

FP7 IDEAS Programme

The European Research Council



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ERC Approach to Excellence

**Helga Nowotny
ERC President**

Bratislava, 17th of June 2013

Outline



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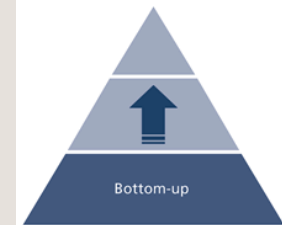
- **ERC Mission**
- Early Impact Signs
- Widening Participation
- Prospects for the Future

Bottom-up, individual-based, pan-European competition



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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

Excellence is the sole evaluation criterion



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Evaluation of *excellence* at two levels:

- **Excellence of the Research Project**
 - ✓ Ground breaking nature
 - ✓ Potential impact
 - ✓ Scientific Approach
 - ✓ Added-value of the Group (only SyG)
- **Excellence of the Principal Investigator**
 - ✓ Intellectual capacity
 - ✓ Creativity
 - ✓ Commitment

Referees and panels **evaluate and score** each criterion, which results **in a ranking** of the proposals.

Selecting the selectors



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- **Independent Identification Committee selects 22 eminent scientists and scholars as ERC Scientific Council**

- **Panel Members are appointed by the ERC Scientific Council**
 - **25 Panels** covering all fields of science, technology and scholarship
 - **3 sets of Panels:** StG Panels, CoG Panels, AdG Panels
 - Each Panel consists of the **Panel Chair** and **10-15 Panel Members**
 - Panel Chair oversees the evaluation process of the proposals assigned to his/her panel in collaboration with the ERC staff
 - Over 3000 panel members, coming from 45 countries (2007-2012) -> **6 from SK**

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

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



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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

- ERC Mission
- **Early Impact Signs**
- Widening Participation
- Prospects for the Future

After 6 years of existence...

A success story



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- more than 3.400 funded proposals; over 5 billion euro awarded
- “excellence attracts excellence”: 50% of PIs in 50 institutions, but more than 500 different host institutions in 29 countries host the other 50% of the projects
- highly competitive: average success rate 12%
- EU value added: pan-European competition among researchers for the first time ever
- strengthening peer-review-based evaluation systems
- strong structuring effects: reshaping the European landscape of basic/frontier research
- making Europe more attractive in the global competition for scientific talent

