

# The European Research Council



ERC

The European Science Champion's League

# What is the European Research Council?



A **bottom-up, individual-based, pan-European competition** with **host institution in EU or Associated Countries**.

## Strategy

- Support for **individual** scientists
- **International** peer-review
- **No predetermined subjects** (bottom-up)
- Support for **frontier research** in **all fields of science and humanities**
- Look for **high gain/high risk ambitious projects**

## Legislation

- Scientific governance by an independent 22-member **Scientific Council**, which has **full authority** over **funding** and **evaluation**
- Support by the **ERC Executive Agency** (autonomous)
- Only criterion: **quality of research** aiming for **excellence**



# 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 Grant Schemes



## Starting Grants

starters  
(2-7 years after PhD)  
up to € 1.5 Mio  
for 5 years

## Consolidator Grants

consolidators  
(7-12 years after PhD)  
up to € 2 Mio  
for 5 years

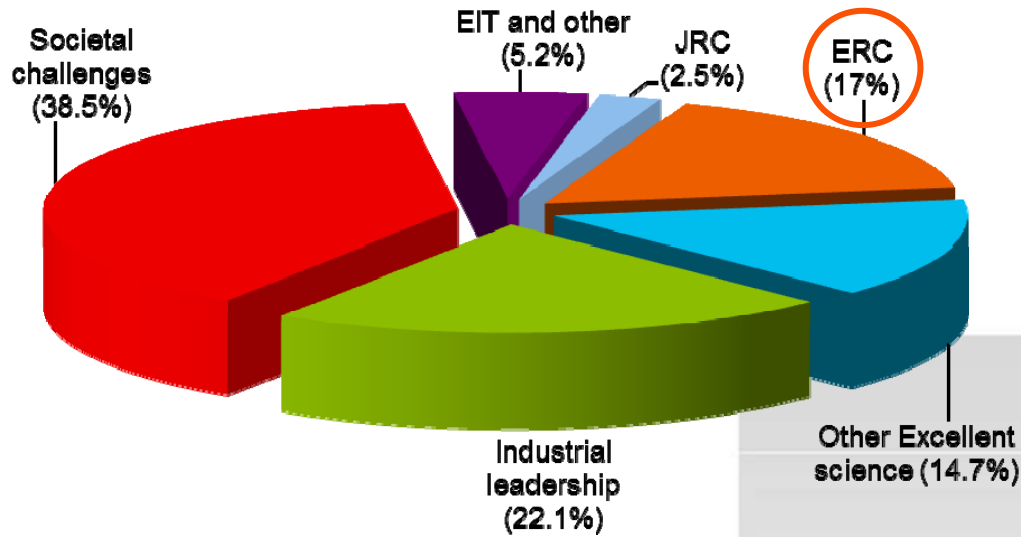
## Advanced Grants

track-record of  
significant research  
achievements in the  
last 10 years  
up to € 2.5 Mio  
for 5 years

