



# Thinking about the Future of the European Research Council (ERC)

**Prof. Dr. Andreu Mas-Colell**  
ERC Secretary General

**Information and Strategy day for the heads of  
German Universities**  
**Strasbourg, 19-20 January 2010**



FP7 IDEAS Programme

European Research Council



# The European Research Council



ERC Calls 2007 – 2009: an overview

# Content of the presentation

I would highlight four issues:

- **What is the ERC and what does it add?**
- **Consolidation and development of the current schemes**
- **The ERC towards the 8<sup>th</sup> Framework Programme**
- **Institutional development of the ERC**





# What is the ERC and what does it add?



# What is the ERC?

**ERC is a new type of funding body in Europe to support excellence in future research open, individual-team designed competition**

## Legislation

- A Scientific Council with 22 members
- Support by the ERC Executive Agency
- A significant budget (1.1 billion €/year)
- Excellence is the only valid criterion

## Strategy

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



# The ERC paradigm

- A radical shift in policy: pan-European competition to advance excellent ideas of individuals
- Support for excellent individual researchers to push the frontiers of science
- Support for the early independence of young researchers
- Industry participation is welcome



# ERC offers a new partnership in Europe

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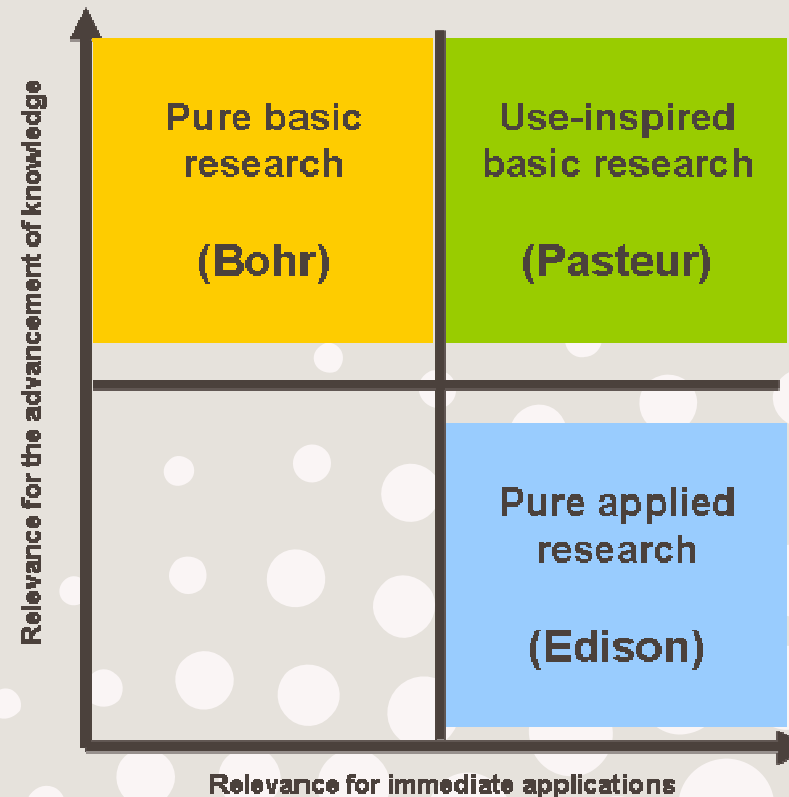
- From individual to institutional excellence: committed to scientific excellence while helping dynamic institutions that successfully attract high-level researchers
- Raising standards throughout Europe: ERC acts as a catalyst for reforms in research funding policies in Europe



# No distinction made between basic research and basic technology



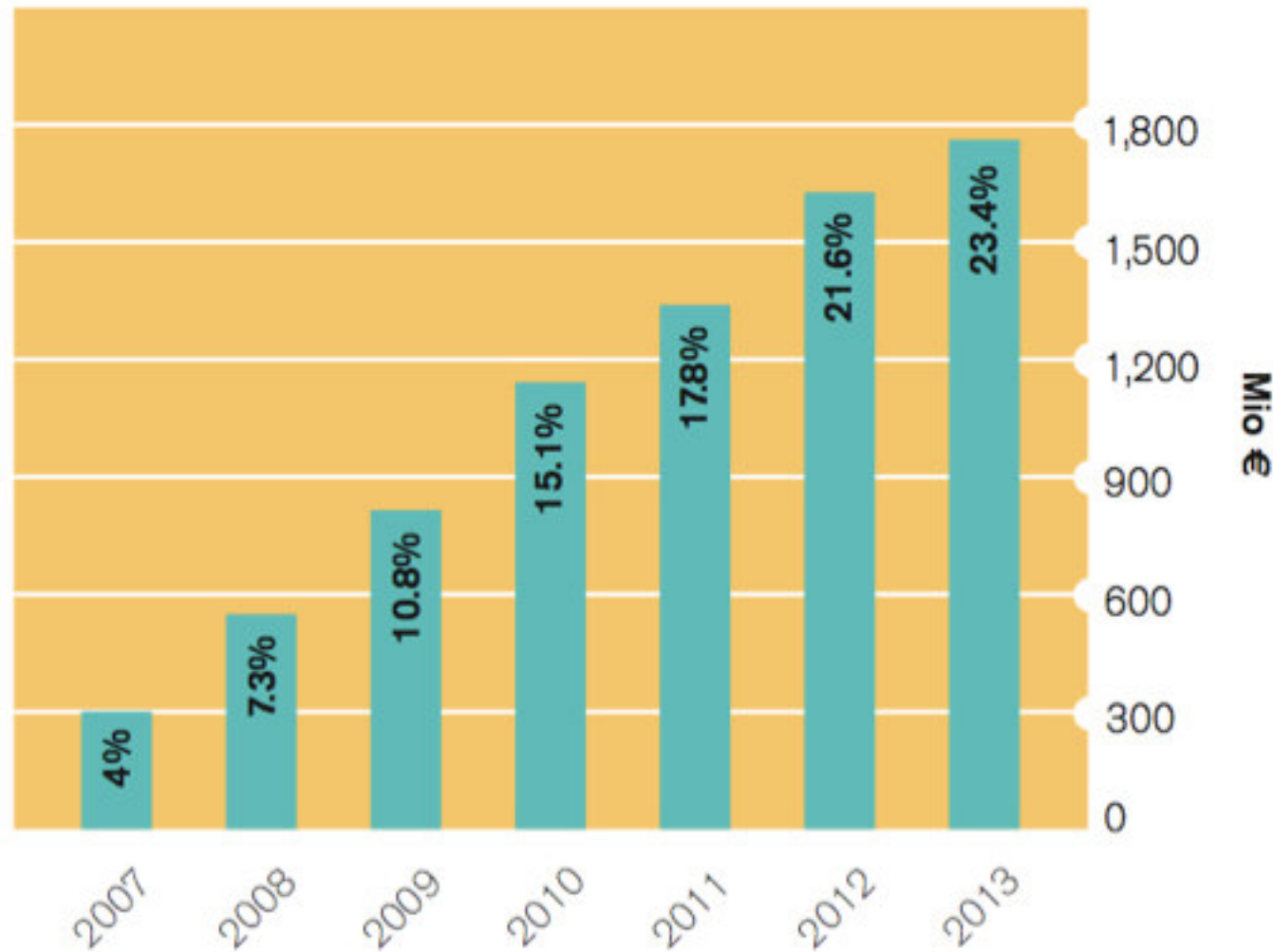
- “Frontier research” responds to the blurring boundaries between basic and applied research
- “Frontier technology” emerges often in the course of basic research
- If picked up, frontier technologies travel well: across research fields and out of the lab







# ERC budget increases by € 250 M€ / year





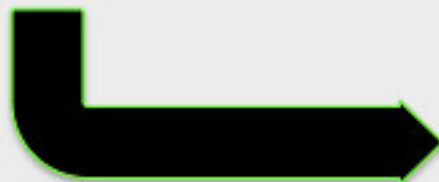
# ERC budget € 1 billion/year (on average)

## ERC budget

Averages to **€ 1 billion/year**



Less than 0.5% of R&D spending  
In Europe



## Compare with US institutions

NSF → **\$ 6.85 billion** (2009)

NIH → **\$ 30.5 billion** (2009)

## Annual R&D budget



# The ERC keeps its strategy simple, flexible and focused!

- **“Starting Grant”**: Support young(\*) researchers      (\*) 2-10 yrs post-PhD
- **“Advanced Grant”**: Support leading(\*) scientists      (\*) in past 10 yrs
- Promote excellence irrespective of nationality, age, or field
- Trust the dynamic of science
  - ➔ The ERC funds the individual PI (and his/her individual team)
  - ➔ Grants are portable
- Encourage interdisciplinarity by mainstreaming interdisciplinary projects