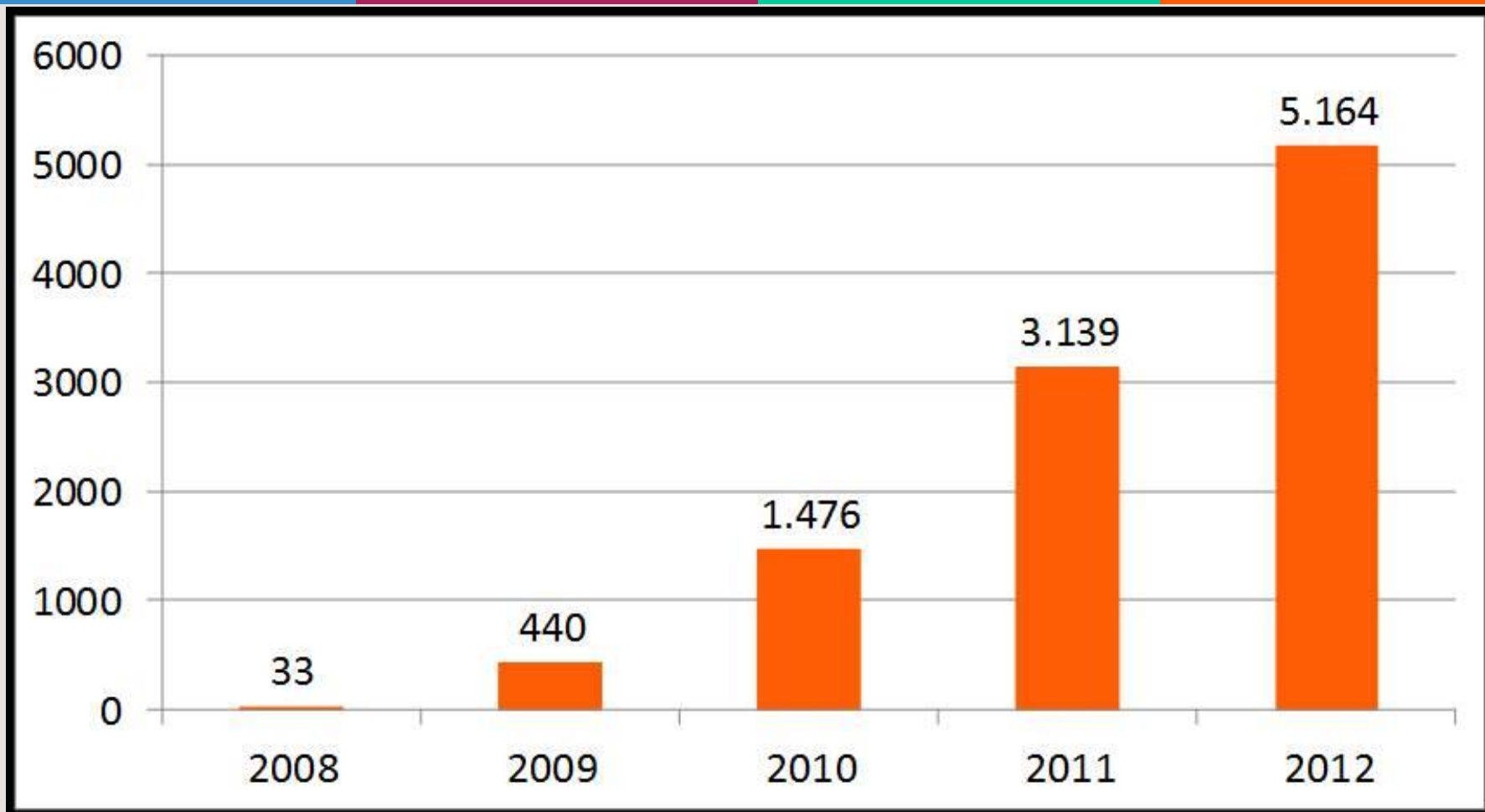
Publications from ERC funded projects

Over 10 000 articles acknowledging ERC funding



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ERC Grantees features prominently among Laureates of prestigious Prizes and Awards



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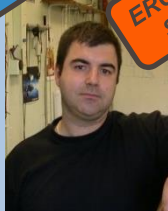
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ERC Grantee
AdG 2009



Serge Haroche
Nobel 2012

ERC Grantee
StG 2007



Konstantin Novoselov
Nobel 2010

ERC Grantee
AdG 2012



Ada Yonath

ERC Grantee
AdG 2012



Andre Geim

ERC Grantee
AdG 2012



Christoforos Pissarides

ERC Grantee
AdG 2010



Theodor Hansch

ERC Grantee
AdG 2010



James Heckman

ERC Grantee
AdG 2011



Jean-Marie Lehn



Stanislav Smirnov AdG 2008
Simon Donaldson AdG 2009
Elon Lindenstrauss AdG 2010

2013 Wolf Prize awarded to Peter Zoller - SyG 2012
2013 Holberg Prize awarded to Bruno Latour - AdG 2010
2013 Crafoord Prize awarded to Lars Klareskog - AdG 2009

Other Prizes awarded to ERC grantees

EMBO GOLD MEDAL 2011 – Simon BOULTON - AdG 2010
FEBS|EMBO WOMEN IN SCIENCE 2011 - Carol ROBINSON - AdG 2010
EMBO GOLD MEDAL 2010 – Jason W CHIN - StG 2007
THE SHAW PRIZE IN MATHEMATICAL SCIENCES 2011 - Christodoulou Demetrios - AdG 2009
CRAFOORD PRIZE 2011 and EUROPEAN LATSIS PRIZE 2010 – Ilkka Hanski - AdG 2008
L'ORÉAL-UNESCO AWARD FOR WOMEN IN SCIENCE 2011 - Anne L'Huillier - AdG 2008
WOLF PRIZE 2010 – Anton ZEILINGER, David BAULCOMBE-AdG 2008, Alain ASPECT-AdG 2010
MILLENIUM AWARD 2010 – Michael GRATZEL - AdG 2009

