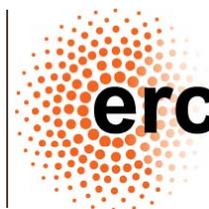


FP7 IDEAS Programme

European Research Council



The European Research Council

“ERC goes global” campaign



Prof. Donald Dingwell
ERC Secretary General

Visit to Taiwan
July 2012

The European Research Council

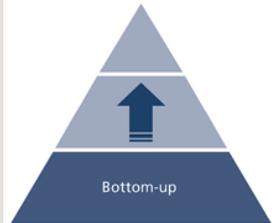
European Research Council



What is ERC



What is ERC?



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

Budget: € 7.5billion (2007-2013) - 1.1 billion €/year

Legislation

- Scientific governance: independent Scientific Council with 22 members; full authority over funding strategy
- Support by the ERC Executive Agency (autonomous)
- Excellence as the only criterion

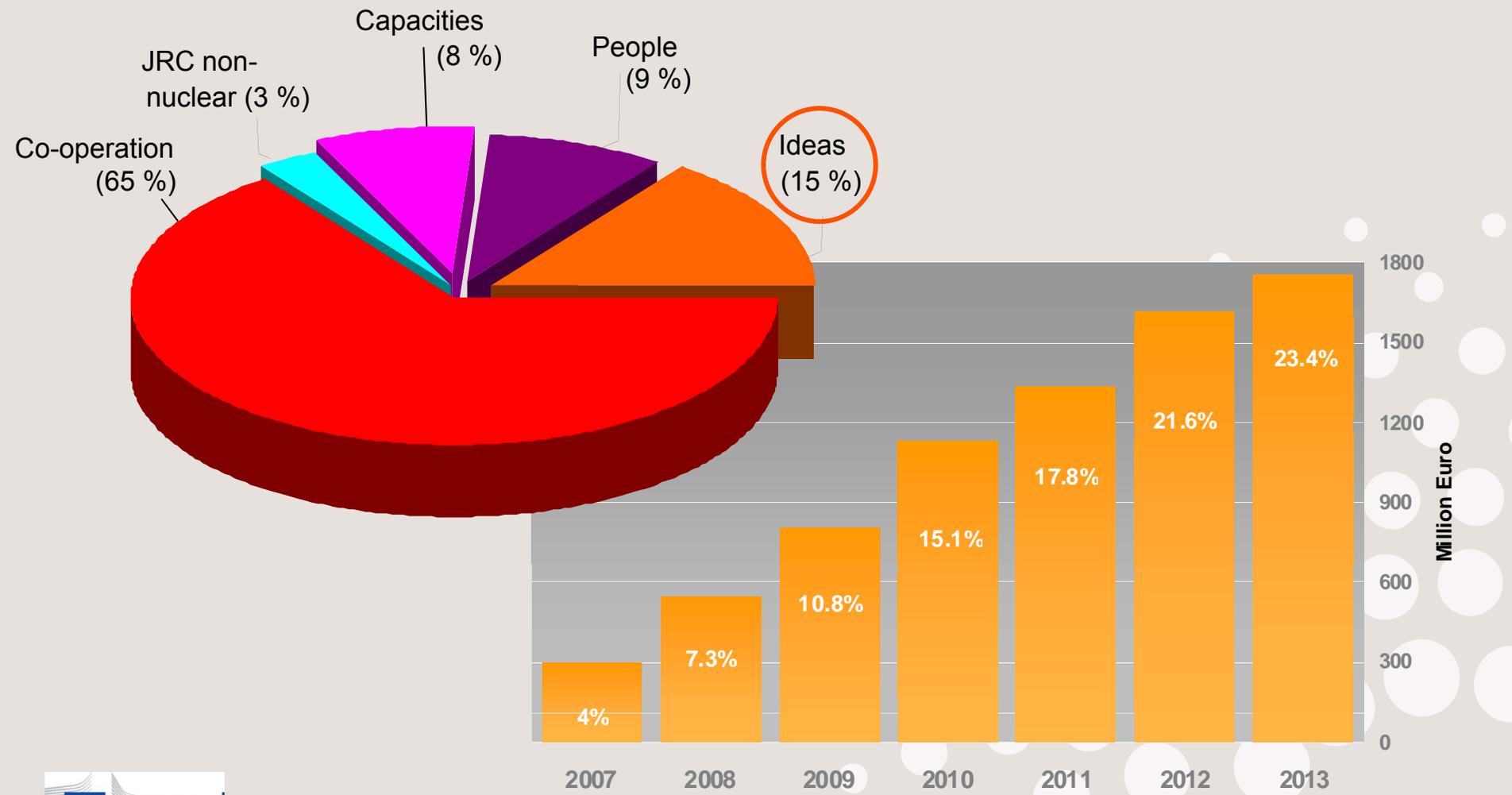
Strategy

- 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



FP7 budget € 50.5 billion

ERC budget € 7.5 billion; Increase by € 250 M/year



ERC Structure

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 Scientific Council Members

- Prof. Claudio BORDIGNON (Medicine)
- Prof. Nicholas CANNY, (History)
- Prof. Sierd A.P.L. CLOETINGH (Earth Sciences)
- Prof. Mathias DEWATRIPONT (Economics)
- Prof. Tomasz DIETL (Physics)
- Prof. Daniel DOLEV (Computer Sciences)
- Prof. Carlos M. DUARTE (Biology)
- Prof. Daniel ESTEVE (Physics)
- **Prof. Pavel EXNER (Applied Mathematics & Mathematical Physics), ERC Vice President**
- Prof. Hans-Joachim FREUND (Physics & Physical Chemistry)
- **Prof. Carl-Henrik HELDIN (Molecular Cell Biology), ERC Vice President**
- Prof. Timothy HUNT (Biology)
- Prof. Norbert KROO (Physics)
- Prof. Maria Teresa LAGO (Astrophysics)
- Prof. Henrietta L. MOORE (Social Anthropology)
- **Prof. Helga NOWOTNY (Science and Technology Studies), ERC President**
- Prof. Christiane NÜSSLEIN-VOLHARD (Genetics)
- Prof. Alain PEYRAUBE (Linguistics)
- Dr. Jens ROSTRUP-NIELSEN (Chemistry)
- Prof. Mart SAARMA (Biology)
- Prof. Anna TRAMONTANO (Biochemistry)
- Prof. Isabelle VERNOS (Molecular and Cell Biology)

Prof. Don Dingwell
ERC Secretary General



After 5 years of existence... A success story

- Highly recognised by the research community
- ~2 600 top researchers funded (58% are at early-career stage); 53 nationalities represented
- Working in >480 different institutions in 26 countries
- **Highly competitive** (average success rate 12%)
- 50% of grantees in 50 institutions; “Excellence attracts excellence”
- **Benchmarking** effect, e.g. pan-European competition among researchers; EU value added
- Efficient and fast grant management



Future perspectives

ERC's role in the Innovation Union 2020

➤ **HORIZON 2020** structure:

- Excellence Science
- Industrial leadership
- Societal challenges
- EIT
- JRC

➤ **Excellent Science**: reinforcing and extending the excellence of the EU's science base and consolidating ERA to make EU's R&I system more competitive on a global scale

- ✧ **European Research Council (proposed budget: 15 billion euro)**
- ✧ Future and Emerging Technologies
- ✧ Marie Curie
- ✧ Research Infrastructures

The European Research Council

European Research Council



ERC Grant schemes



ERC Grant schemes

Starting Grants

starters (2-7 years after PhD)
consolidators (7-12 years after PhD) up to € 2.0 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

Synergy Grants

2 – 4 *Principal* Investigators
up to € 15.0 Mio for 6 years

Proof-of-Concept

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



Creative freedom of the individual grantee

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



Attractive features for researchers from outside Europe

Flexibility:

- Additional “start-up” funding for scientists moving to Europe (EUR 500 000 for Starting and EUR 1 Million for Advanced grantees)
- Grantee can keep affiliation with home institute outside Europe (“significant part” of work time in Europe)
- Team members can be based outside Europe
- Grantee can move within Europe with the grant

Negotiation:

- Several European countries/host institutions assist applicants and reward grantees with top-up funds or long-term professorships



ERC funding process

Peer Review Evaluation

Starting and Advanced Grants

Panel Members are appointed by the ERC Scientific Council

- **25 Panels** covering all fields of science, technology and scholarship
- **2 sets of Panels:** StG Panels, AdG Panels
- Each Panel consists of the **Panel Chair** and **10-15 Panel Members**
- Panel Chair **oversees evaluation process** for the proposals assigned to his/her panel in collaboration with the ERC staff
- Evaluation criteria:

Principal Investigator

- ❖ Intellectual capacity and creativity
- ❖ Commitment

Research project

- ❖ Ground-breaking nature and potential impact
- ❖ Methodology



25 panels for all areas of science

Physical
Sciences
&
Engineering

10 panels

Mathematics
Fundamental constituents of matter
Condensed matter physics
Physical and analytical chemical sciences
Synthetic chemistry and materials
Computer science and informatics
Systems and communication engineering
Products and processes engineering
Universe sciences
Earth system science

Social Sciences & Humanities

6 panels

Individuals, institutions and markets
Institutions, values, beliefs and
behaviour
Environment, space and population
The Human Mind
Cultures and cultural production
The study of the human past