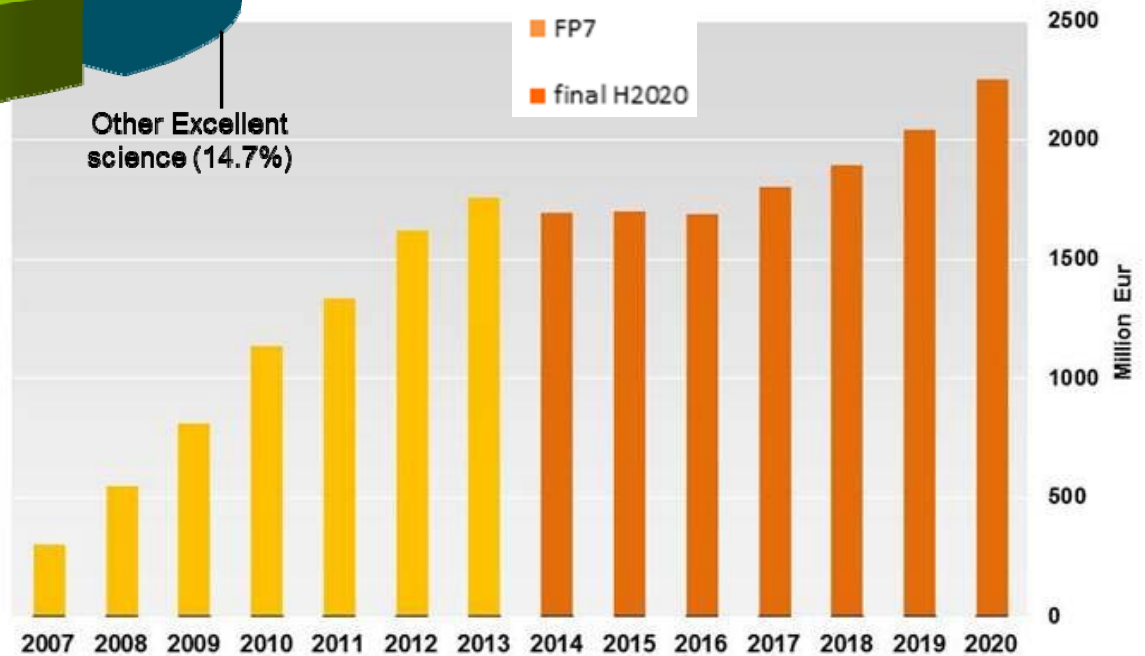
## Proof-of-Concept

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

# Horizon 2020 Budget



## ERC Budget for 2014-2020 € 13.1 billion

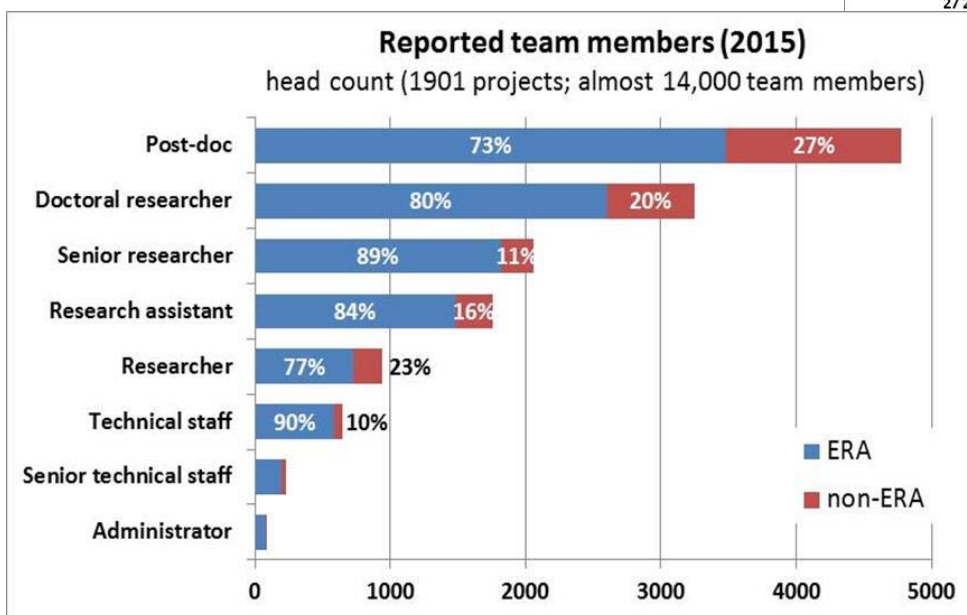
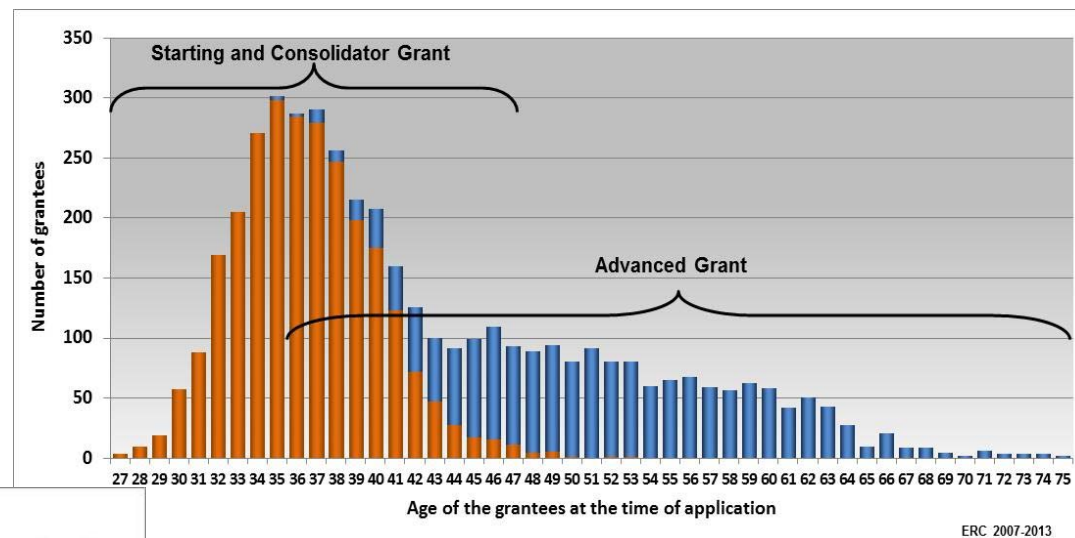


# Priority to Young Scientists



European Commission

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



+ 22 000 PhD and post-doc researchers working in ERC teams.