2012 Prizes awarded to ERC grantees

EMBO GOLD MEDAL 2012 Jiri FRIML - StG 2011
BALZAN PRIZE 2012 David BAULCOMBE - AdG 2008
EUROPEAN LATSIS PRIZE 2012 Uffe HAAGERUP - AdG 2009
KELVIN PRIZE 2012 Colin McINNES - AdG 2008
LEIBNIZ PRIZE 2012 Michael BRECHT - AdG 2008 & Joerg WRACHTRUP - AdG 2010

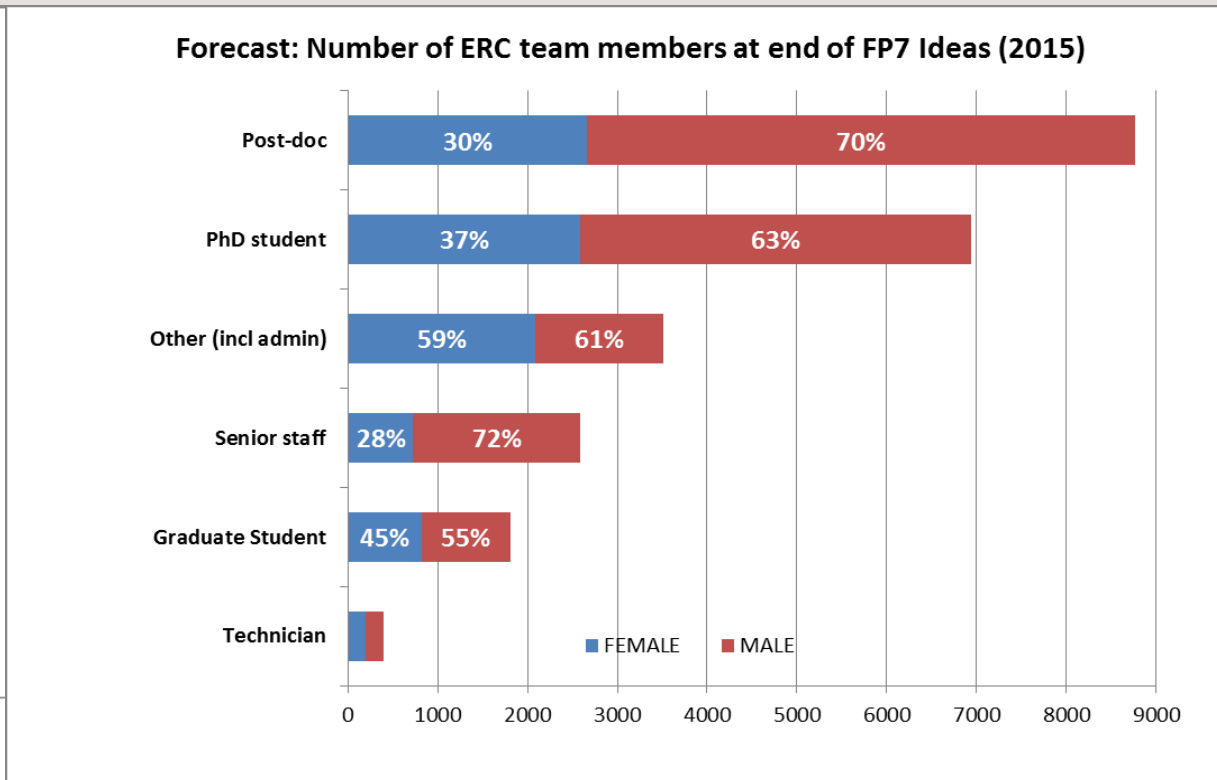
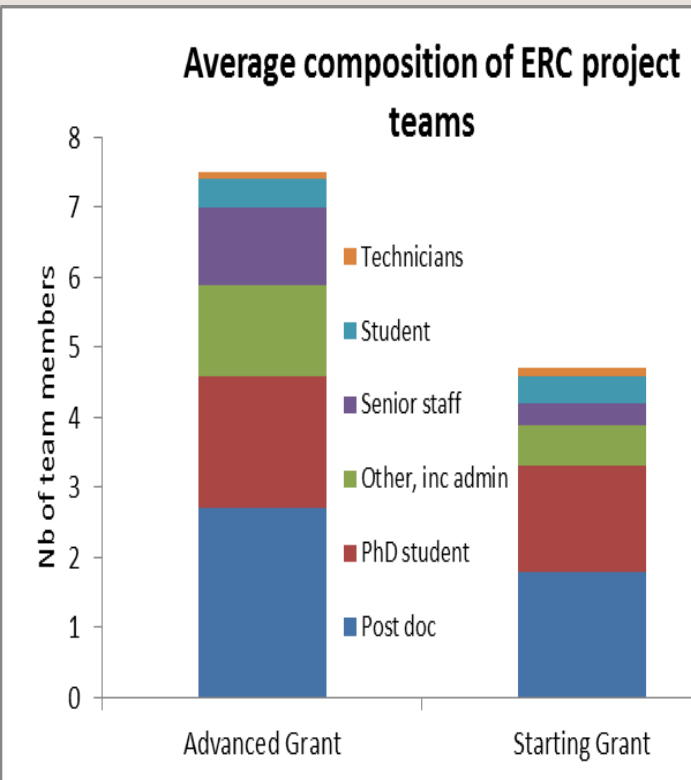
Training a new generation of excellent scientists