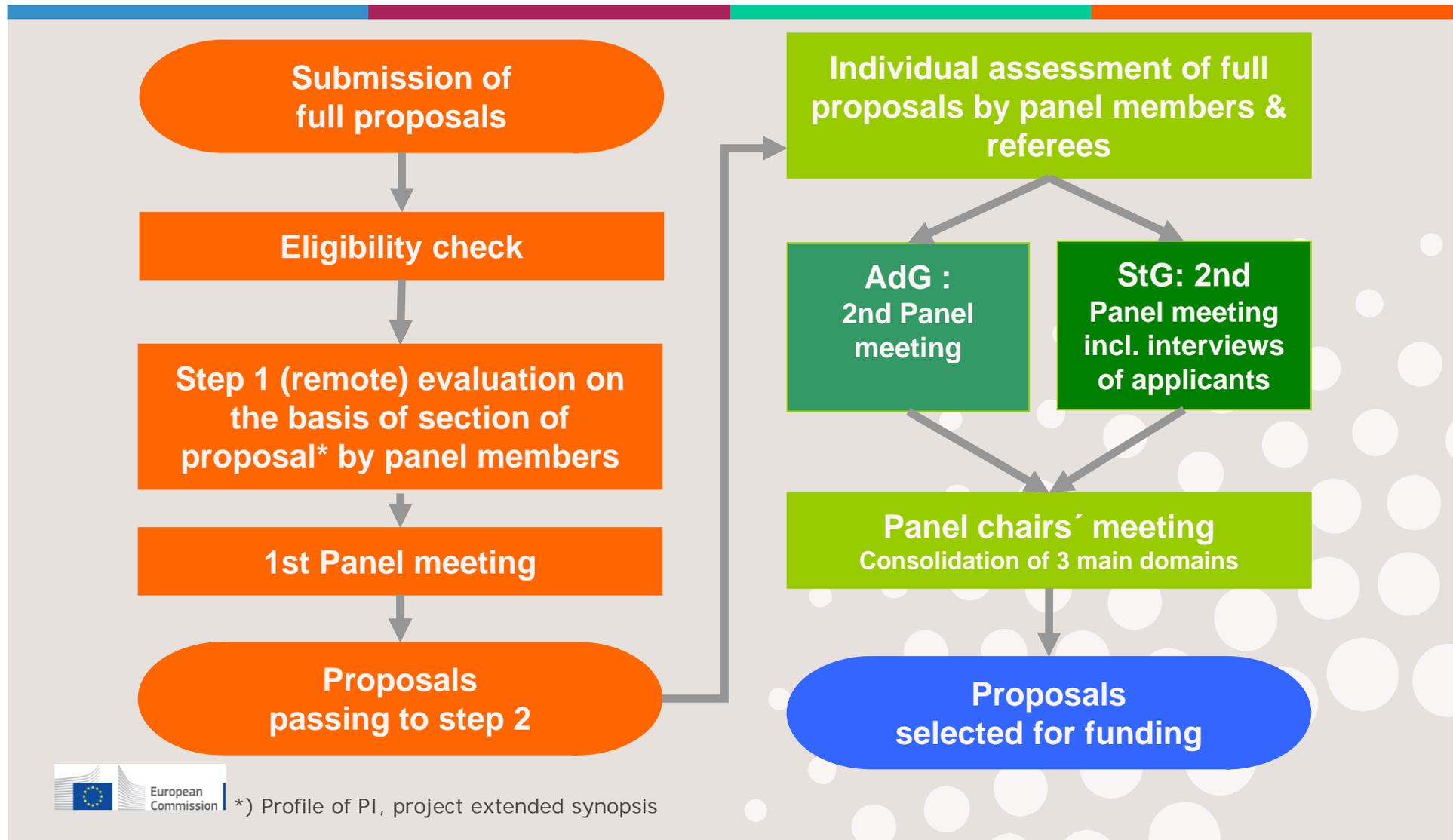
Life
Sciences

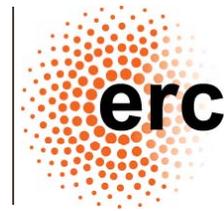
9 panels

Molecular and structural biology and biochemistry
Genetics, genomics, bioinformatics and systems biology
Cellular and developmental biology
Physiology, pathophysiology and endocrinology
Neurosciences and neural disorders
Immunity and infection
Diagnostic tools, therapies and public health
Evolutionary, population and environmental biology
Applied life sciences and biotechnology

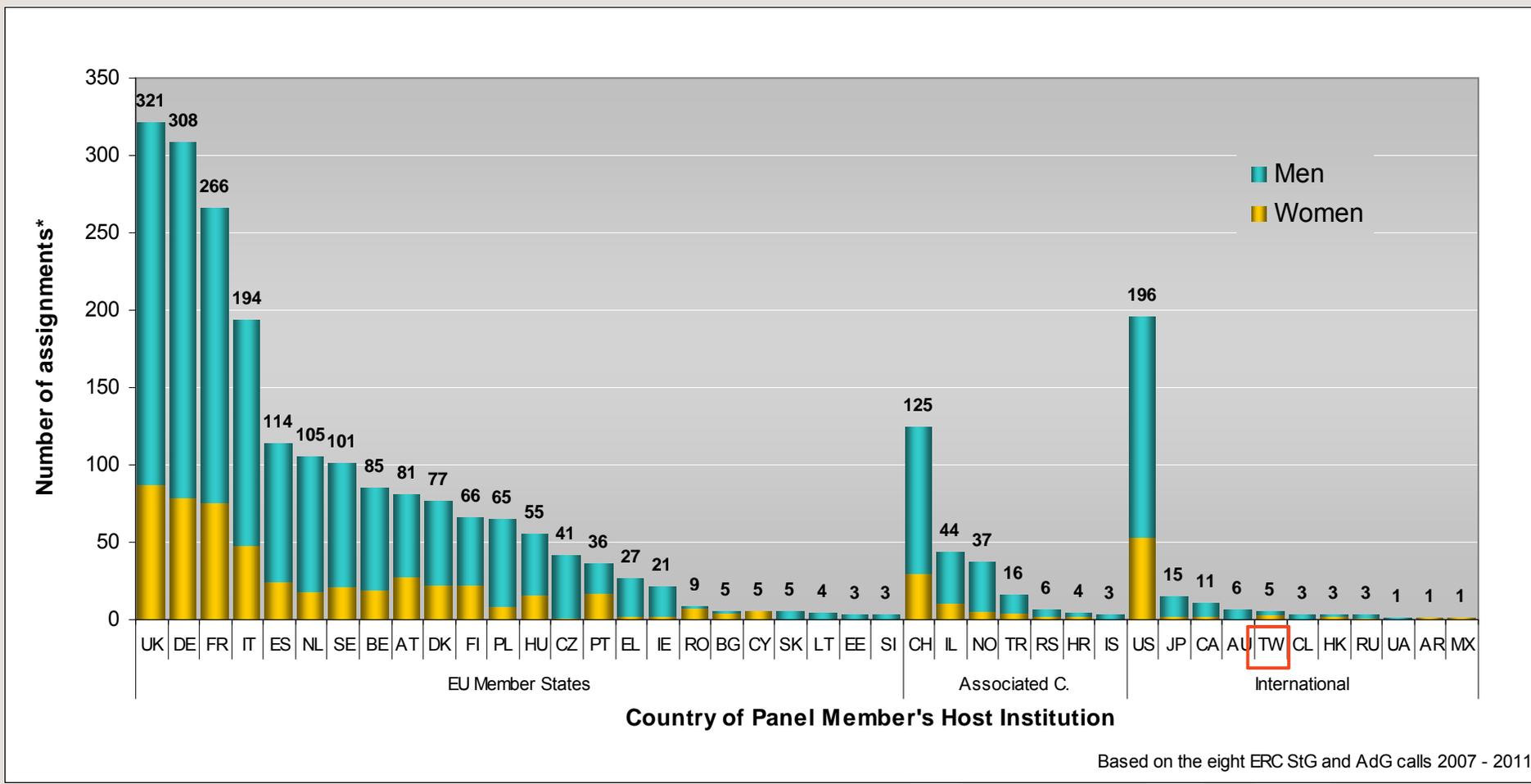
Submission, evaluation and selection

Starting and Advanced Grants





International participation to proposals evaluation



Based on the eight ERC StG and AdG calls 2007 - 2011



* Number of instances that experts of a certain country of origin are contributing to the ERC peer review



Speeding up the discovery process: ERC Synergy grant

- 2012 work programme on a pilot basis
- 2 – 4 Principal Investigators; complementary skills, knowledge & resources; to jointly address frontier research problems
- Up to €15m for up to six years
- Based on ERC principles (no consortia, no networks):
 - bottom-up and risk-taking
 - driven by scientific demand
 - PIs expected to spend significant “core time” together
 - only one Host Institution, but groups not required to be physically located in the same place
- **710** submissions to the first Synergy Call



Frontier research and innovation: ERC Proof of Concept

- Initiated to help ERC grant-holder to bridge the gap between their research and the earliest stage of a marketable innovation
- Supporting grant-holders during the pre-demonstration
- Up to 150.000 Euro per grant
- One step evaluation
- First call in Autumn 2011 with 2 deadlines
- Next call in Spring 2012 (deadlines: 3 May and 3 October 2012)

ERC Competitions 2007-2011

	Total number of applications received	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	487	12.2
Starting Grant	18,623	17,951	1,467	10.4
Advanced Grant 2008	2,167	2,034	282	13.9
Advanced Grant 2009	1,583	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	8,043	7,772	1,099	14.3
Proof of Concept 2011 - 1	78	73	29	39.7
Proof of Concept 2011 - 2***	73	66	22	33.3
Proof of Concept	151	139	51	36.5

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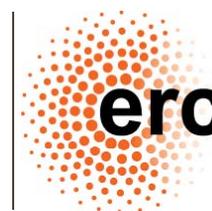