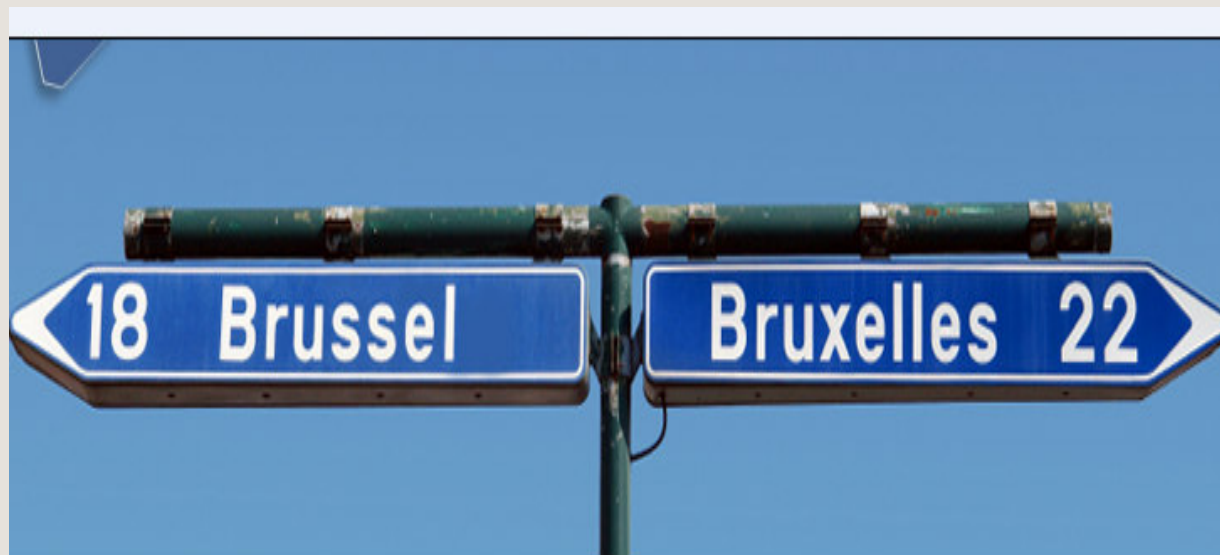


# The ERC paradigm

- Frontier research based solely on scientific excellence 
  - researcher
  - proposal
- Open competition of outstanding individuals of all nationalities and ages willing to move, stay and do **research** in Europe
  - (\*) minimum 50% time in Europe, 30% time on project
  - Europe = 39 countries of European Research Area (ERA)
- Generous funding for ambitious projects (up to €2 mil / €3.5 mil)
- No quotas per country/region, gender, etc.
- All fields supported: 3 Domains  
(Life Sciences, Physical Sciences & Engineering, Social Sciences & Engineering)