# Creative Freedom to 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*

# Evaluation Panel Structure (WP2015)

European  
Commission

## 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

## 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

## Social Sciences and Humanities

- SH1 Markets, individuals & institutions
- SH2 The social world, diversity, institutions & values
- SH3 Environment, space & population
- SH4 The Human Mind and its complexity
- SH5 Cultures & cultural production
- SH6 The study of the human past





# ERC achievements



# After 8 Years of Existence... A Success Story



- Highly recognised by the research community
- Over **4 300** top researchers funded during **FP7** (2007-2013)
- **65%** are at an early-career stage
- Other **937** researchers selected in the **2014** calls among which more than **700** young ones
- **66** nationalities represented
- **Highly competitive** (overall success rate tending to 10%)
- Working in almost **600** different institutions in **32** countries
- **50%** of grantees in **50** institutions : *“Excellence attracts excellence”*
- **Benchmarking** effect: impact on national programmes and agencies; national funding for best "runners-up"
- **Efficient and fast grant management**



# ERC Delivers

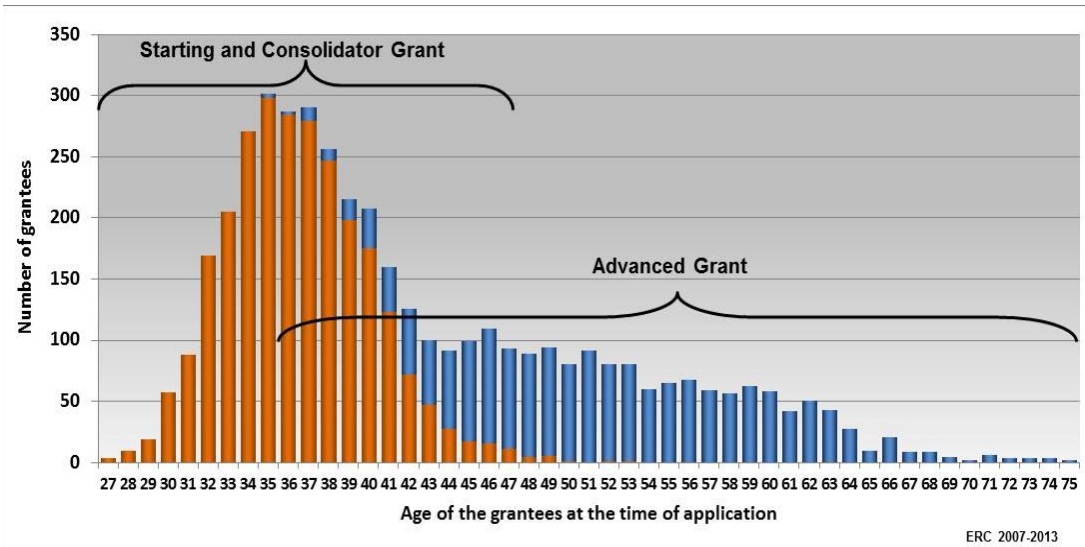


- **30 000** publications acknowledging ERC support by September 2014
- **7%** of these publications were in the **top 1%** most cited in their scientific field and year of publication
- **20%** of completed LS and PE projects reported at least one patent (on average **2** patents reported per project)