International participation



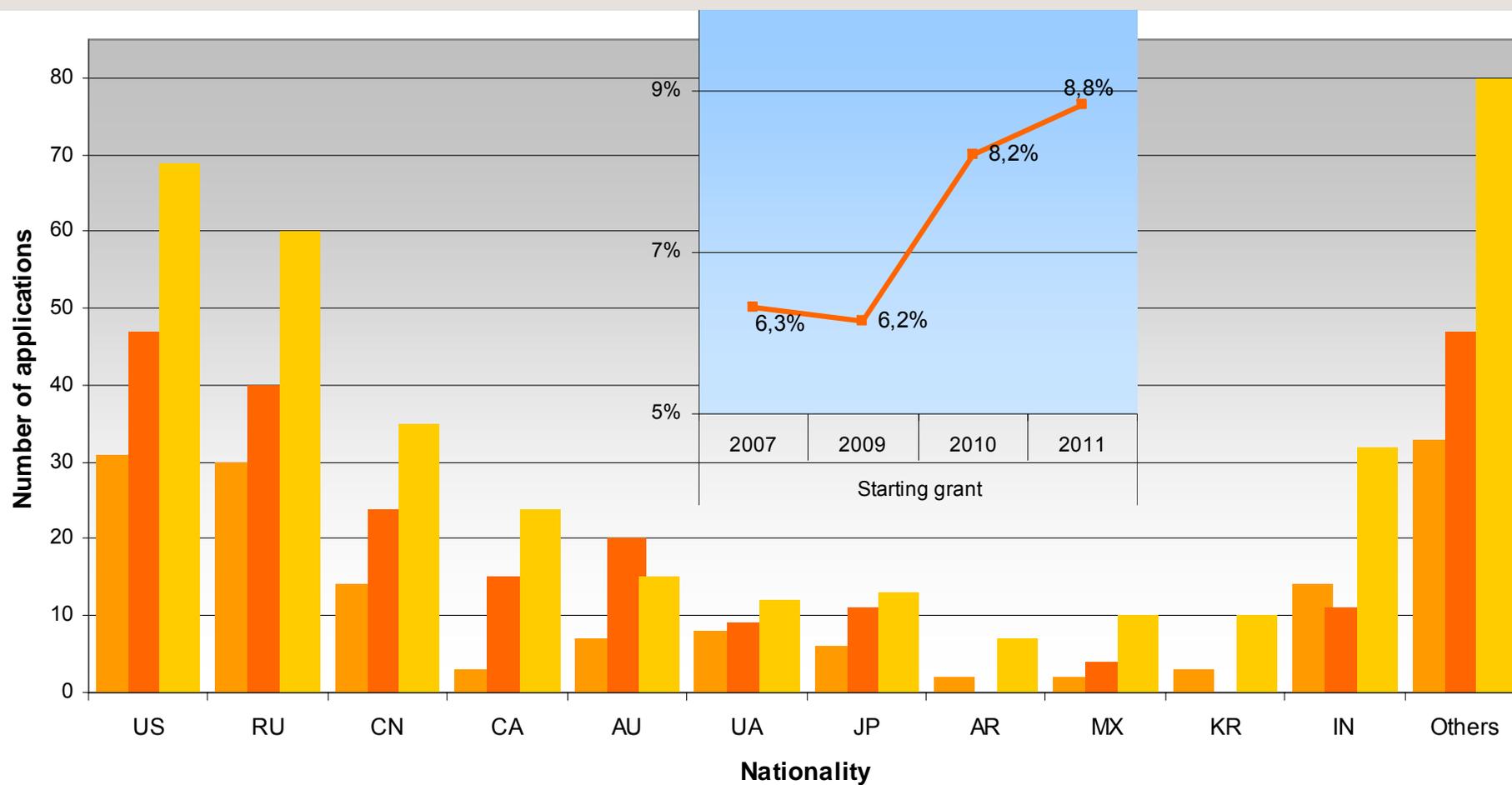
Submitted proposals from researchers with non-ERA* nationality

European Research Council



ERC Starting grant calls 2009 – 2011

* ERA = European Research Area



Starting 2009 Starting 2010 Starting 2011

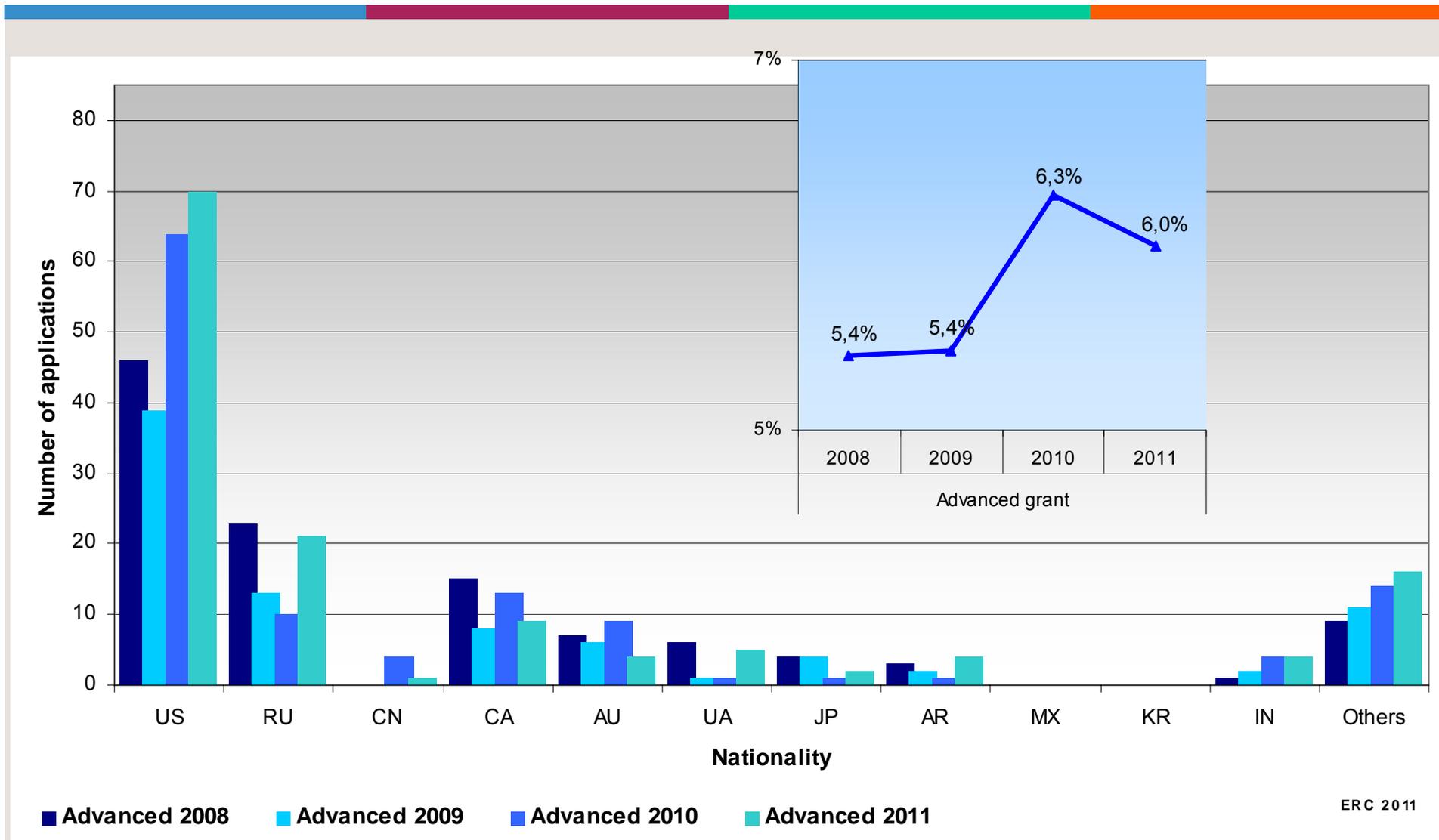
Submitted proposals from researchers with non-ERA* nationality

European Research Council



ERC Advanced grant calls 2008 – 2011

* ERA = European Research Area



Submitted proposals from Taiwan

ERC Starting grant calls 2007 - 2012

ERC Advanced grant calls 2008 – 2012

Submitted applications from nationals

Country*	StG calls	AdG Calls	All ERC calls	Life Sci	Phys&Eng	Soc&Hum
Japan	68	14	82	28	46	8
South Korea	31	1	32	11	11	10
Taiwan	9		9	1	5	3
Hong Kong	3	2	5		2	3
Total:	111	17	128	40	64	24

*) nationality as last declared by the principal investigator

- the applications of the researchers from Taiwan have the host institution in UK (4), Belgium (2), Spain (1), Sweden (1), Finland (1)

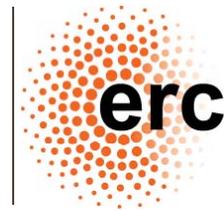
Submitted applications from researchers resident in the country at the time of application

Country	StG calls	AdG Calls	All ERC calls
Japan	22	5	27
South Korea	5	1	6
Taiwan	2		2
Hong Kong	1	2	3
Total:	30	8	38

- one of the applicants that were resident in Taiwan at the time of application is national of the country (the other is Austrian)