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Analysis of a significant sample of ERC grants shows that over 15,000 PhD and post-doc researchers will be trained within ERC projects (average of 7 team members per AdG, and 5 per StG, without the PI)



Outline



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- ERC Mission
- Early Impact Signs
- **Widening Participation**
- Prospects for the Future

Widening participation



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- assess the **participation and success rates** in all ERC calls
- ensure a **level playing field**
 - the integrity of ERC peer evaluation system is continuously monitored
- enhance the **awareness of the ERC grants schemes** across Europe
 - *Ideas* NCP (National Contact Points)
 - Stand and sessions at conferences/congresses
 - **ERC events: Scientific Council meetings in the new Member States: Prague (May 2007), Vilnius (Sept 2008), Warsaw (June 2009) Bucharest (March 2010), Budapest (June 2011), Riga (Oct 2011), Sofia (April 2012), Vienna (Feb 2013), Bratislava (June 2013)**
 - **ERC regional outreach events**
- excellence can be anywhere, but **excellence doesn't happen on its own**
combined efforts of the Commission and the Member States

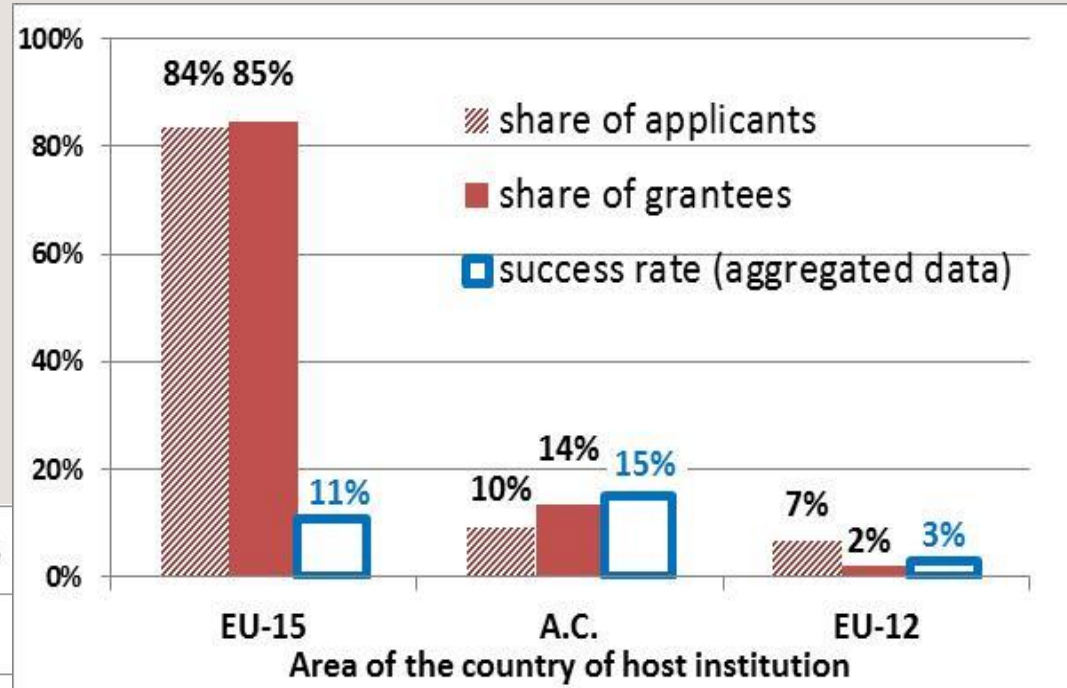
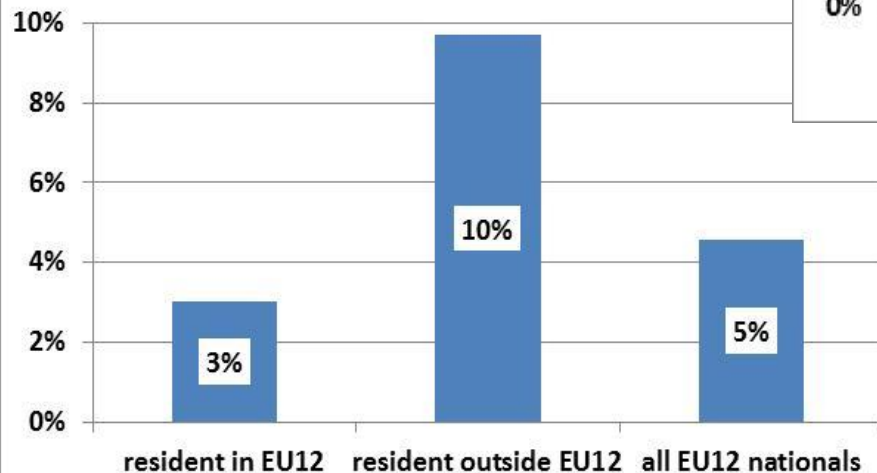
EU12 participation to ERC calls

