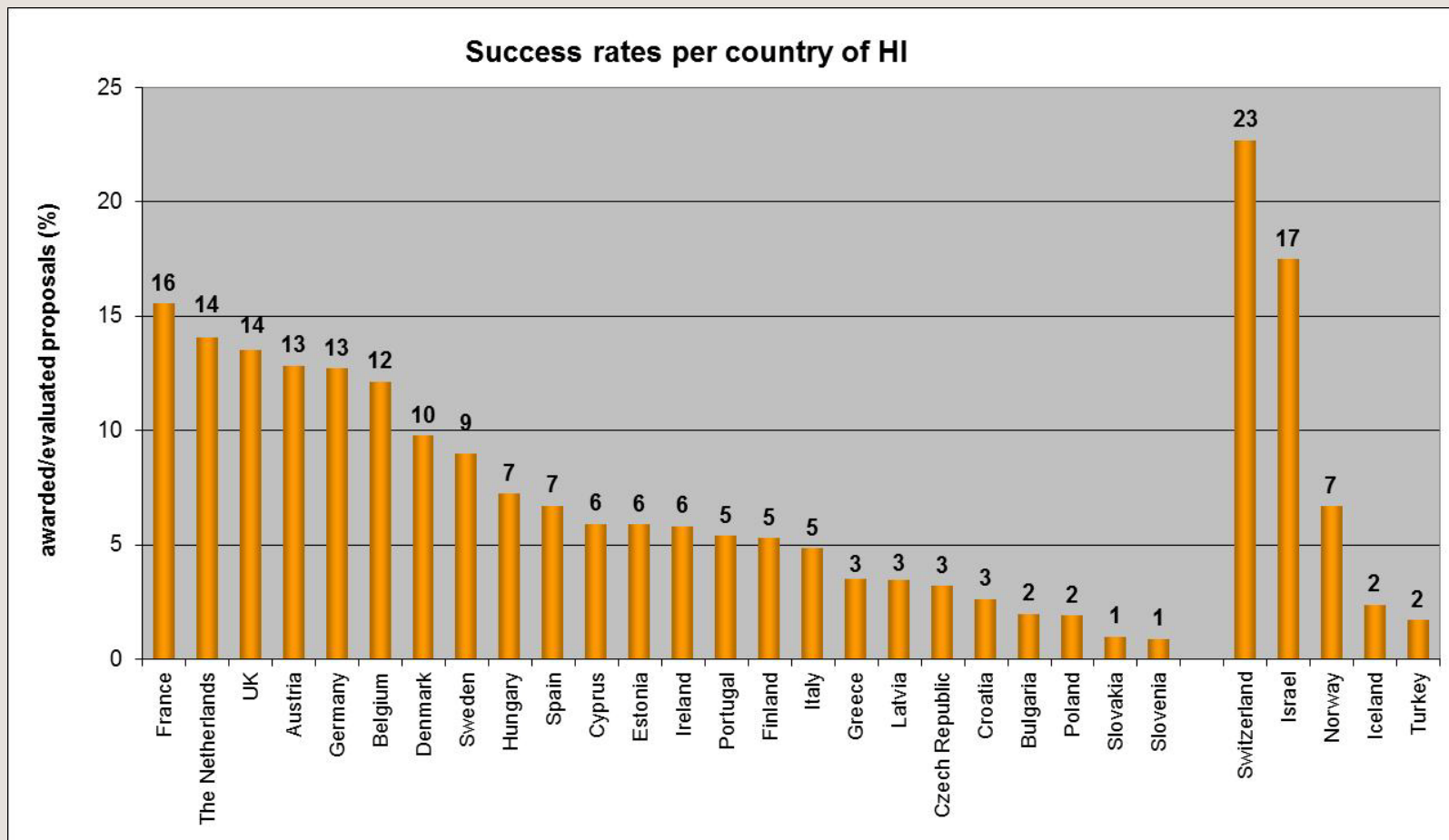
ERC Starting and Consolidator grant calls 2007-2013

ERC Advanced grant calls 2008-2013



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ERC grant distribution to countries of HI