# Consolidation and development of the current schemes

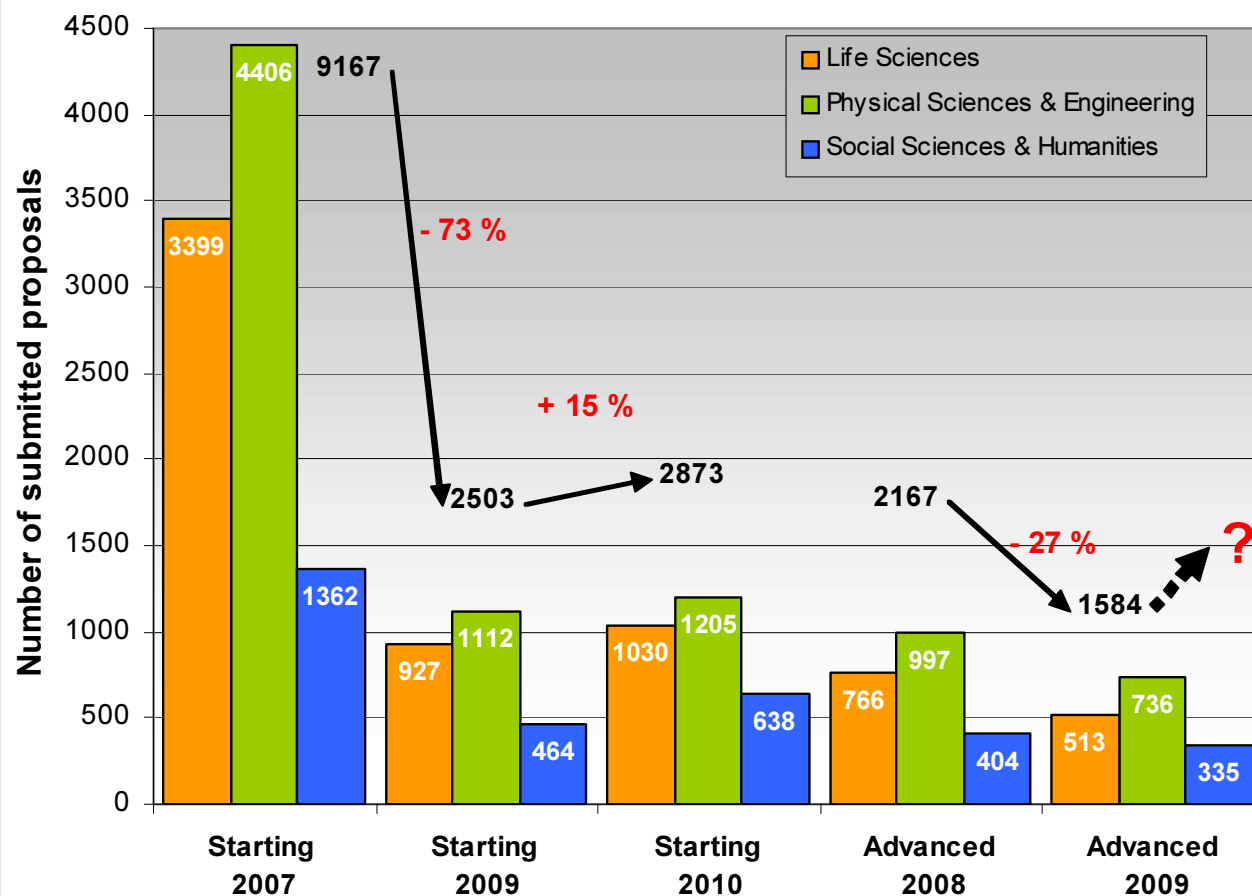


# ERC Starting & Advanced grant calls 2007, 2008 & 2009

## Submitted proposals by domain

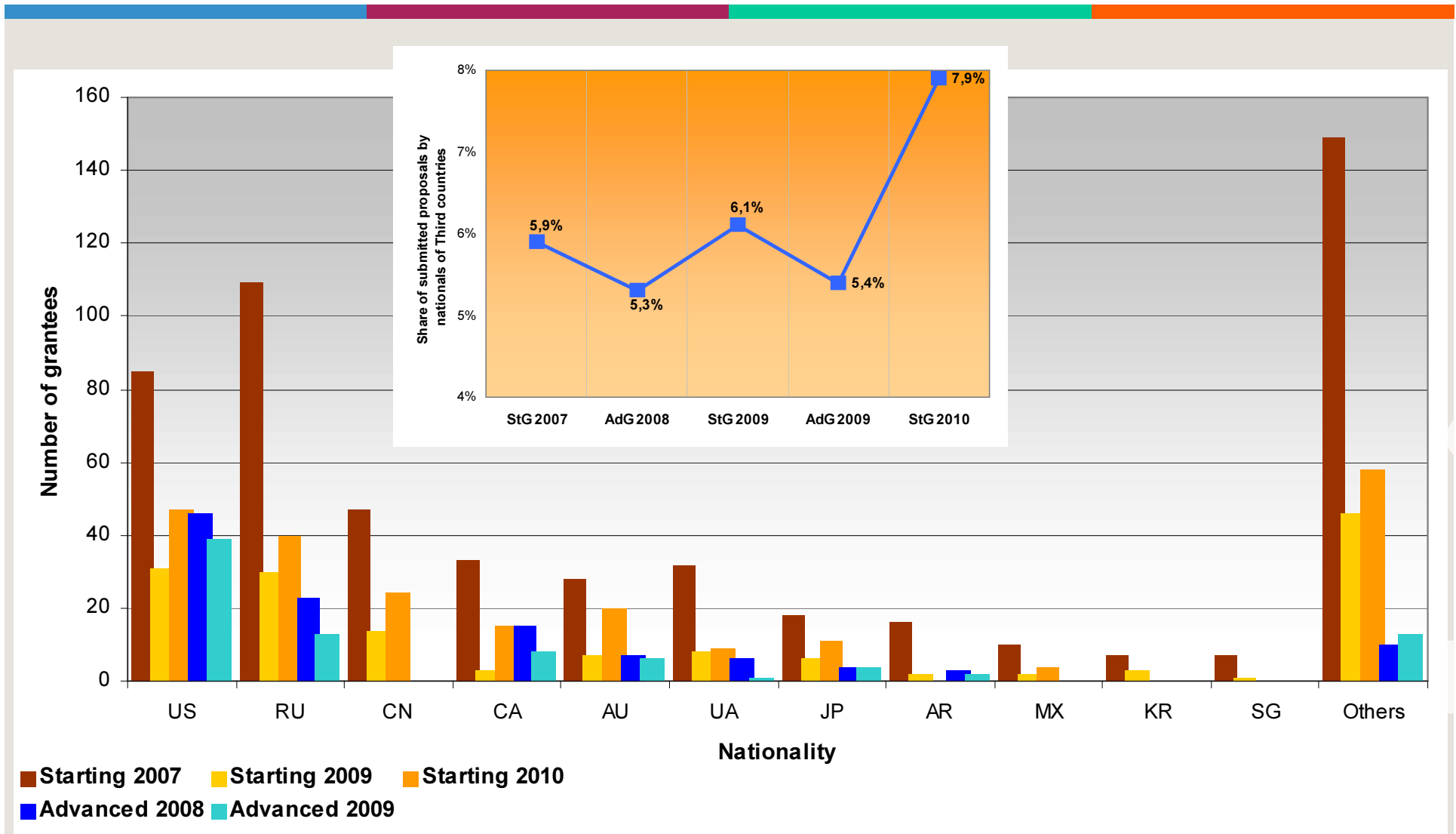


### Number of proposals



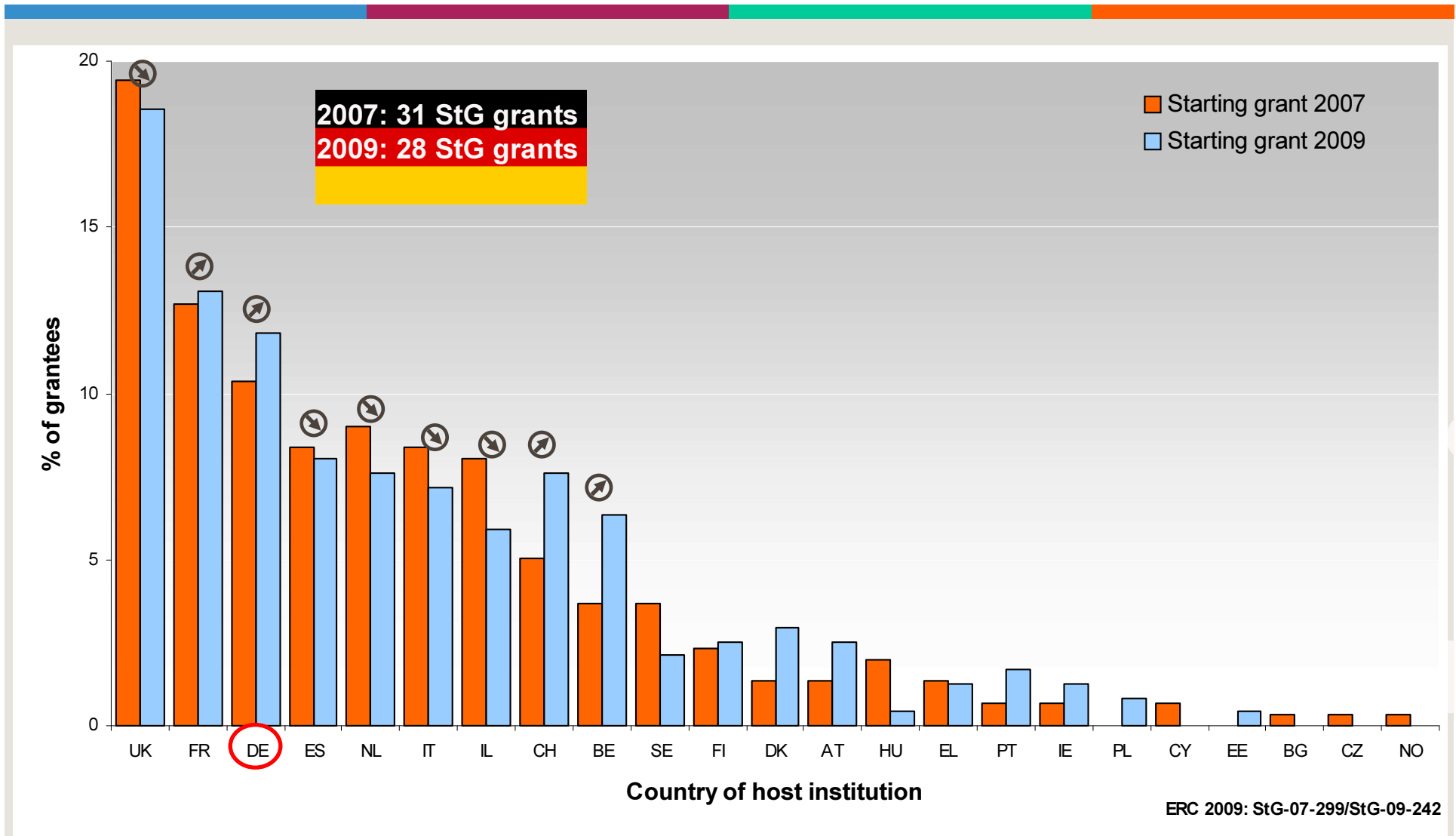


## Submitted proposals from researchers with nationality from a Third country



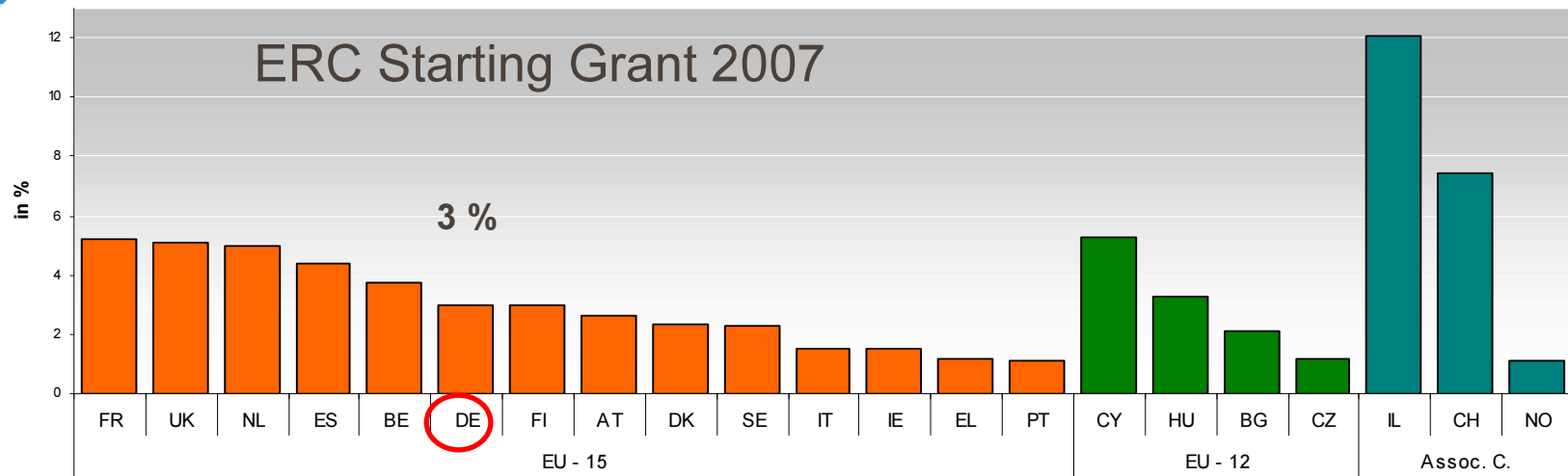


# Share of selected proposals by country of host institution

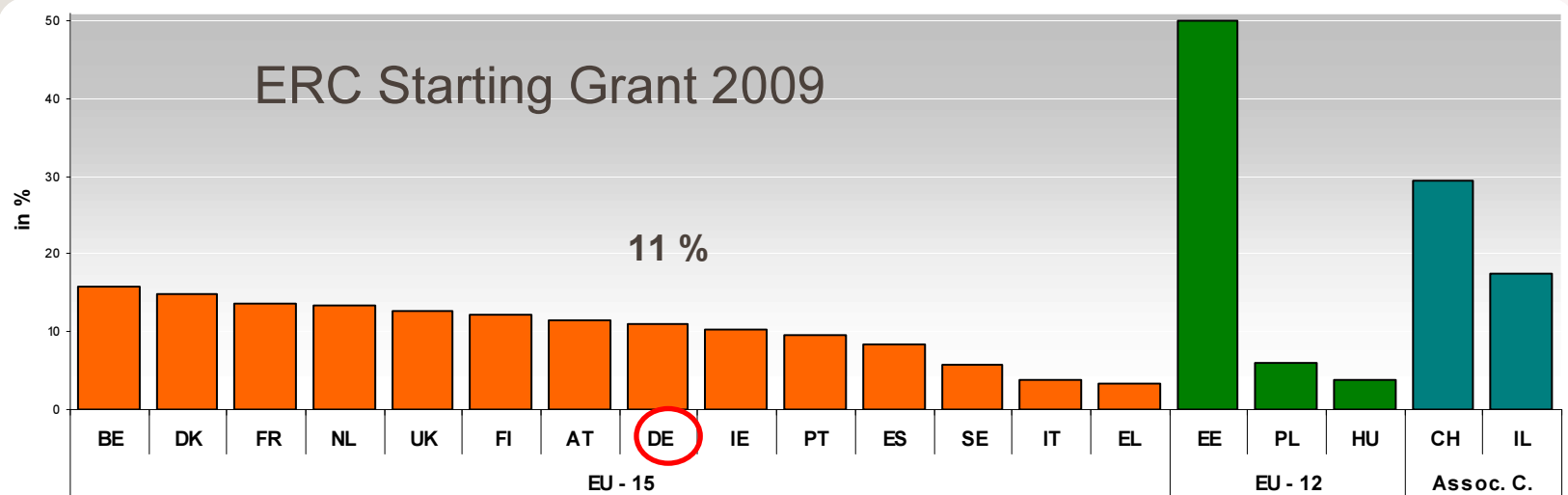




**Success rate by country of host institution**  
(i.e. ratio submitted – selected proposals)



Source: All submitted proposals (9 167) and 299 selected projects