ERC Starting and Advanced grant calls 2007-2012

Share of EU12 public researchers in EU&AC = **15%**

Share of EU12 GERD in EU&AC = **3%**

Success rate of EU12 nationals



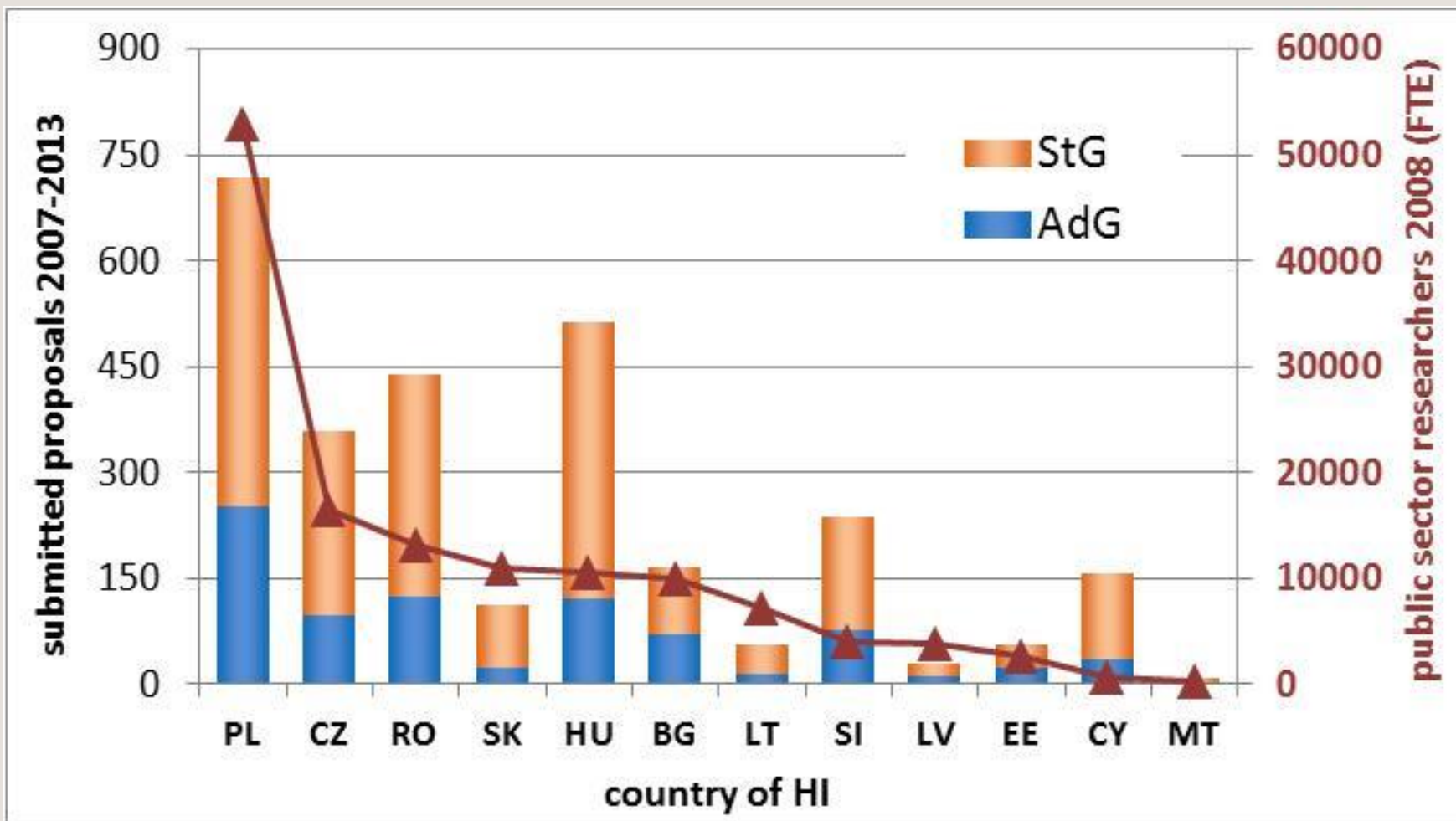
Submitted proposals from host institutions in the EU-12 countries

ERC calls 2007-2013



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National initiatives in support of finalist projects in the ERC calls



NO: The Research Council supports unfunded StG finalists

FI: support scheme for finalists in reserve lists since 2009 calls

SE: support for unfunded finalists of StG calls since 2007

IE: New scheme open since 2012 for proposals that obtained A in step 2 in ERC calls. Previous scheme for StG2007 finalists

BE Flanders: FWO supports the best ranked PIs on the StG reserve list

PL: Support scheme for finalists since 2009

CZ: opened support scheme for finalists in 2012

LU: FNR supports unfunded StG and AdG finalists since 2009 calls

HU: Call for unfunded ERC finalists of StG2007 and StG2009

RO: opened support scheme for finalists of 2011 calls

FR: ANR launched an initiative to support unfunded StG2007 finalists

CH: SNSF launched an initiative to back unfunded StG2007 finalists

SI: Complementary scheme for unfunded finalists in step 2

TR: Considers a scheme to support unfunded ERC finalists

PT: New national initiative in support of ERC finalists being developed

IT: Call open to all unfunded StG2007 finalists

BG: Develops a scheme to financially support projects in the ERC reserve list

CY: Research Promotion Foundation supported StG 2009 finalists

ES: support for unfunded finalists of StG calls since 2007

EL: support for unfunded StG and AdG finalists in 2010, 2011 and 2012 calls

Outline



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- ERC Mission
- Early Impact Signs
- Challenges for Frontier Research
- **Prospects for the Future**