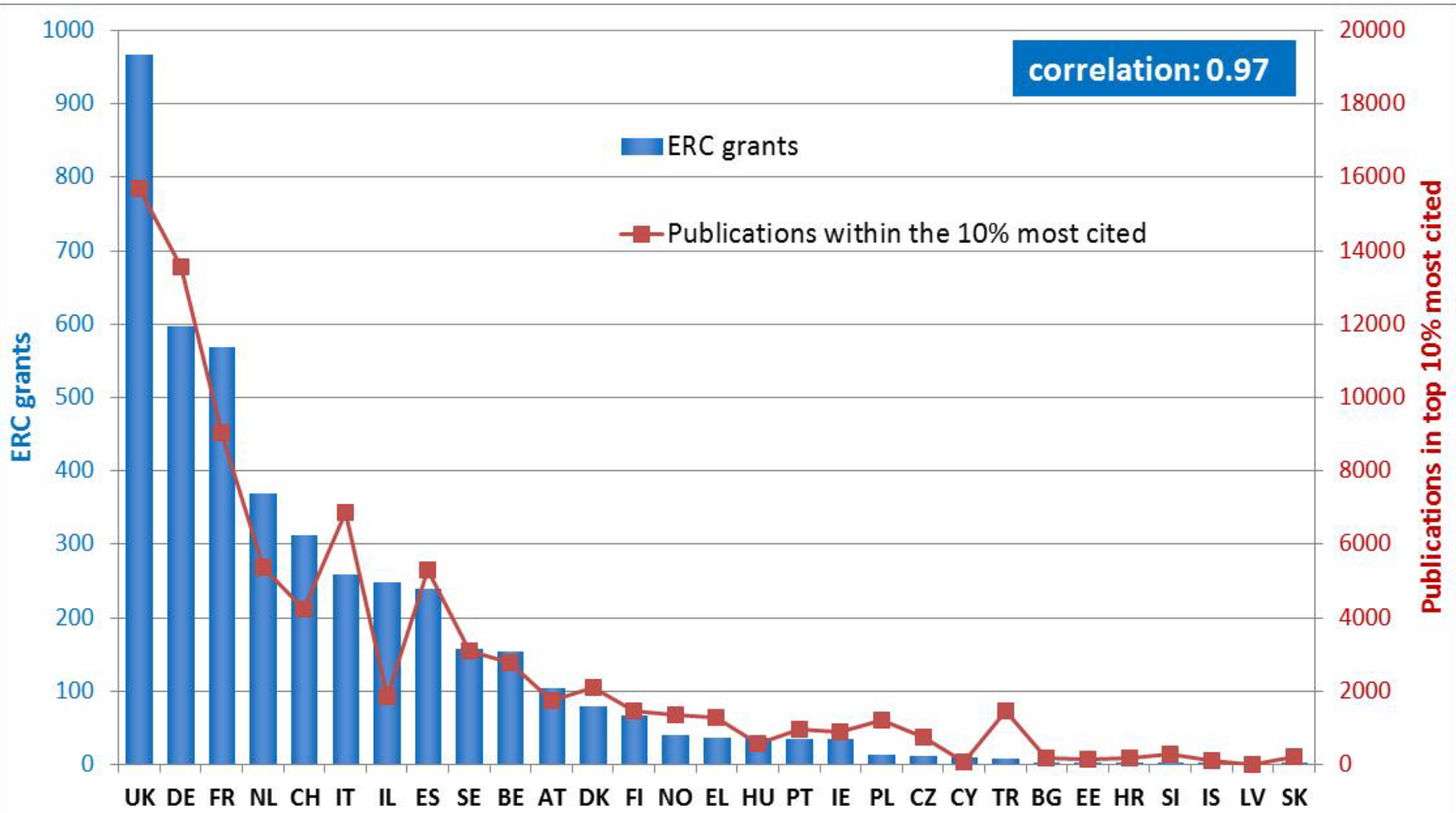
ERC Starting and Consolidator grant calls 2007-2013