ERC grantees with a non-ERA* nationality

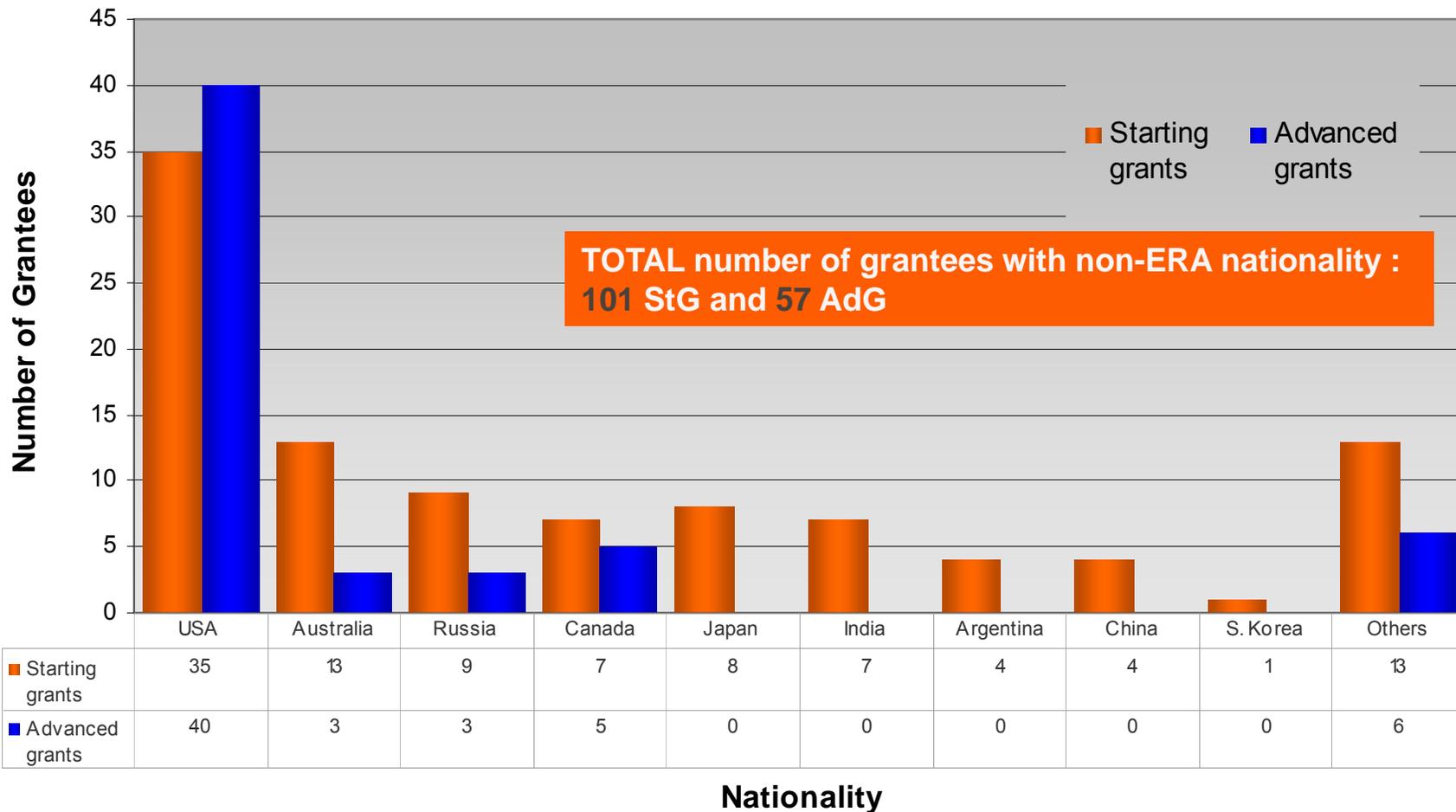
European Research Council



ERC Starting and Advanced Calls 2007 – 2011

* ERA = European Research Area

no grantee with Taiwan nationality until now



*) nationality as last declared by the principal investigator

Few grantees from outside ERA

Mainly researchers moving/returning from the US

Country of residence	International grantees	ERA nationals	Total
Argentina	1		1
Australia	1	2	3
Brazil	1		1
Canada	1	1	2
Japan	1	1	2
Korea		1	1
USA	13	51	64
Total	18	56	74

Note: Researchers residing outside ERA at the time of application

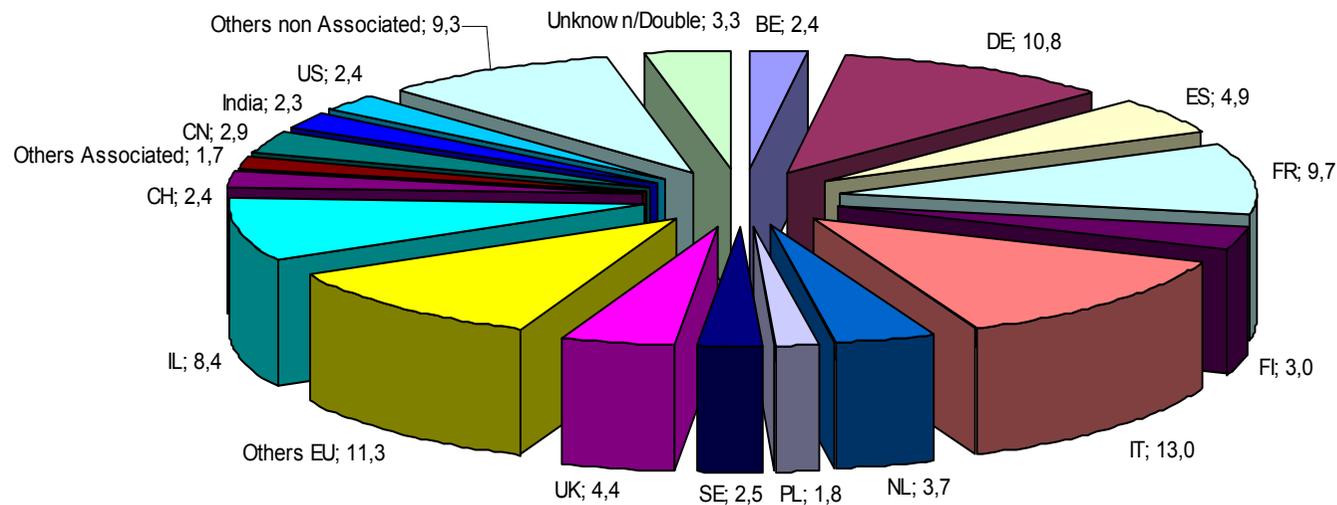
Team members: internationalisation

a sample of 383 on-going projects

about 2200 team members without principal investigators



- Breakdown by nationality (77):



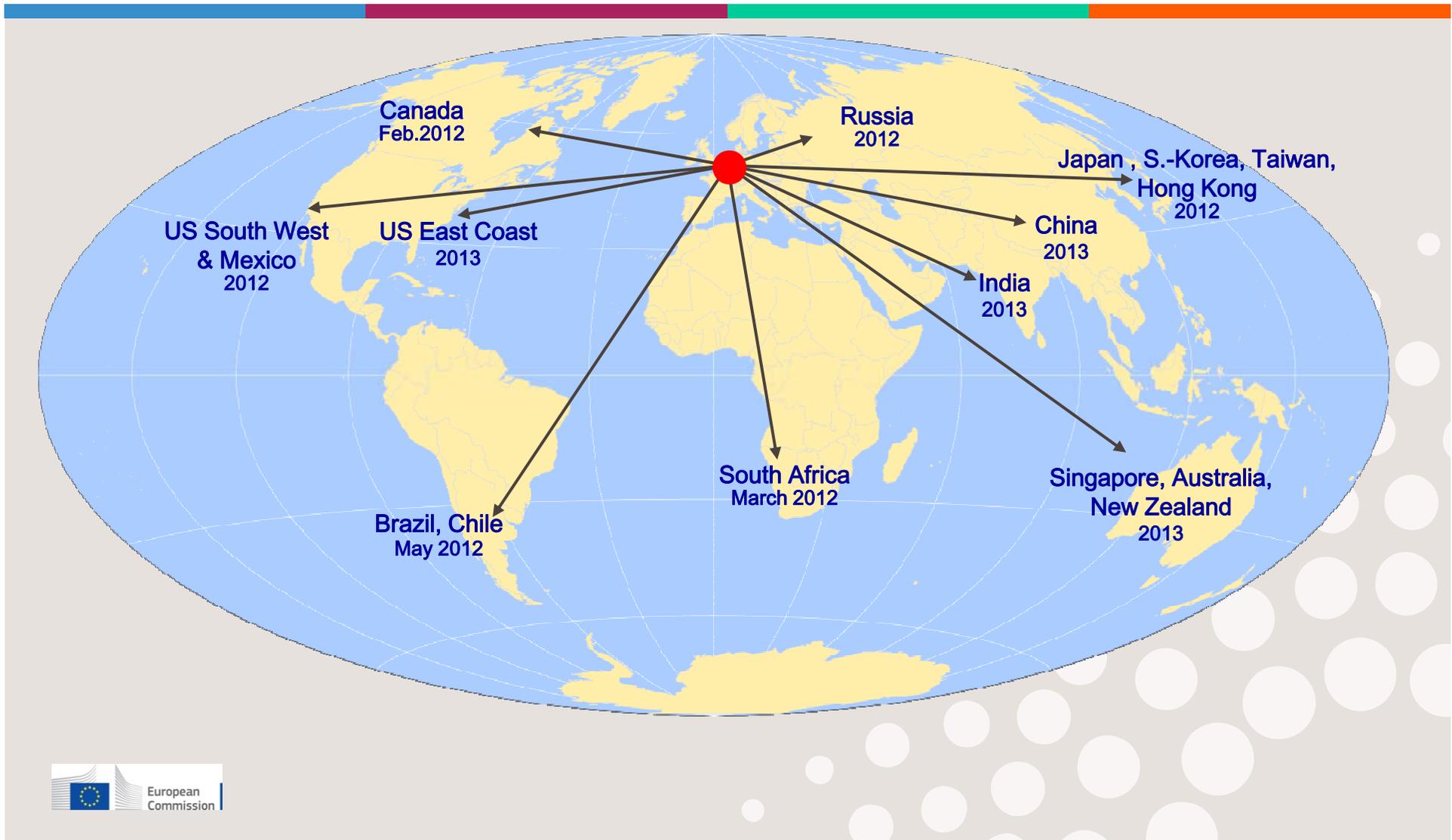
EU: 67% Assoc. Countries: 13% Other Countries: 17% Unknown: 3%

Attracting excellent researchers worldwide

"ERC goes global" campaign

targeting top and emerging research locations

European Research Council



Global researchers

Example



ERC Project: **“TRACSYMBOLS”**
<http://tracsymbols.eu/home/>

South African professor Christopher S. Henshilwood, appointed Professor of African Archaeology at the University of Bergen, Norway in 2007, received an ERC Advanced Grant in 2009

He also holds a complementary Research Professorship and Research Chair at the University of the Witwatersrand, South Africa



More information on ERC

- Ideas NCPs <http://erc.europa.eu/national-contact-points>
- ERC Website <http://erc.europa.eu>
- ERC Helpdesk <http://erc.europa.eu/about-erc/links>
- Quarterly ERC e-newsletter and e-News Alerts
- Euraxess-Jobs <http://ec.europa.eu/euraxess/index.cfm/jobs/index>

New ERC calls	Expected Publication	Deadline
Starting 2013	10 July 2012	17 Oct. 2012
Consolidator 2013	7 Nov. 2012	21 Feb. 2013
Advanced 2013	10 July 2012	22 Nov. 2012
Synergy 2013	10 Oct. 2012	10 Jan. 2013
PoC 2013	10 Jan. 2013	24 April 2013 3 Oct. 2013

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Thank you!