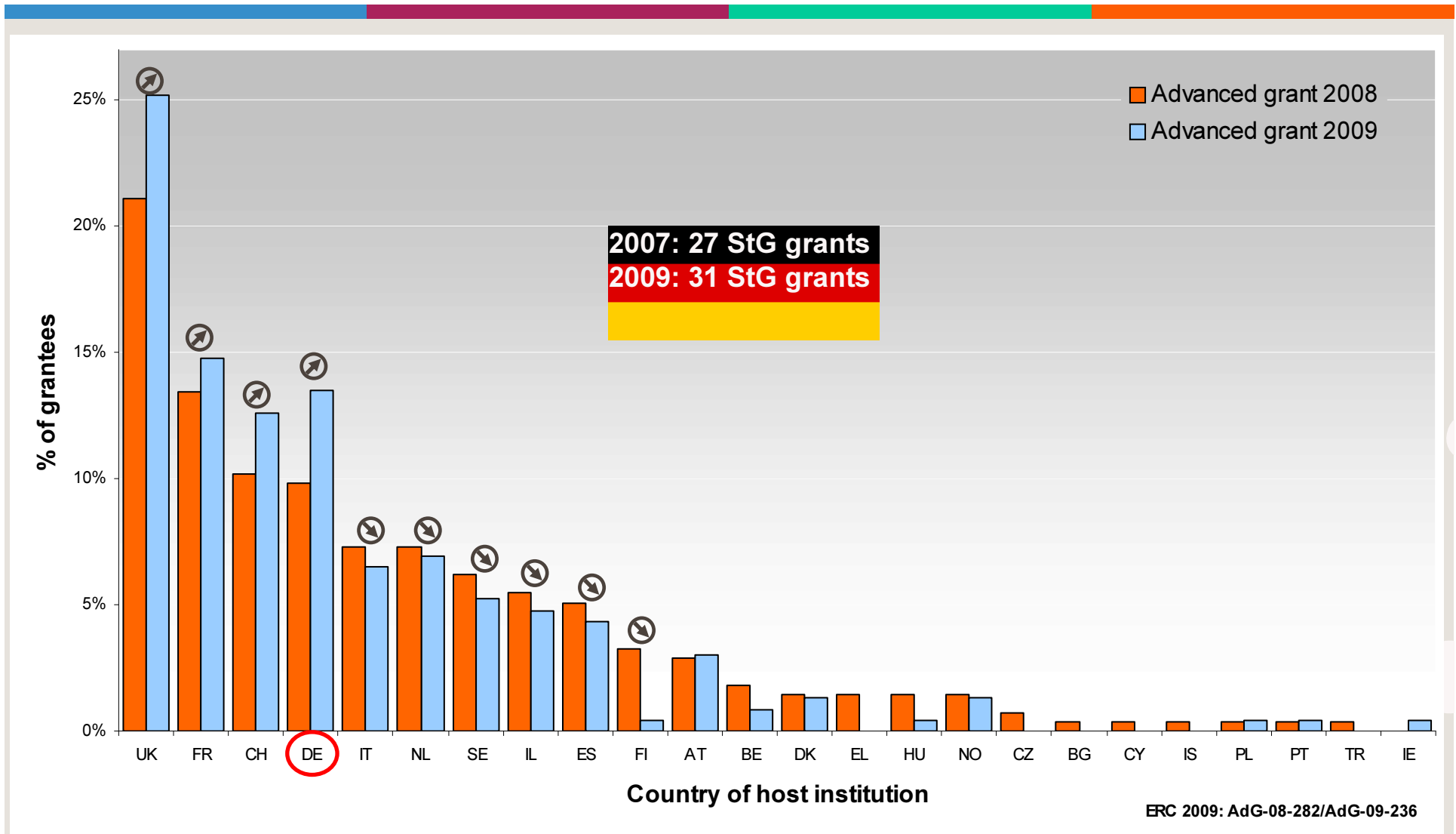


Source: All proposals (2503) and 242 top listed proposals



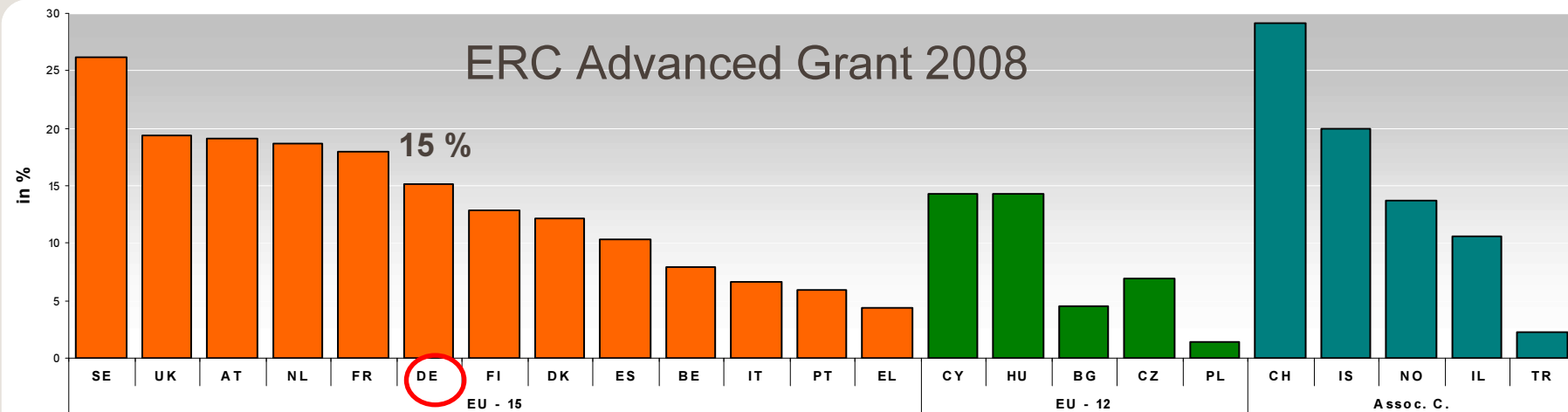


# Share of selected proposals by country of host institution

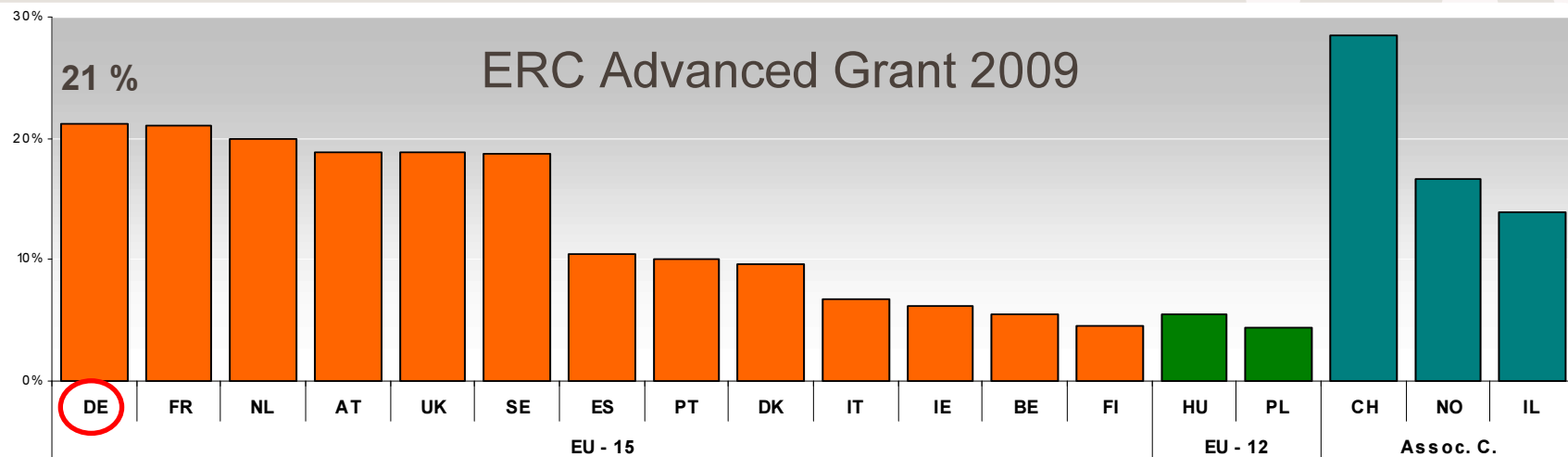




# Success rate by country of host institution (i.e. ratio submitted – selected proposals)



Source: All submitted proposals (2 167) and 282 selected projects



Source: All proposals (1584) and 236 top listed proposals

StG 2009

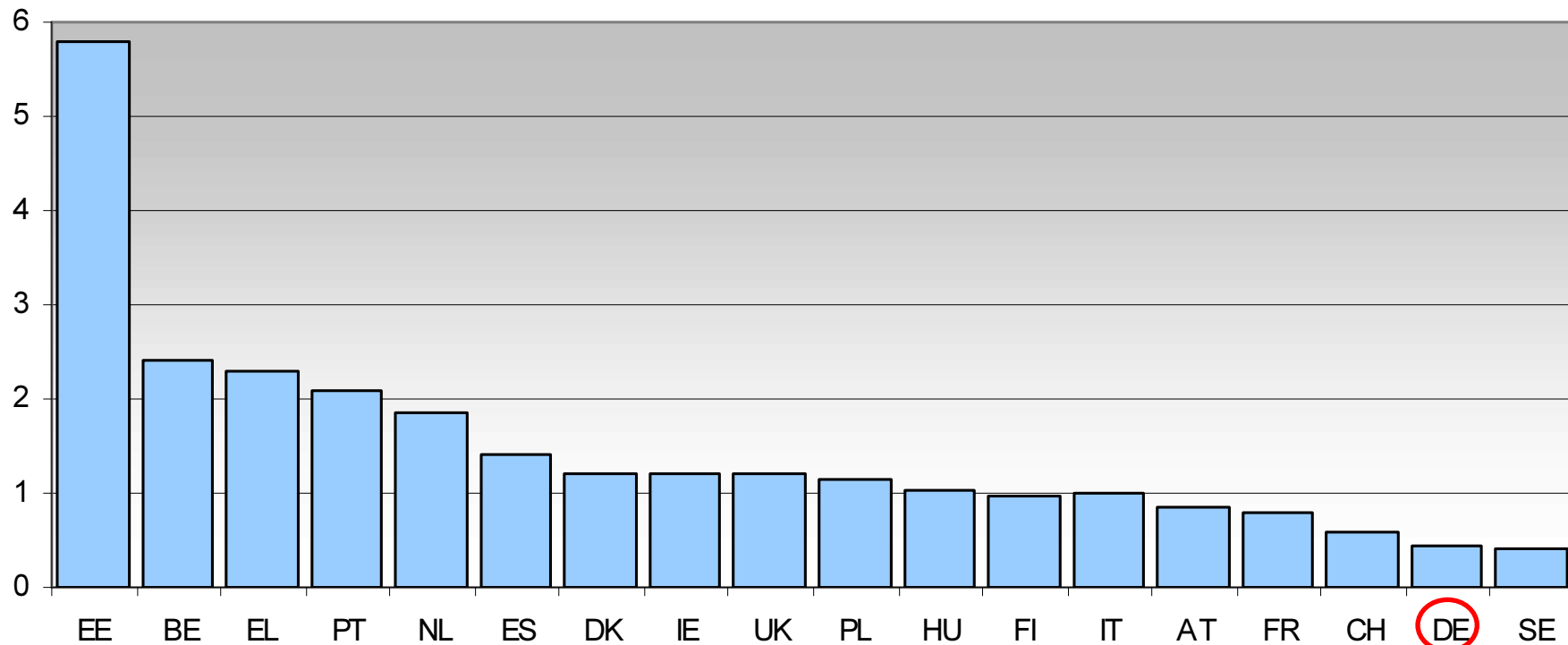
# Number of projects vs. R&D intensity

242 StG 09 proposals

European Research Council



Proposals per billion GDP on R&D\*



Source: Eurostat, Reference year 2007, or latest year available, Missing data: IL