ERC Advanced grant calls 2008 -2013



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Nationals at home and abroad

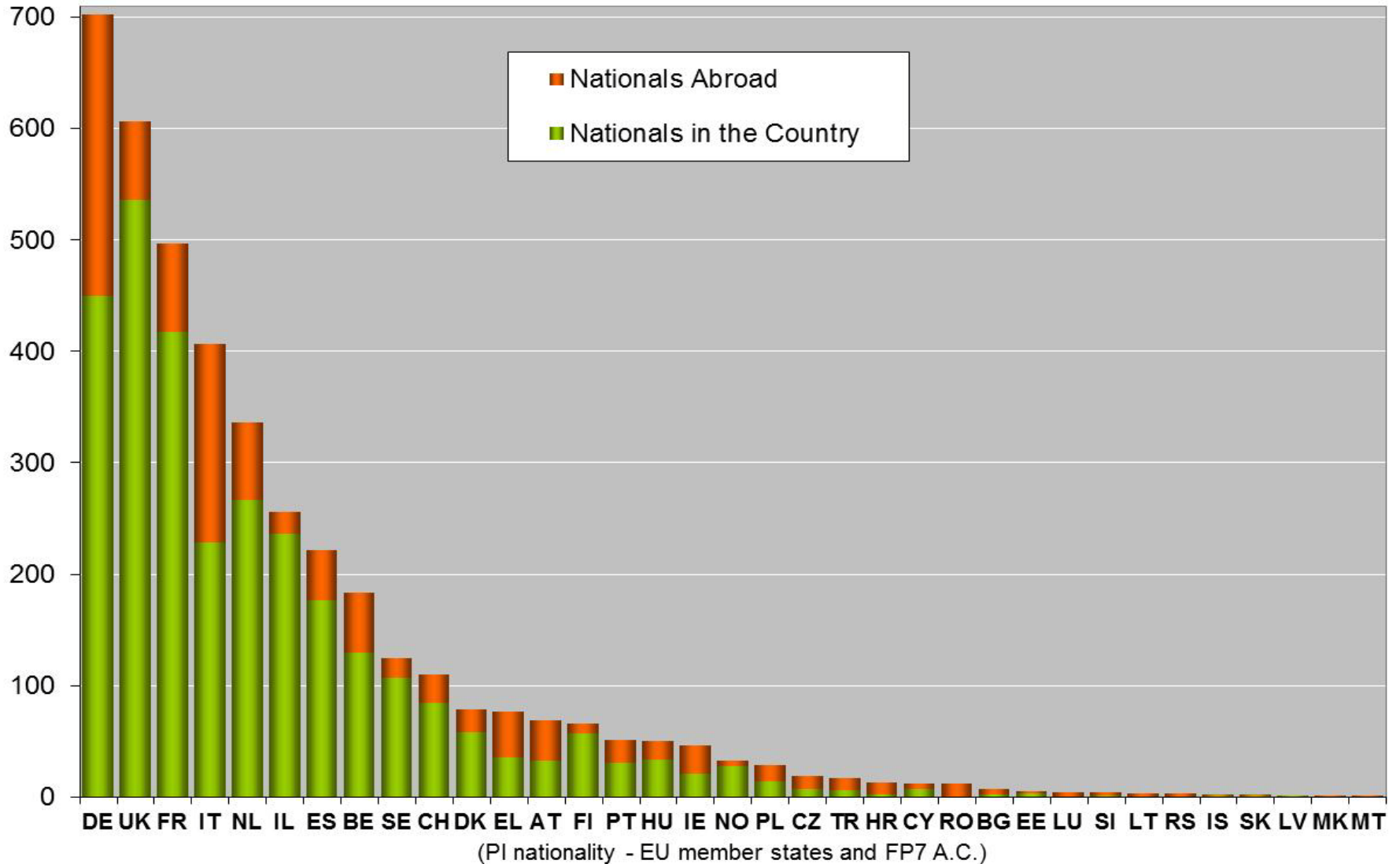
ERC Starting and Consolidator grant calls 2007-2013