# ERC achievements

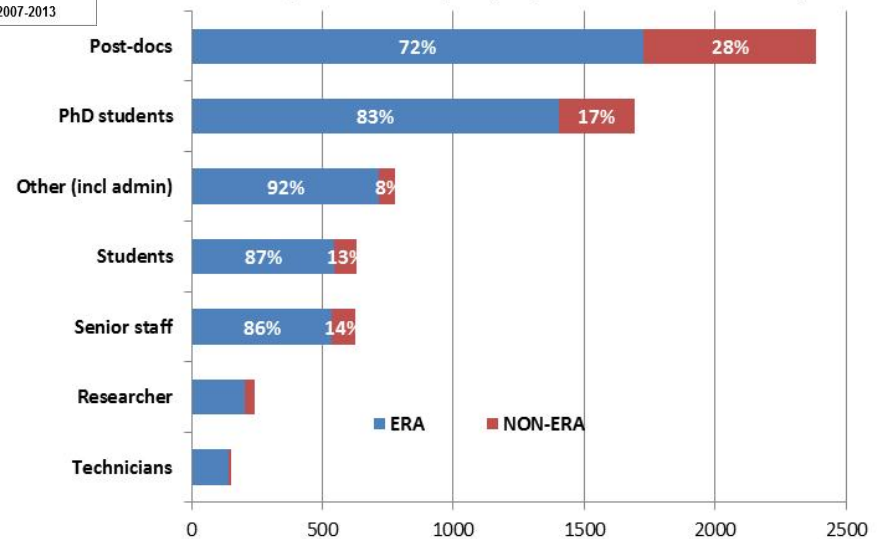
## Priority to Young Scientists



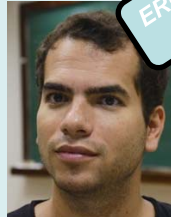
+ 15 000 PhD and post-doc researchers working in ERC teams

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

Reported ERC team members (May 2013)  
\*simple head count (995 projects; 6800 team members)



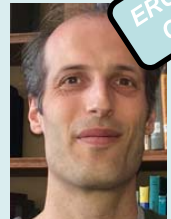
# 2014 Distinctions to ERC Grantees



ERC Grantee  
StG 2010

Artur Avila

Two of the Fields Medals 2014 awarded to researchers based in Europe: **Artur Avila** "for his work in dynamical systems" and to **Martin Hairer** "for his work on stochastic singularities"



ERC Grantee  
CoG 2014

Martin Hairer



ERC Grantee  
AdG 2009

Jean Tirole

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



ERC Grantee  
AdG 2010

May-Britt Moser

The Nobel Prize in Physiology/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".



ERC Grantee  
AdG 2008

ERC Grantee  
AdG 2013

Edvard Moser

The research leading to these discoveries was supported by FP5. ("Spatial Representation in the Entorhinal Cortex" Science 2004)