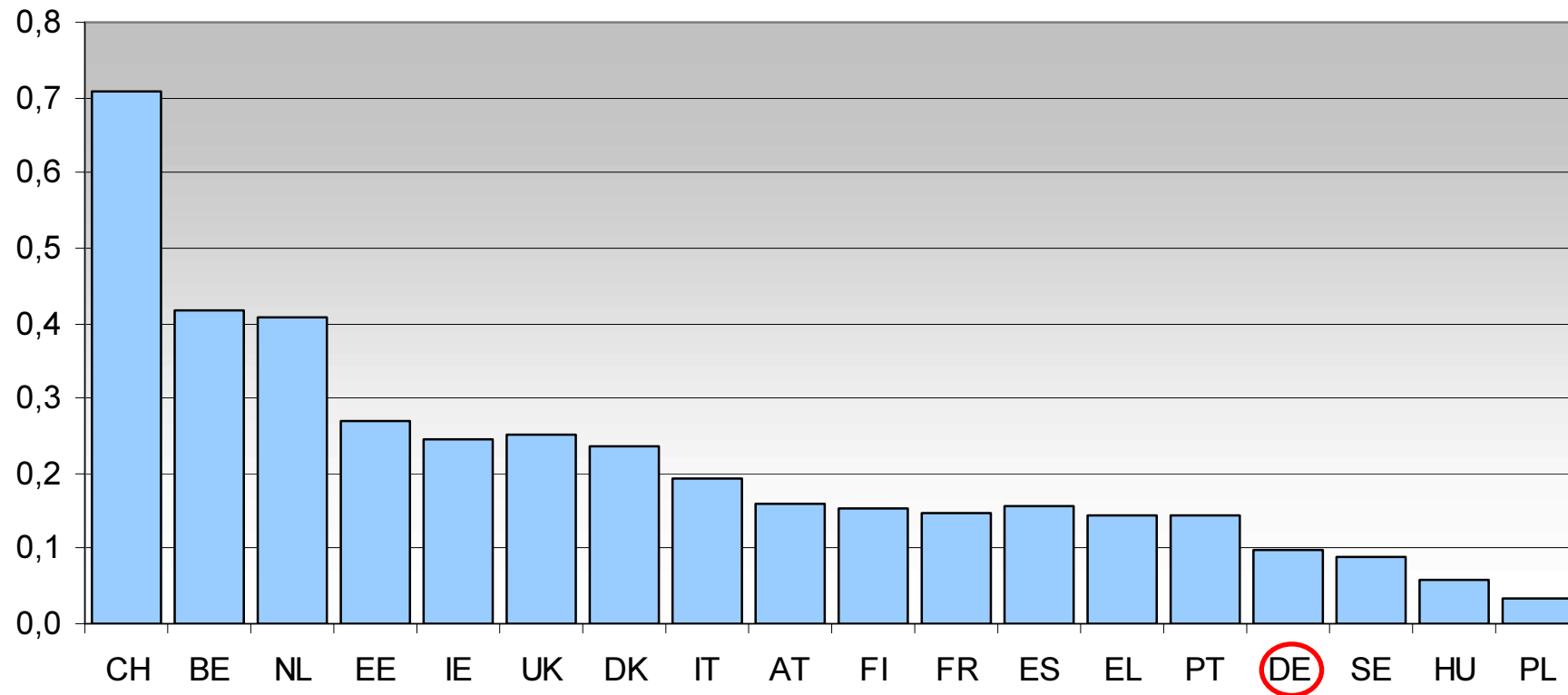
\* Total intramural R&D expenditure (GERD) in billion Euro

ERC 2010: StG-09-242





Grants per 1000 researchers (FTE)



Source: Eurostat, Reference year 2006/2007, or latest year available, Missing data: IL ; FTE (Full-time equivalent) corresponds to one year's work by one person