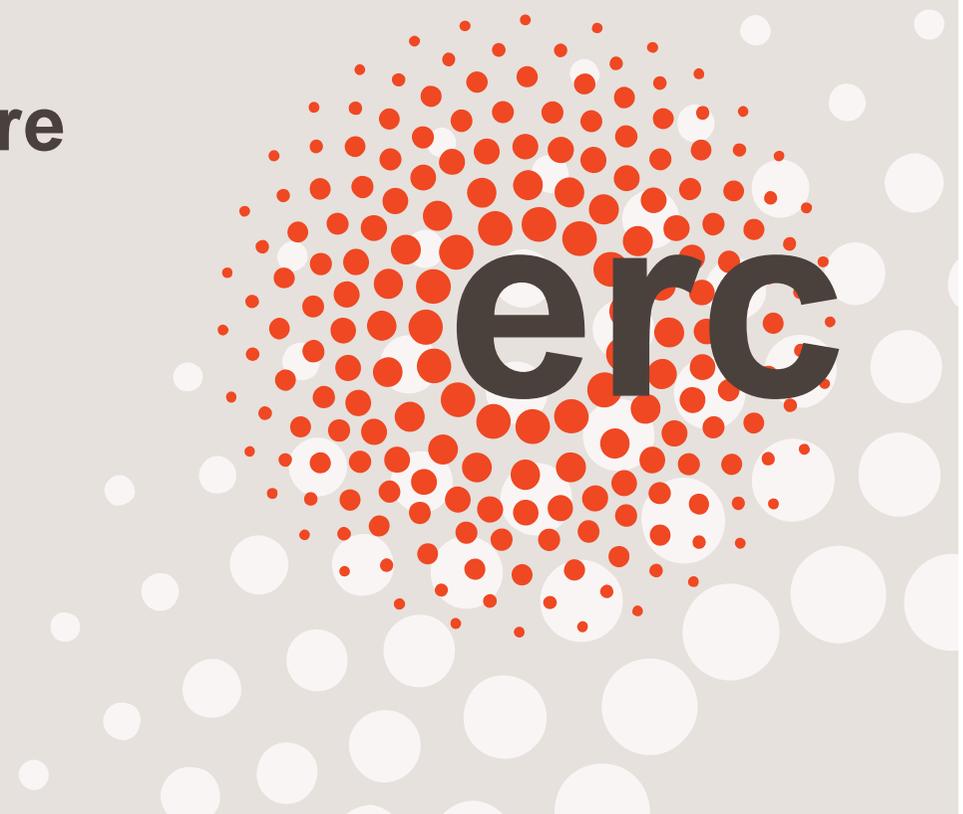


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Proposal structure



Submission of proposals

- Single submission
 - ➔ “1 stage, 2 step” evaluation
- Electronic submission via EPSS only
- Deadlines strictly enforced
- Proposals have two parts:
 - ➔ Part A: Administrative forms
 - Structured information
 - ➔ Part B: Scientific proposal itself
 - Free form pdf file

Composition of a StG or AdG ERC Proposal

Single submission, two-step evaluation



Panels evaluate just this part in Step 1!!!!

PART A – online forms

- A1 Proposal and PI info
- A2 Host institution info
- A3 Budget

Annexes –

On ethics

Host institution support letter

Extension justification docs

StG: PhD certificate or equivalent

PART B1 – submitted as .pdf

Track Record of PI

StG: early achievements

StG: Scientific Leadership Potential

AdG: last 10 yrs

CV (including “funding ID”)

Extended synopsis

PART B2 – submitted as .pdf

Full project description

incl. budget & ethics table

Panels evaluate this part only in Step 2!!!

Proposal structure: Part A

Part A: “Administrative forms” containing

- A1 Structured information on proposal, PI and contact details of host institution
- A2 Information on Host Institution
- A3 Budget table

Proposal Structure: Part B

Starting and Advanced Grants

- **Section 1 = The Principal Investigator and a synopsis of the proposal**
 - Scientific Leadership potential (1 page)
 - Early achievements track-record (2 pages)
 - CV (including “funding ID”) (2 pages) StG
 - 10-year track record (2 pages) AdG
 - Extended synopsis (5 pages)
- **Section 2 = Full Scientific proposal (15 pages, not accessible for referees in step 1!)**
- Ethical Review information (where appropriate)
- Host Institution Support Letter (compulsory)



Submission to Panels

- Proposals are submitted to a *Targeted Panel* (of PI's choice)
 - ➔ Can flag one “*Secondary Review Panel*”
- **Applicant chooses his/her panel**, this panel is “responsible” and takes ownership for the evaluation of the particular proposal
- Switching proposals between panels not possible unless clear mistake on part of applicant, or due to the necessary expertise being available in a different panel
- Switching proposals between domains (deadlines) not possible at all.
- But: In case of cross-panel or cross-domain proposals, evaluation by members of other panels possible

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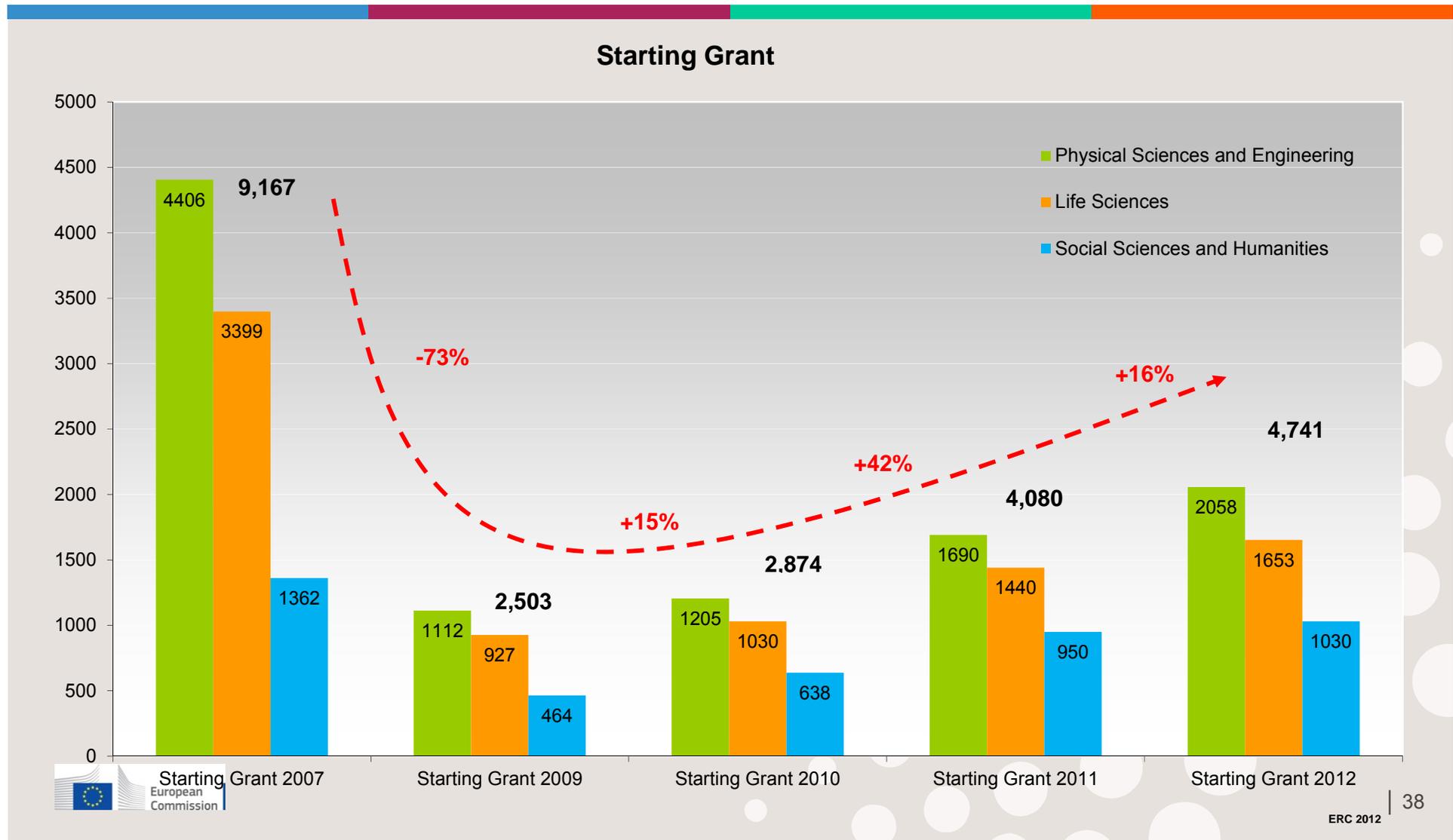