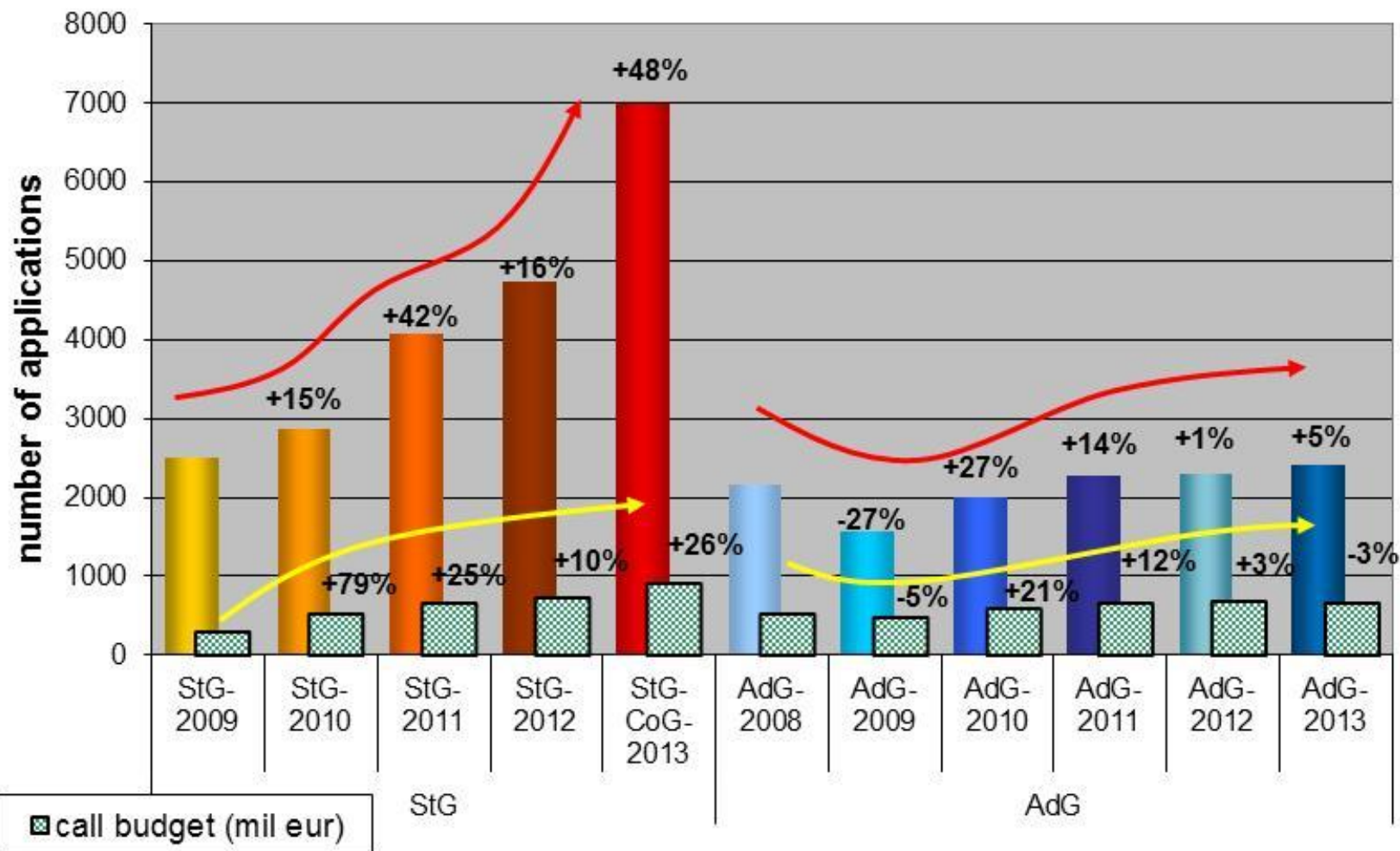
ERC prospects for the future

Rising applications



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Horizon 2020: ERC under the “Excellent Science” Pillar



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- **HORIZON 2020** structure:
 - Excellent 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** (budget proposal under H2020: € 15 billion)
 - ✦ Future and Emerging Technologies
 - ✦ Marie Curie
 - ✦ Research Infrastructures

ERC in FP7 and in H2020

Changes and Continuity



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Essential features maintained

- Independent Scientific Council with full authority over funding strategy
- Executive Agency with autonomous operation
- Scientific excellence - the sole criterion on which ERC grants are awarded

Strengthening the Scientific Governance of the European Research Council

Strengthening the links between the Scientific Council and the Executive Agency

- Merging positions of President of ERC and Secretary General
- Full-time President based in Brussels
- 3 Vice-Chairs elected from amongst the Scientific Council members

Strengthening the role of Scientists in the Steering Committee of the ERCEA

Strengthening the relation of the Scientific Council and the ERCEA



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