ERC 2010: StG-09-242

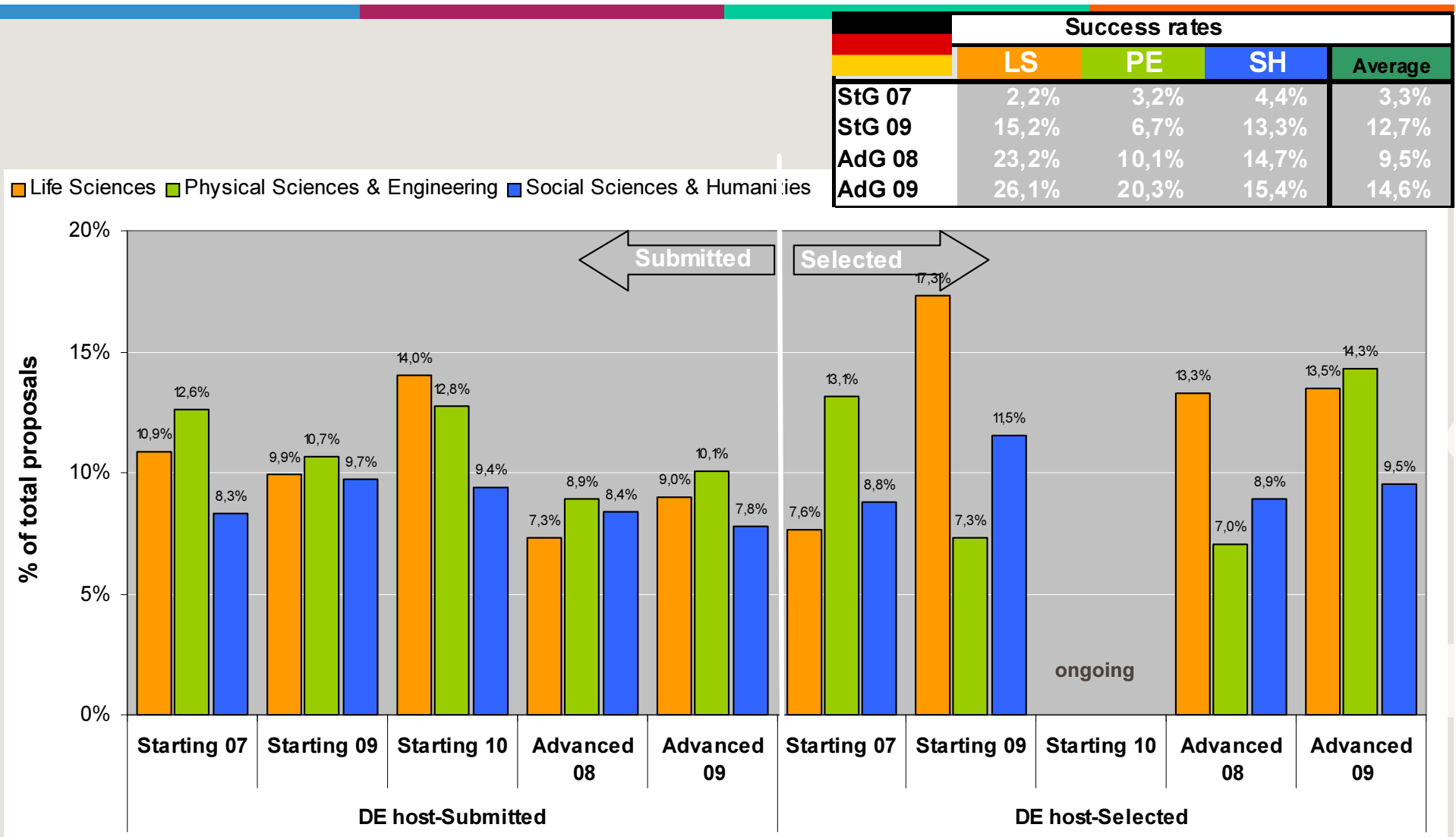


# ERC Starting & Advanced grant calls 2007 - 2010

European Research Council

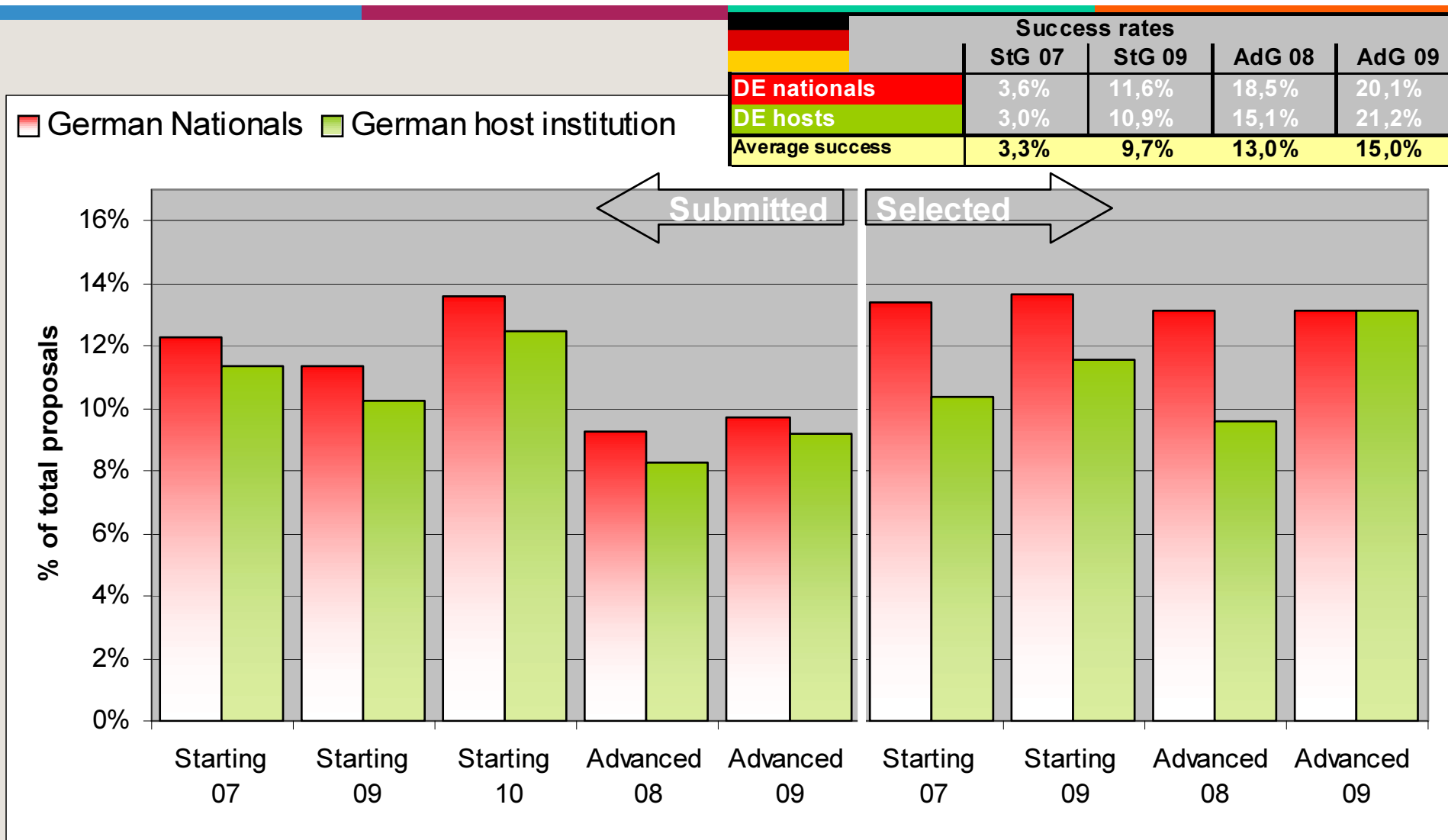


## Share of submitted and selected proposals of German host institutions by domain





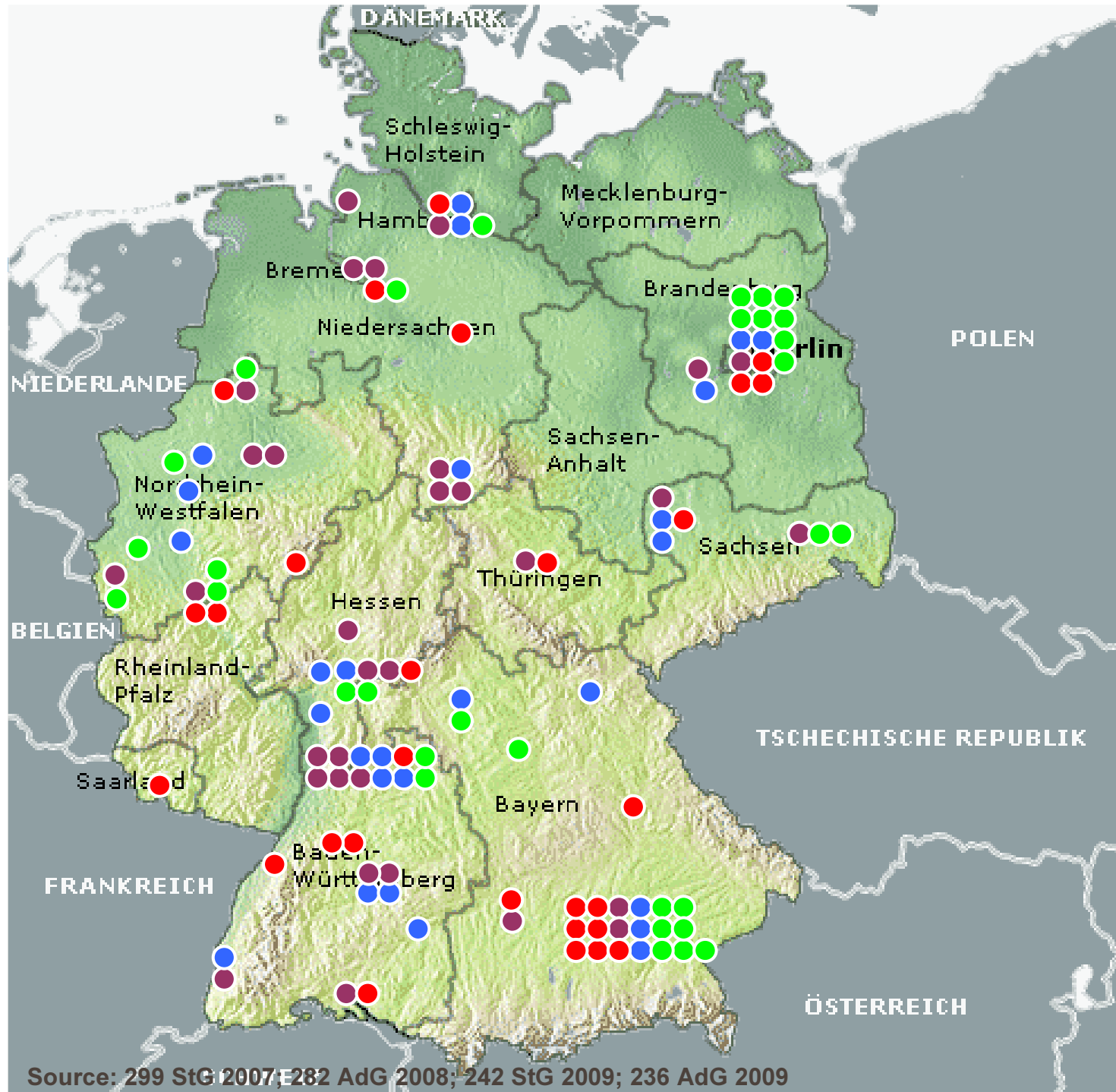
## Share of submitted and selected proposals of German nationals and German host institutions



StG 2007, 2009 &  
AdG 2008, 2009

## Host institutions for StG and AdG in Germany

- Starting grant call 2007
- Starting grant 2009
- Advanced grant call 2008
- Advanced grant call 2009



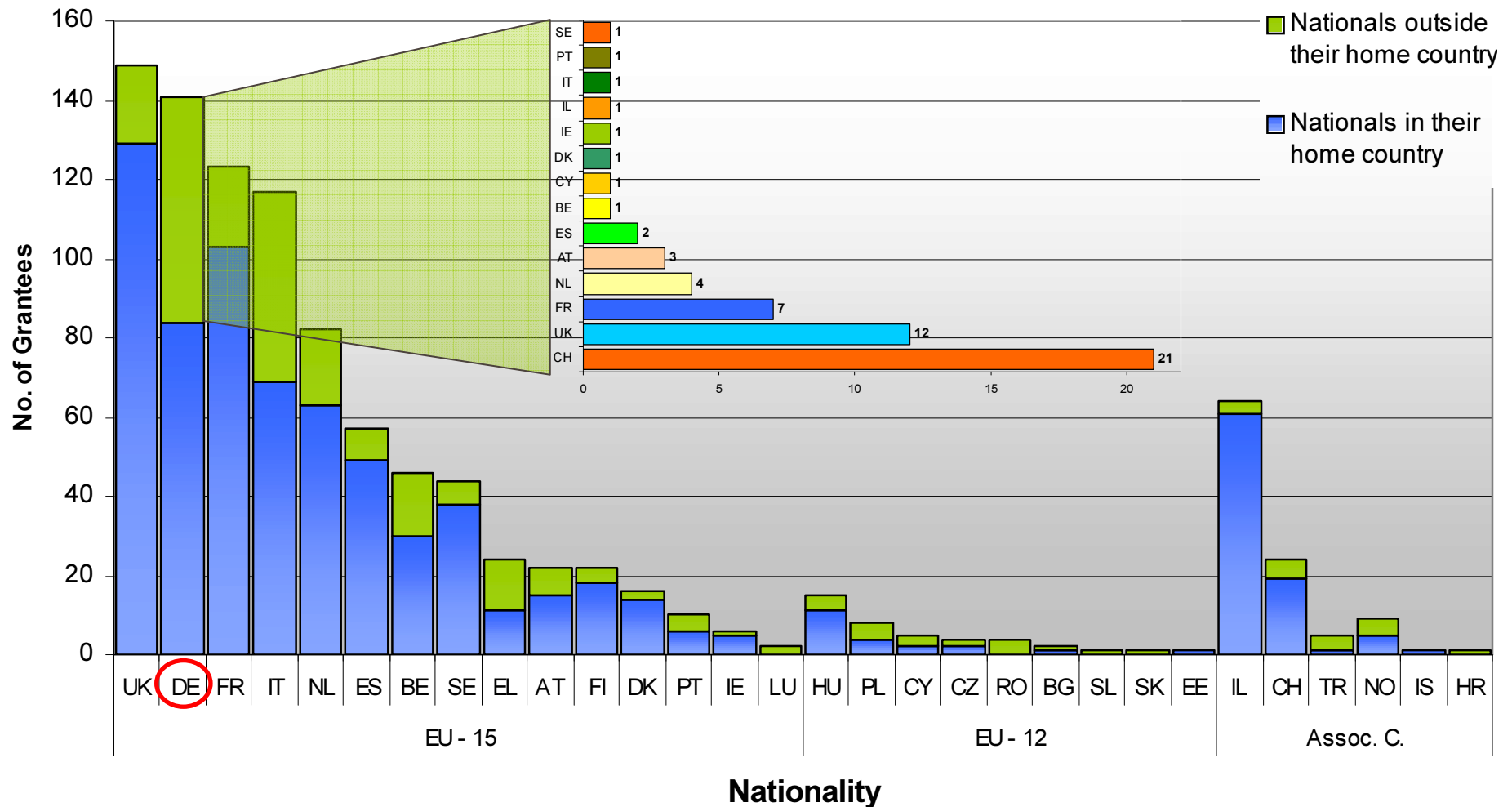
Source: 299 StG 2007; 282 AdG 2008; 242 StG 2009; 236 AdG 2009