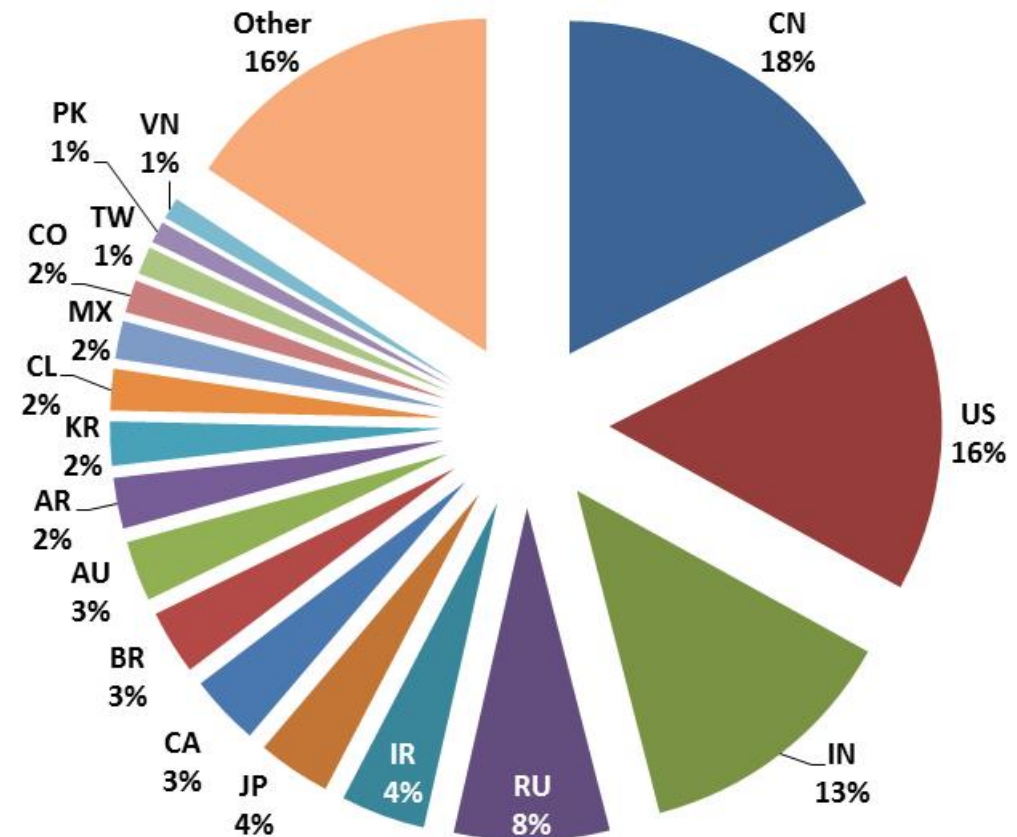
# Attracting Researchers to Europe



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%

+ 6,500 non-ERA team members  
most from  
**China, US, India, and Russia**





# International Participation



# Attracting 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, at least 50%)
- Team members can be based outside Europe
- Grantee can move within Europe with the grant