Statistics on ERC calls



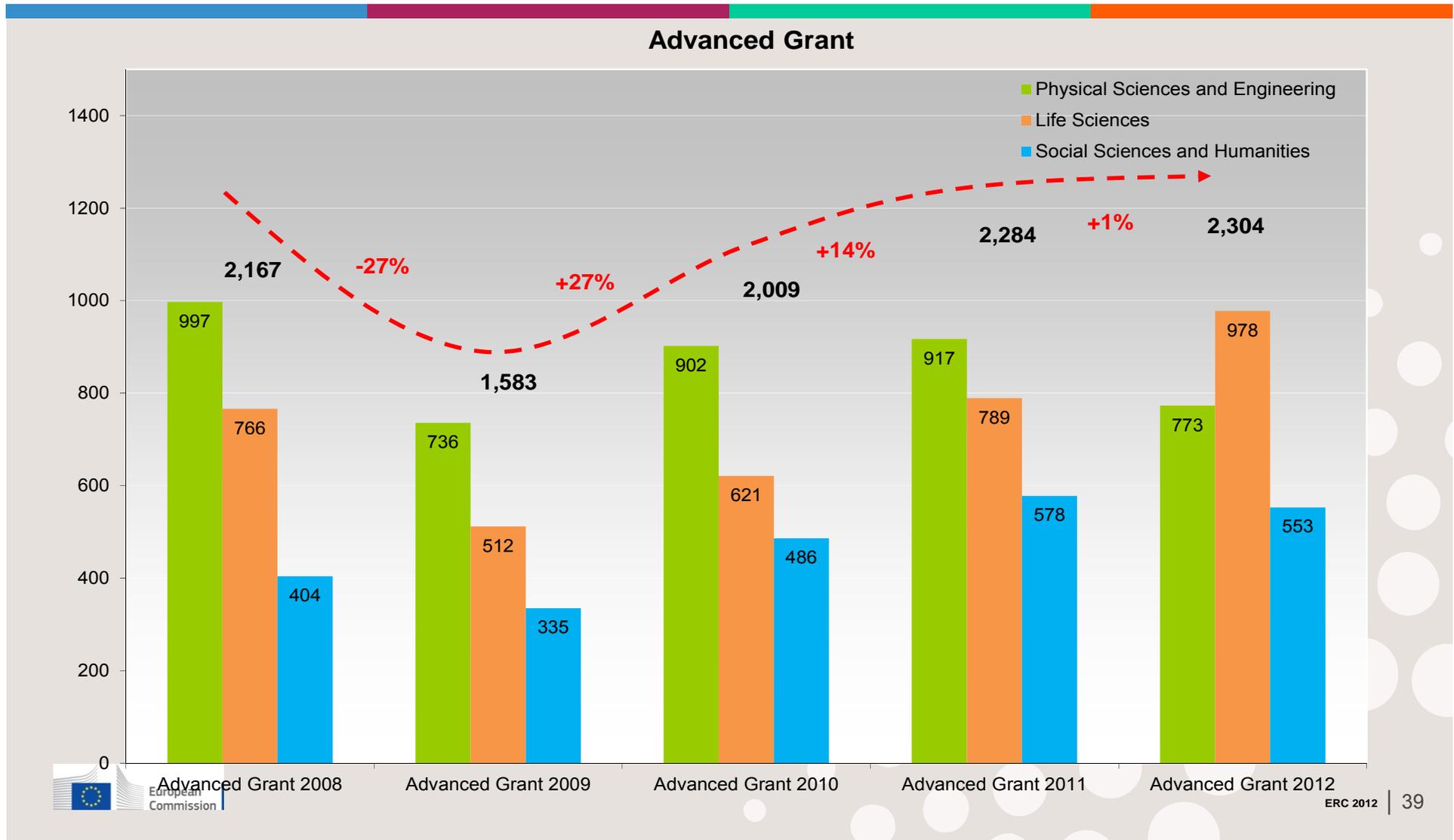
Submitted proposals by domain

ERC Starting grant calls 2007 - 2012



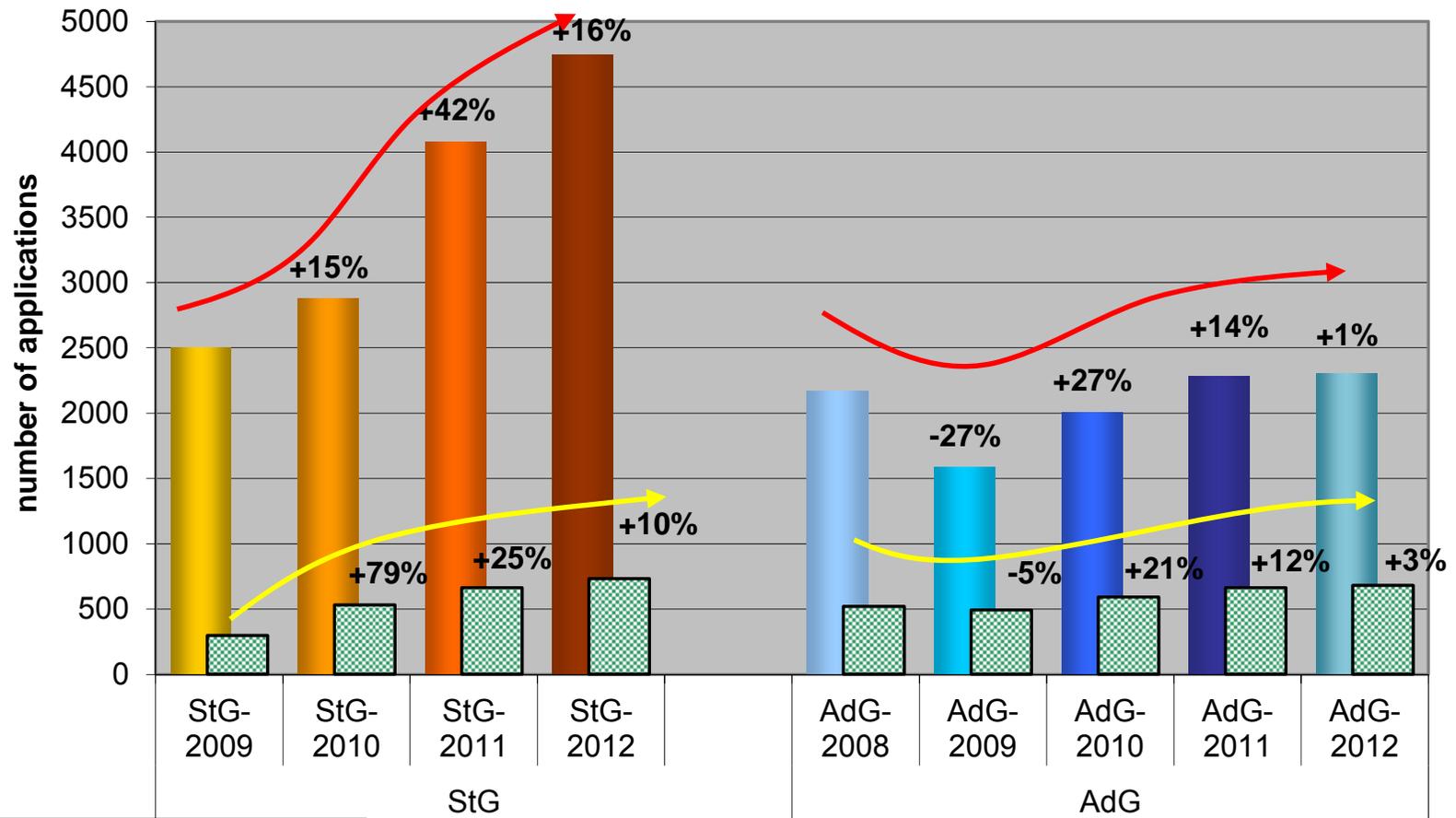
Submitted proposals by domain

ERC Advanced grant calls 2008 - 2012





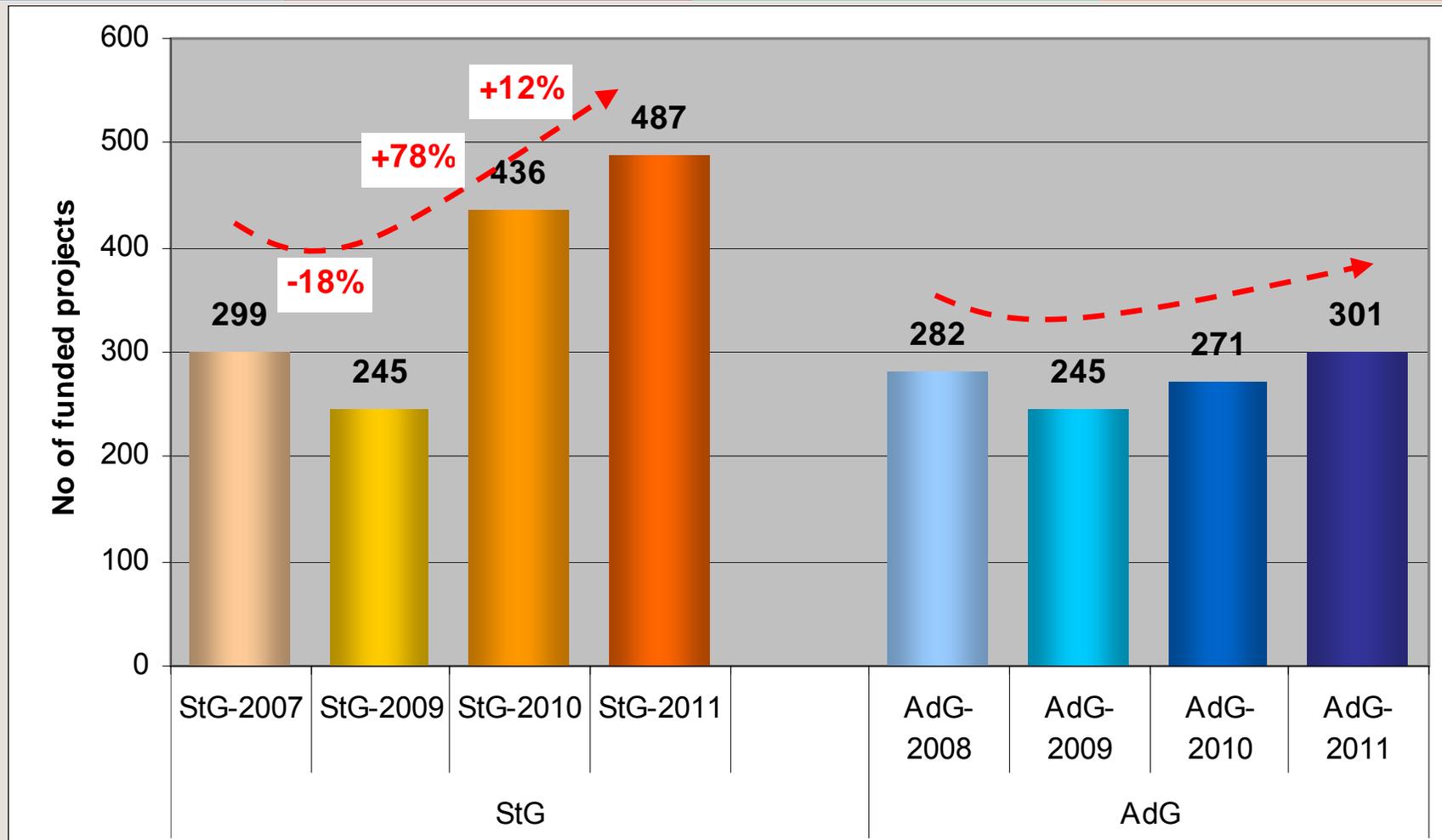
Rising applications



■ call budget (mil eur)