# ERC Starting & Advanced grant calls 2007 - 2010



## Nationality and host country

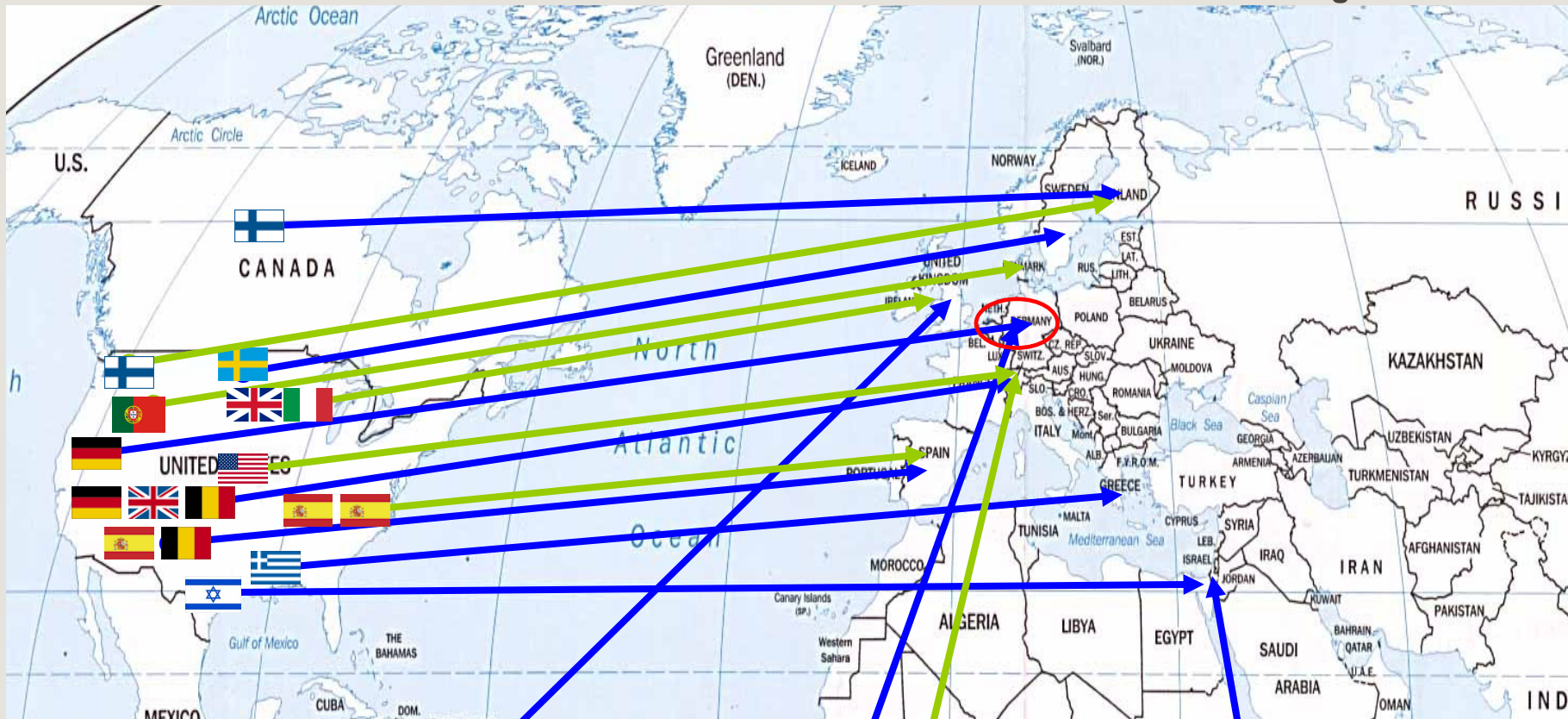
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# Selected projects: Repatriation and Recruitment

 Starting Grant 2007  
 Starting Grant 2009



Argentina

Japan

Australia

# ERC Starting & Advanced grant calls 2007 - 2010

European Research Council



## Comparison of the TOP European institutions

ERC StG 2007		ERC AdG 2008		ERC StG 2009	
no. grants		no. grants		no. grants	
17	CNRS	11	EPF Lausanne	7	CNRS
9	Max-Planck-Society	10	Centre National de Recherche Scientifique	7	EPF Lausanne
8	University of Cambridge	8	Weizmann Institute of Science	7	Max-Planck-Society
7	Technion Israel Institute of Technology	7	Univ of Oxford	6	Univ Leuven
6	Imperial College London	7	Imperial College London	6	Univ of Oxford
6	Hebrew Univ Jerusalem	6	ETH Zürich	5	Hebrew Univ Jerusalem
6	Consiglio Nazionale delle Ricerche	5	Univ of Edinburgh	5	Uni Gent
5	Weizmann Institute of Science	5	Univ of Cambridge	4	Univ of Cambridge
5	Univ Oxford	5	Univ Helsinki	4	University College London
5	University College London	4	Univ Genève	4	Uni Bristol
5	Free Univ Amsterdam	4	University College London	4	Univ Bristol
4	Consejo Superior de Investigaciones Científicas	3	Helsinki Univ of Technology	3	Commissariat à l'énergie atomique
4	Univ Leuven	3	Univ of Tel Aviv	3	ETH Zürich
4	Univ Heidelberg	3	Univ of Nijmegen	3	Imperial College London
4	IN National de la Santé et de la Recherche Médicale	3	Max-Planck-Society	3	IN National de la Santé et de la Recherche Médicale
3	Royal Netherlands Academy of Arts and Sciences	3	IN de Recherche en Informatique et en Automatique	3	Uni Munich
3	Univ Tel Aviv	3	Ecole des hautes études en sciences sociales	3	Helsinki Univ of Technology
3	Univ Stockholm	3	Commissariat à l'énergie atomique	3	Univ of Utrecht
3	Univ Amsterdam	3	Hebrew Univ of Jerusalem	3	Weizmann Institute of Science
3	Univ Aarhus	3	Univ of Utrecht		
3	Univ Leiden	3	Politecnico di Milano		
3	Medical Research Council	3	Univ of Lund		
3	Fundació Privada Centre de Regulació Genòmica	3	Karolinska Institutet		
3	Spanish National Cancer Centre				

ERC AdG 2009	
no. grants	
9	Centre National de Recherche Scientifique
9	ETH Zürich
9	Univ of Cambridge
7	University College London
7	Max-Planck-Society
6	University of Zürich
5	Univ of Oxford
5	Hebrew Univ of Jerusalem
5	Uni Bristol
4	EPF Lausanne
4	Weizmann Institute of Science
4	Imperial College London
4	IN National de la Santé et de la Recherche Médicale
4	Uni Munich
3	Univ of Edinburgh
3	Univ Genève
3	Univ Amsterdam
3	Univ Bergen
3	Univ Uppsala
3	Cancer Research UK



# ERC Starting & Advanced grant calls 2007 - 2010

## German host institution

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Institution	StG 2007	Adg 2008	AdG 2009	StG 2009	Total	Institution	StG 2007	Adg 2008	AdG 2009	StG 2009	Total
Max Planck Gesellschaft	9	3	7	5	24	Universität Erlangen-Nürnberg			1		1
Universität München	1	2	4	3	10	Universität Jena				1	1
Universität Frankfurt am Main	2	2	1	1	6	Universität Düsseldorf		1			1
University of Heidelberg	4	2			6	HGF München				1	1
Technische Universität München		1	2	1	4	HGF - Alfred Wegener	1				1
Freie Universität Berlin	1	1	2		4	Max Delbrück Zentrum				1	1
University of Tübingen	2	2			4	Medizinische Hochschule Hannover				1	1
University of Hamburg	1	2			3	Saarland University				1	1
Charité - Universitätsmedizin Berlin			2		2	Technische Universität Darmstadt		1			1
Deutsches Krebsforschungszentrum		1	1		2	Universität Hohenheim				1	1
Forschungsverbund Berlin e.V.			1	1	2	Universität Karlsruhe				1	1
Humboldt-Universität zu Berlin		1		1	2	Universität Regensburg				1	1
Universität Würzburg		1	1		2	Universität Siegen				1	1
Universität Bonn			1	1	2	Uniklinikum Heidelberg			1		1
Technische Universität Berlin			2		2	Universität Bayreuth		1			1
Universität Hamburg			1	1	2	Universität Duisburg-Essen		1			1
Universität Münster			1	1	2	Universität Ulm		1			1
HGF - UFZ	1	1			2	Uniklinikum Freiburg		1			1
Universität Bremen	1		1		2	Universität Köln		1			1
Uniklinikum Aachen	1		1		2	Uniklinikum Göttingen	1				1
Uniklinikum Bonn	1			1	2	Gesellschaft zur Förderung der analytischen Wissenschaften	1				1
Universität Augsburg	1			1	2	Universität Giessen	1				1
Universität Konstanz	1			1	2	Universität Bochum	1				1
EMBL				1	1	Zentralinstitut f. Seelische Gesundheit		1			1
FZ Jülich			1		1						

Grand Total	StG 2007	Adg 2008	AdG 2009	StG 2009	Total
	31	27	31	28	117



# Attracting applicants

European Research Council



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## An ERC position at Ghent University?