ERC Advanced grant calls 2008-2013



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Nationality as last declared by the principal investigator



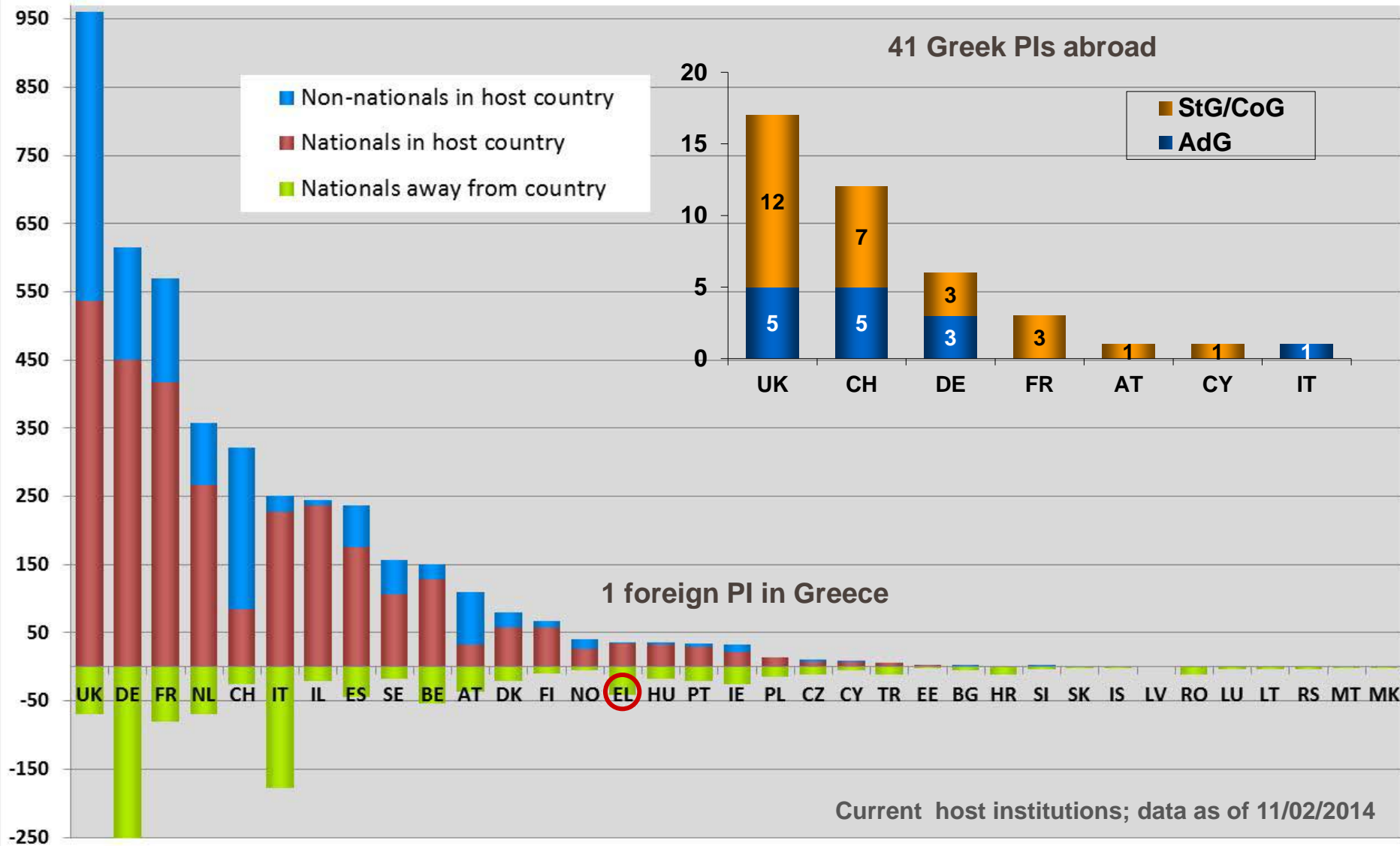
Greece at ERC

Mobility of researchers

ERC StG, CoG and AdG calls 2007-2013



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Current host institutions; data as of 11/02/2014