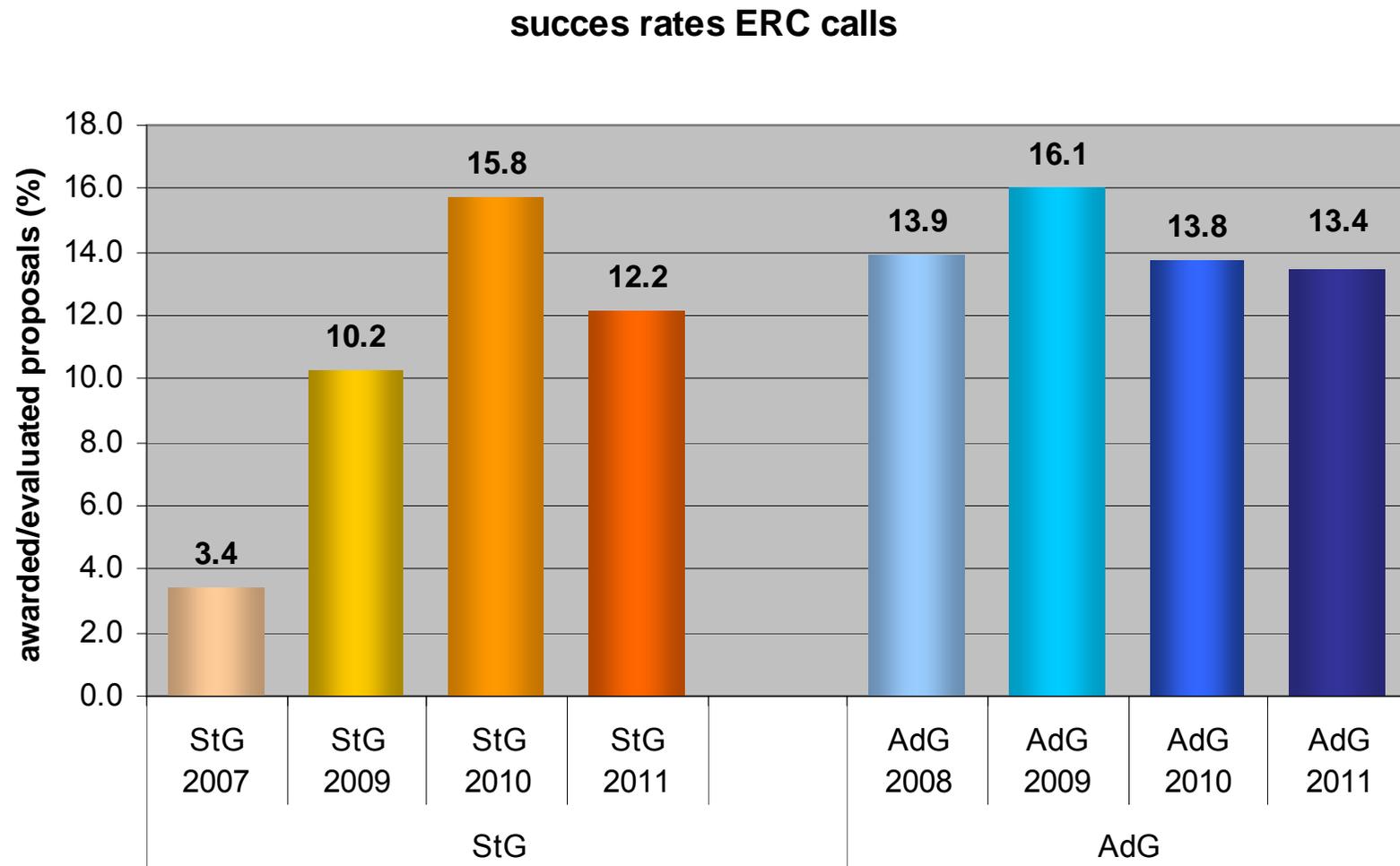
Funded projects

ERC Starting & Advanced grant calls 2007 – 2011



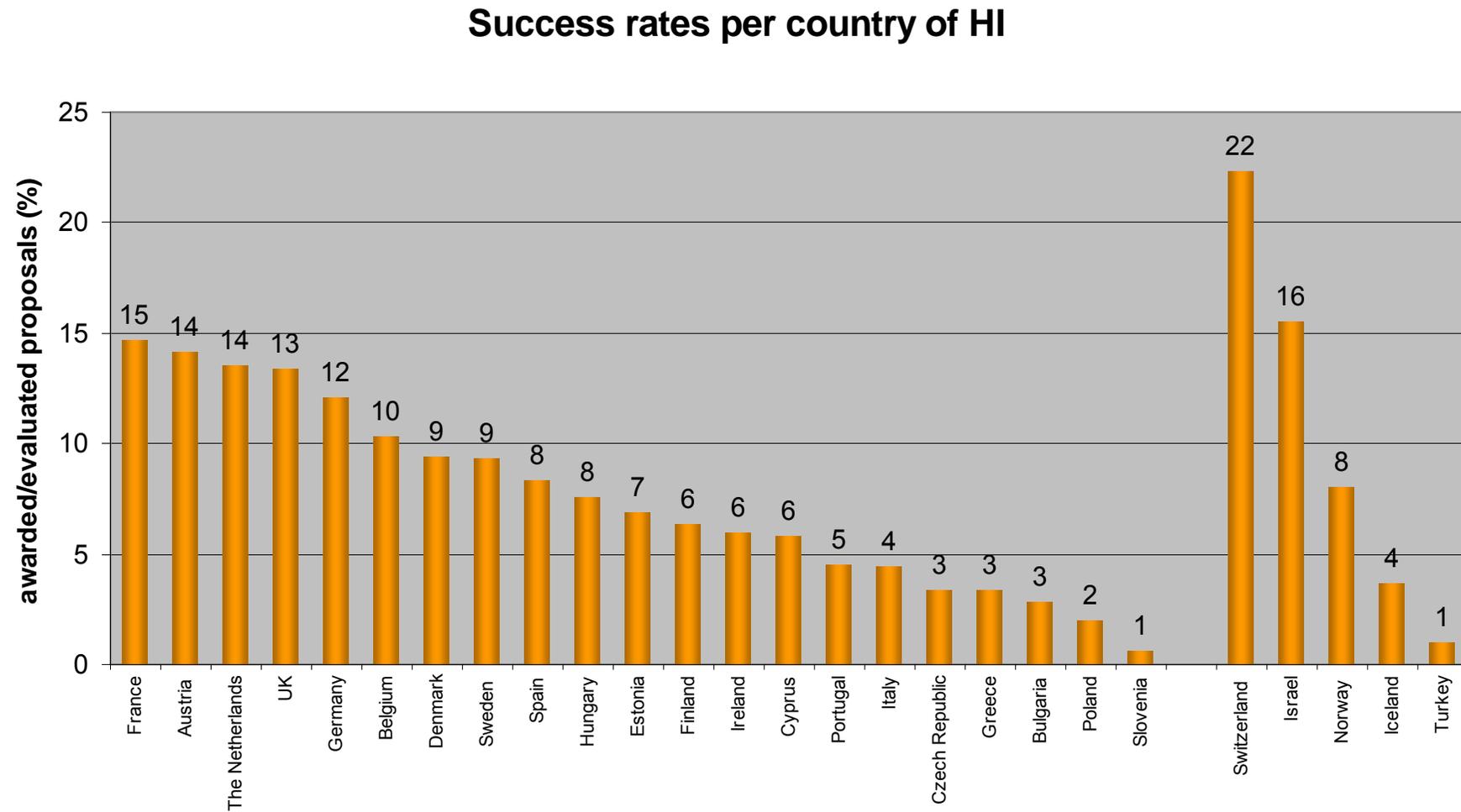
Success rates

ERC Starting & Advanced grant calls 2007 - 2011



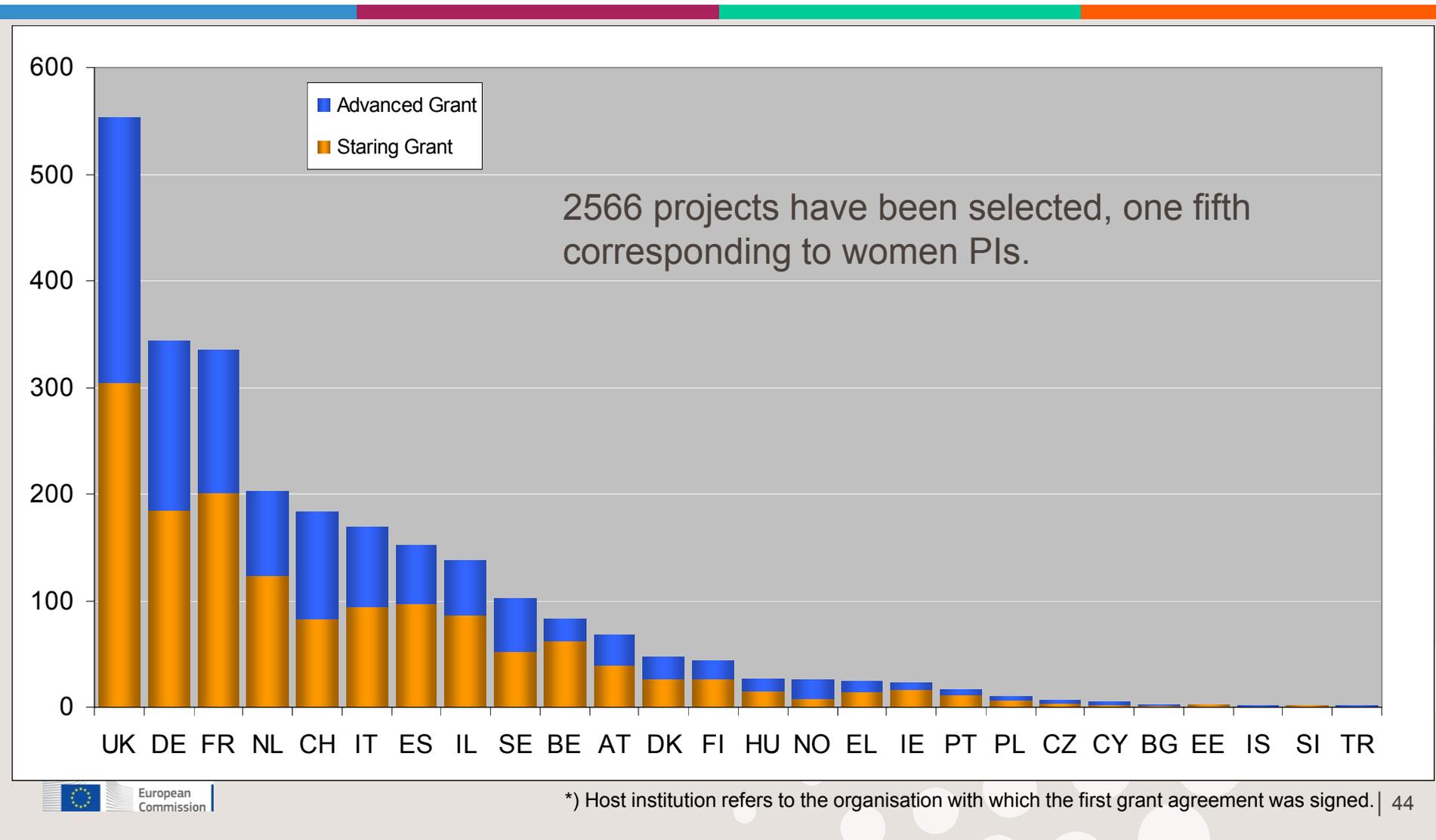
Success rates per country of Host Institution

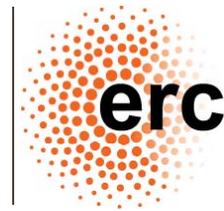
ERC Starting & Advanced grant calls 2007 - 2011



ERC grant distribution per country of Host Institution

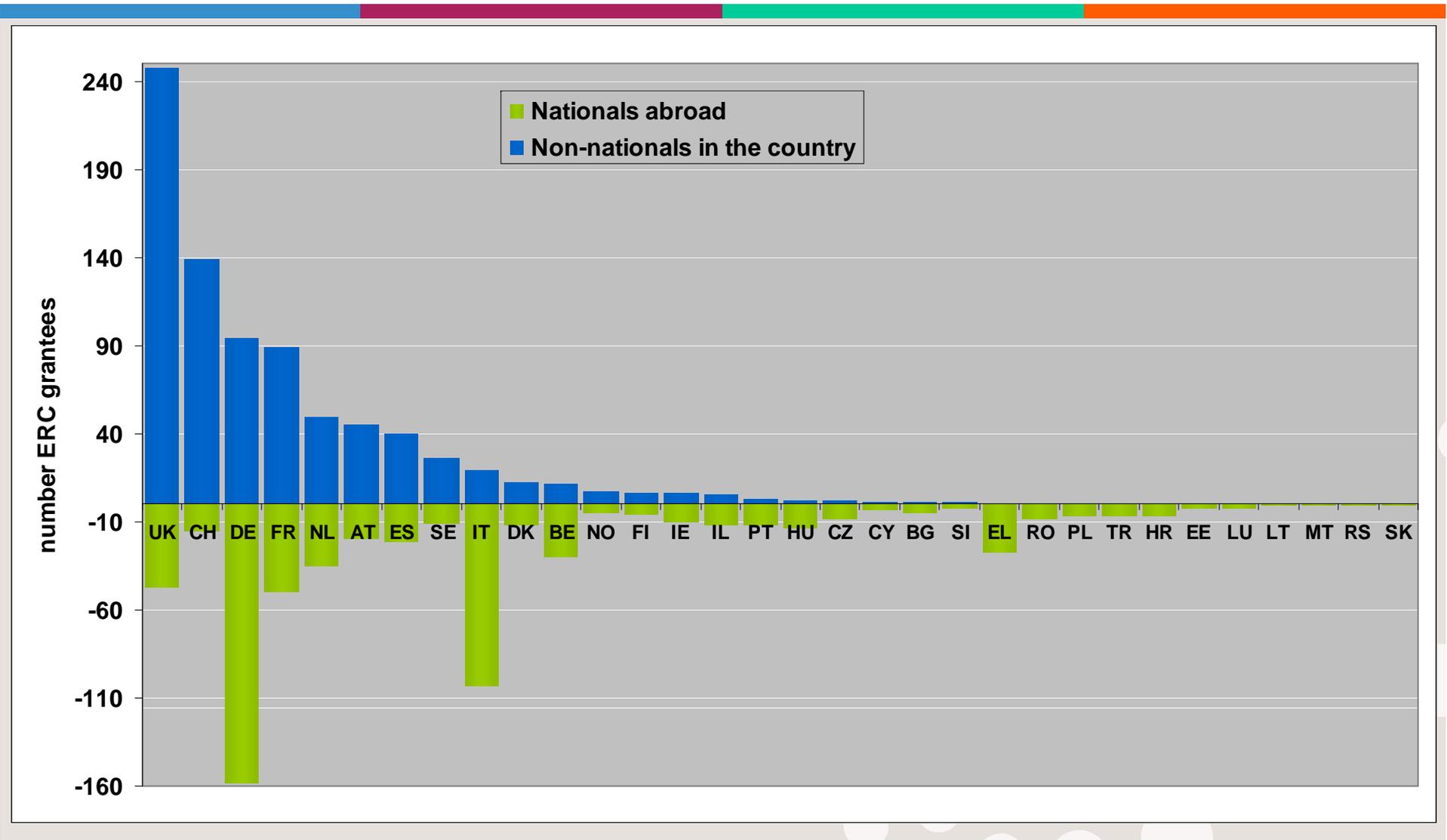
ERC Starting & Advanced grant calls 2007 – 2011





International exchange of researchers

ERC Starting & Advanced grant calls 2007 - 2011



**Top
European
Institutions
hosting
at least 20
ERC Grantees
by funding
Schemes**

StG 2007-2011
AdG 2008-2011

*First legal signatories
of the grant agreement*

Data as of 03/05/2012

Country	Higher-Education Institution	No	StG	AdG	Total
UK	University of Cambridge	1	44	32	76
UK	University of Oxford	2	38	34	72
CH	Swiss Federal Institute of Technology Lausanne	3	27	25	52
IL	Hebrew University of Jerusalem	4	28	17	45
CH	Swiss Federal Institute of Technology Zurich (ETH Zurich)	5	14	29	43
UK	University College London	6	23	19	42
UK	Imperial College	6	22	20	42
IL	Weizmann Institute	7	21	18	39
BE	University of Leuven	8	19	8	27
UK	University of Bristol	9	9	15	24
DE	University of Munich	10	8	15	23
NL	Leiden University	10	12	11	23
CH	University of Zurich	10	10	13	23
UK	University of Edinburgh	10	11	12	23
FI	University of Helsinki	11	12	9	21
NL	University of Amsterdam	11	13	8	21
IL	Technion - Israel Institute of Technology	12	17	3	20
SE	Karolinska Institute	12	11	9	20
Country	Research Organisation	No	StG	AdG	Total
FR	National Centre for Scientific Research (CNRS)	1	86	38	124
DE	Max Planck Society	2	33	29	62
FR	French Alternative Energies and Atomic Energy Commission	3	23	6	29
FR	National Institute of Health and Medical Research (Inserm)	4	18	10	28
FR	National Institute for Research in Computer Science and Automatic Control (INRIA)	5	12	8	20
ES	Spanish National Research Council (CSIC)	5	14	6	20