Are you an outstanding researcher with an innovative research idea?  
Why not choose Ghent University as hosting institution for the establishment of your research team?

Ghent University wants to actively promote its participation in the [ERCAC programme](#) of the Seventh Framework Programme (FP7 – 2007-2013).

This programme, managed by the [European Research Council \(ERC\)](#) provides a distinctive funding mechanism devoted to scientific excellence for all scientific fields.

Funding is provided for the implementation of groundbreaking research for a period of 5 years. Two types of Grants are available:

- [ERC Starting Grants](#) for young postdocs (3-8 years research experience)
- [ERC Advanced Grants](#) for established senior researchers

### What can Ghent University offer you?

For applicants:

- Support in the proposal writing stage: screening and review of proposal in cooperation with external consultants

For successful ERC-candidates:

- A long-term research professorship
- For a period of four years, an additional PhD student with supporting bench fee
- Full administrative support by the European Office of Ghent University

Helpdesk: [EU-cal@UGent.be](mailto:EU-cal@UGent.be)

Read more ...



# The ERC towards the 8th Framework Programme



## Current to do list!

- To increase the participation by women & new Member States nationals without compromising on excellence
- To make Europe more attractive for researchers from overseas
- To increase awareness in industry for opportunities of ERC funding
- To emphasize real “starters” (2-6 years post PhD) through an increase in the StG budget



# Coming challenges

- ERC budget in FP 8
- ERC as a permanent institution
- Closer links to Universities
  - ➔ Development of an partnership with hosts, e.g. joint discussions (procedures and substance)
- New schemes
- Link to Marie Curie?







## Outlook on the Future: Food for thought!

- **What about funding also the mid-term research careers?**
- **Twinning grants for European and non-European co-investigators and their teams**
- **Advanced Studies Institutes/ Graduate Schools – the breeding zones of new ideas?**





# Institutional development of the ERC



# The ERC Board

## Linking strategy and operations

European Research Council



**Prof. Fotis Kafatos**  
ERC President



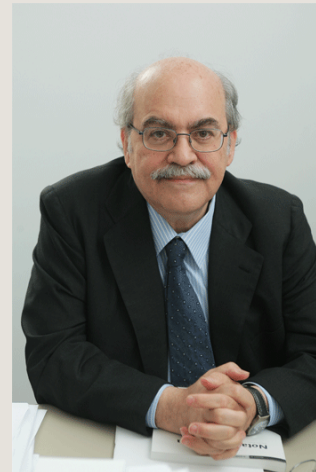
**Prof. Helga Nowotny**  
**Dr. Daniel Esteve**  
ERC Vice-Presidents



**Jack Metthey**  
ERC Executive Agency  
Director *ad interim*

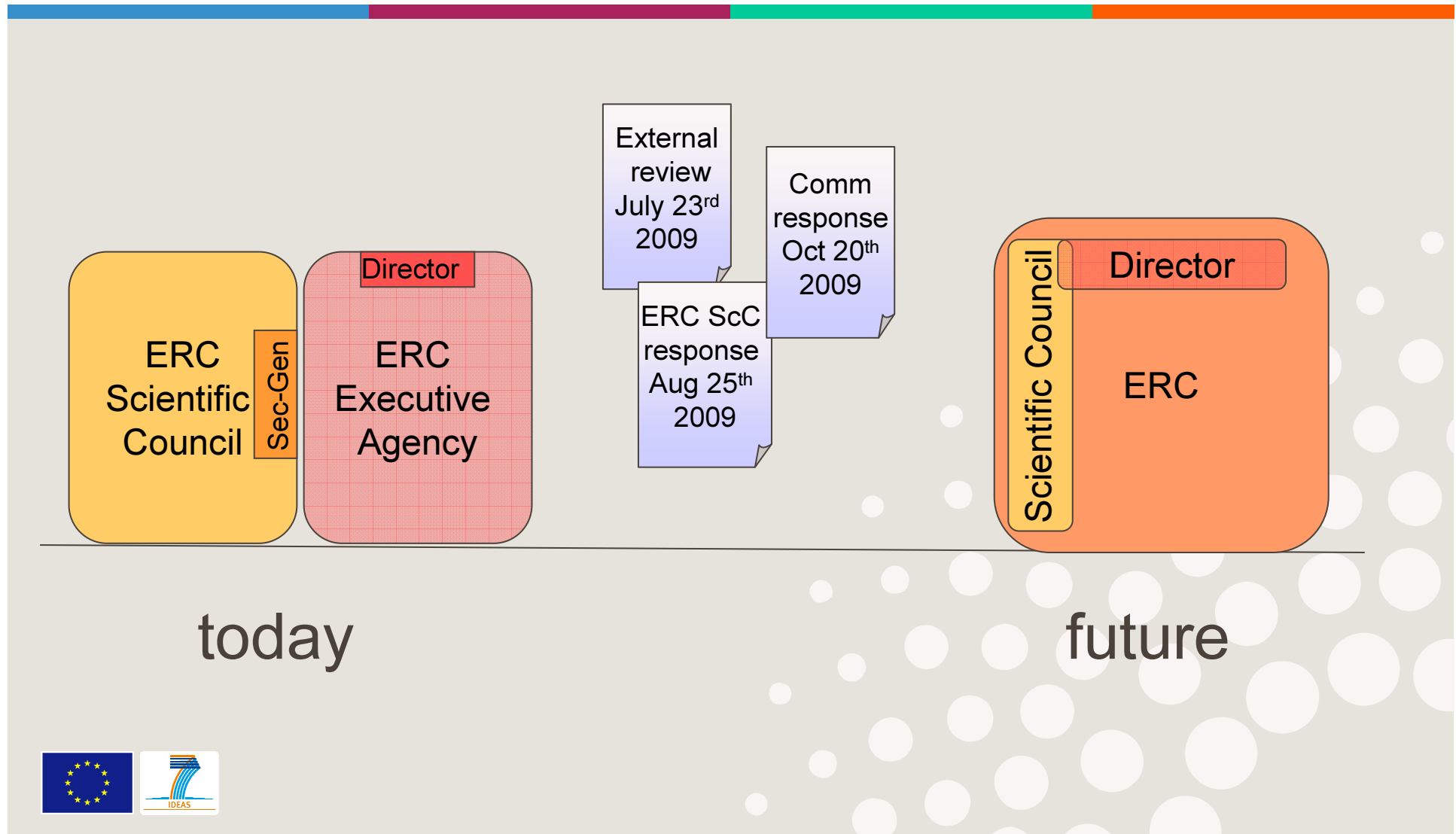


**Prof. Andreu Mas-Colell**  
ERC Secretary-General





# The ERC is a learning organisation!



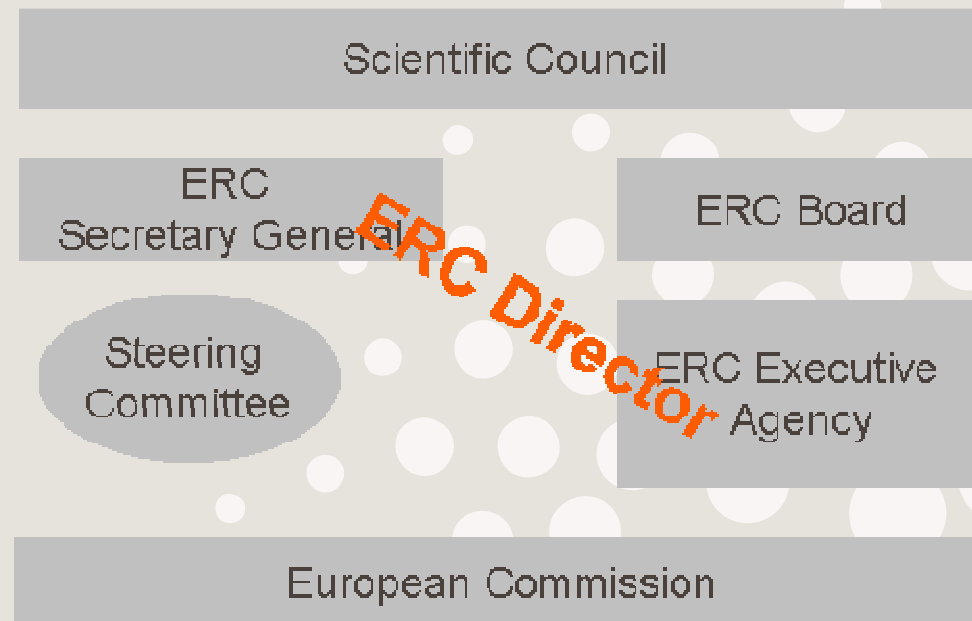
# Ongoing moves!

- Two standing Committees of the ScC
  - Conflict of Interest + Ethical Issues
  - Panels
- Appointment of Expert Evaluators
- Minutes of Scientific Council meetings
- Further development of instruments
- Simplification of administrative procedures



# The position of the director !

- Director Designate of the ERCEA
- Merge of scientific and managerial tasks
- Publication of a vacancy for a Principal Adviser function (Grade AD14)
- Official Journal C 295 A of 04/12/2009
- Closing date: **5 March 2010**.





# See you in 2020!

..... to look back and see that:

- the bottom-up frontier research funded by the ERC will have played a crucial role in new discoveries with large social, environmental and economic impact
- a satisfactory proportion of worldwide technological advances will have happened in Europe