Greece at ERC

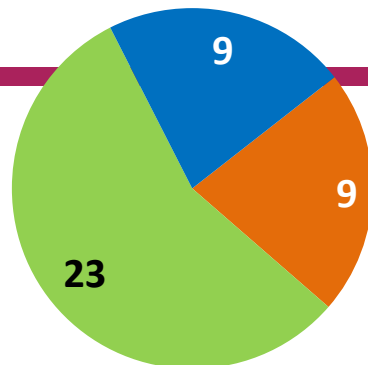
Greek ERC grantees outside Greece ERC StG, CoG and AdG calls 2007-2013



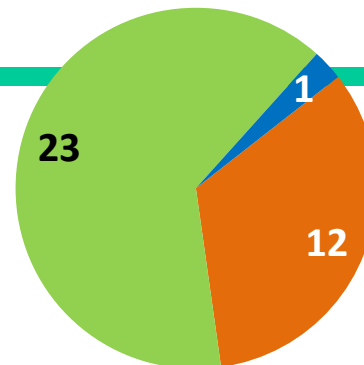
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Greek PIs outside Greece



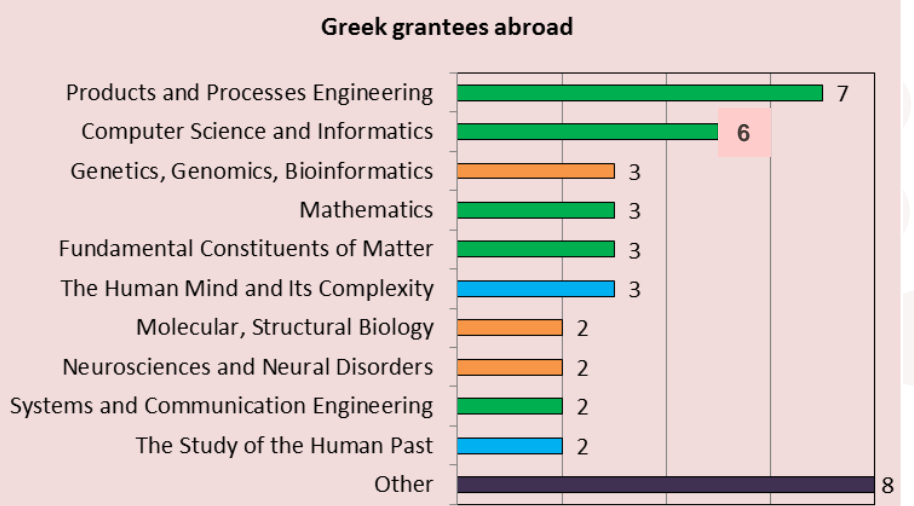
ERC grants in Greece



Greeks applying with a HI outside Greece	evaluated	grantees	s.rate
resident in Greece	33	4	12%
resident in other ERA countries	373	36	10%
resident outside ERA	9	1	11%
Total	415	41	10%

Greeks applying with a HI in Greece	evaluated	grantees	s.rate
resident in Greece	932	30	3%
resident in other ERA countries	20	1	5%
resident outside ERA	41	4	10%
Total	993	35	4%

Host institution	Greek PIs
Imperial College	4
University of Oxford	4
Swiss Federal Institute of Technology Zurich	4
Swiss Federal Institute of Technology Lausanne	4
University of Cambridge	3
University of Geneva	3
Other	19
TOTAL	41



Greece at ERC

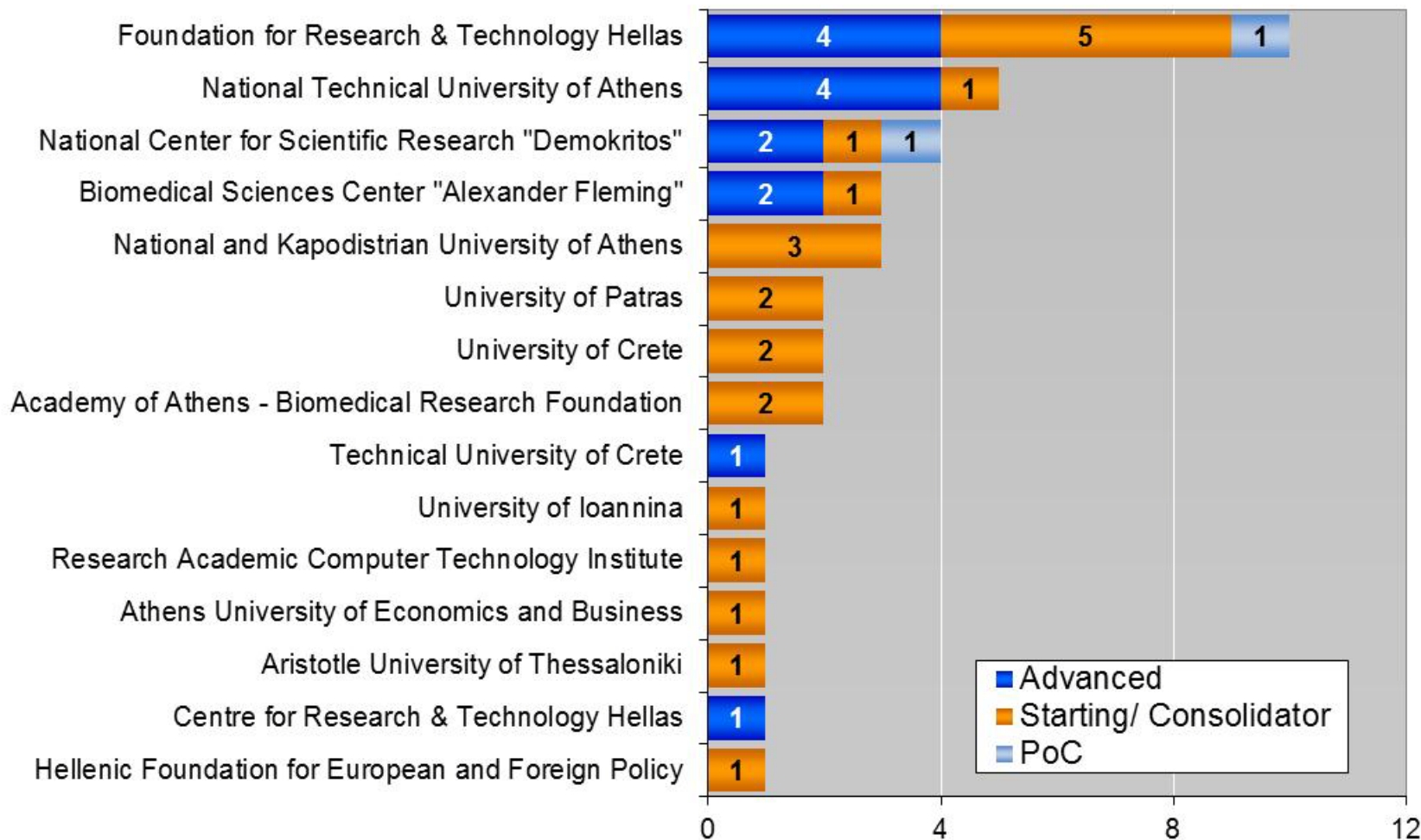
Host institutions in Greece

ERC StG, CoG and AdG calls 2007-2013



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Current host institutions; data as of 11/02/2014

ERC in H2020

Work program 2014 planning



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ERC calls	Budget	Call Publication	Submission Deadline(s)
Starting Grants ERC-2014-StG	\$ 658 M	11 December 2013	25 March 2014
Consolidator Grants ERC-2014-CoG	\$ 968 M	11 December 2013	20 May 2014
Advanced Grants ERC-2014-AdG	\$ 610 M	17 June 2014	21 October 2014
Proof of Concept ERC-2014-PoC	\$ 20 M	11 December 2013	DL1: 1 April 2014 DL2: 1 Oct. 2014



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For further information

- **Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

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

Thank you for your attention!