## Accompanying measures

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

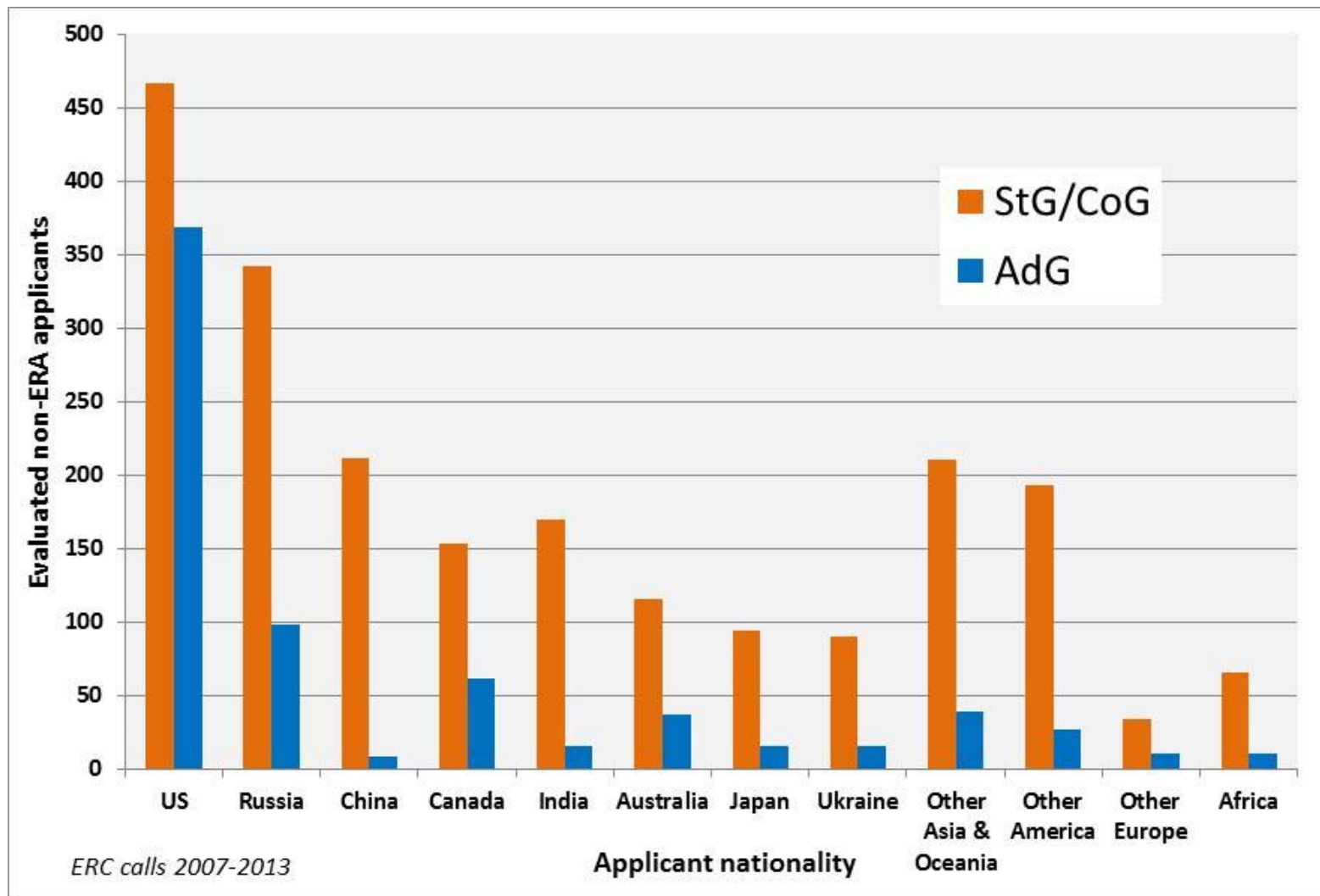




# FP7 ERC 2007-2013 calls

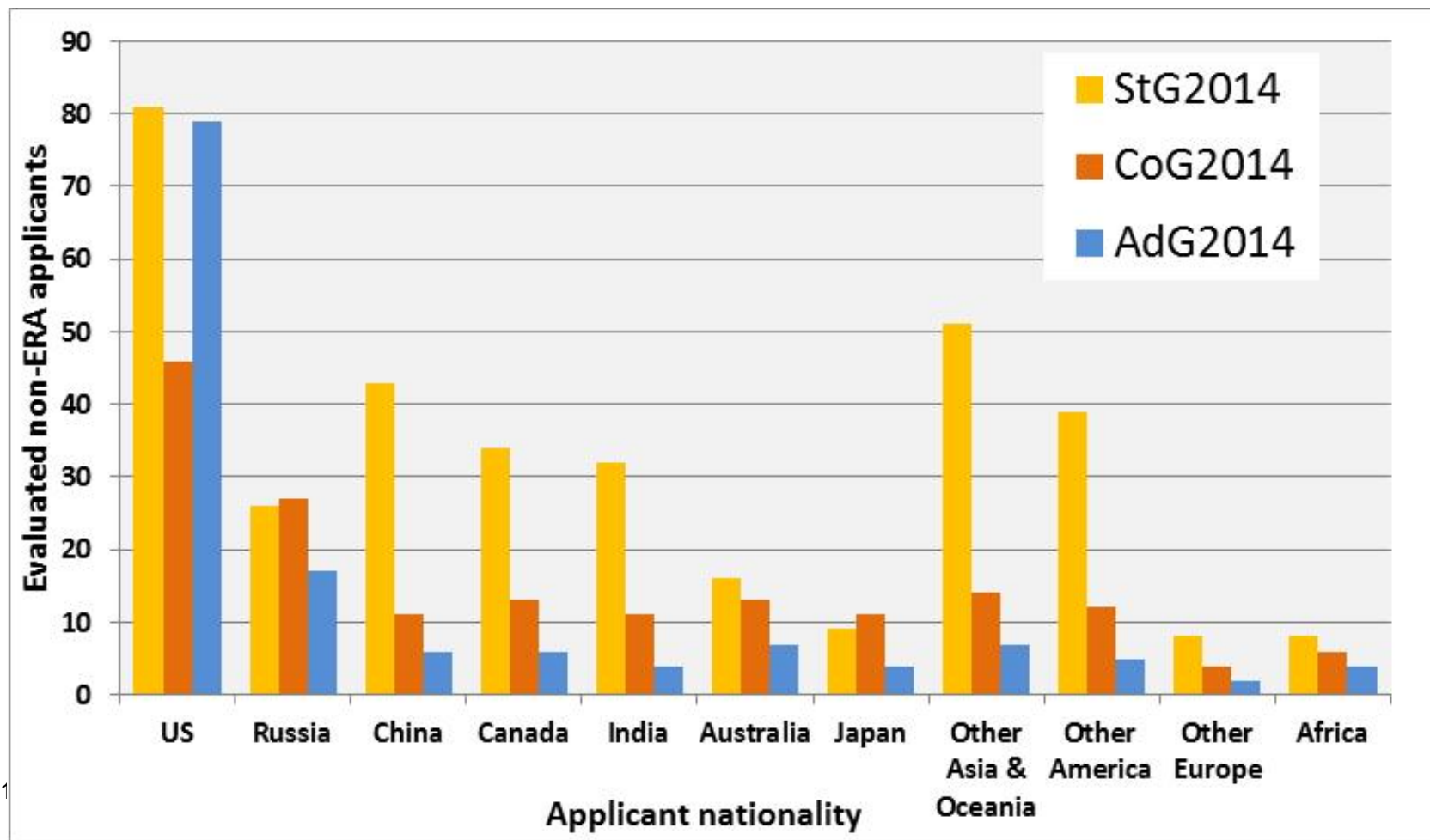


## Evaluated Proposals from non-ERA Nationals



# H2020 ERC 2014 Calls

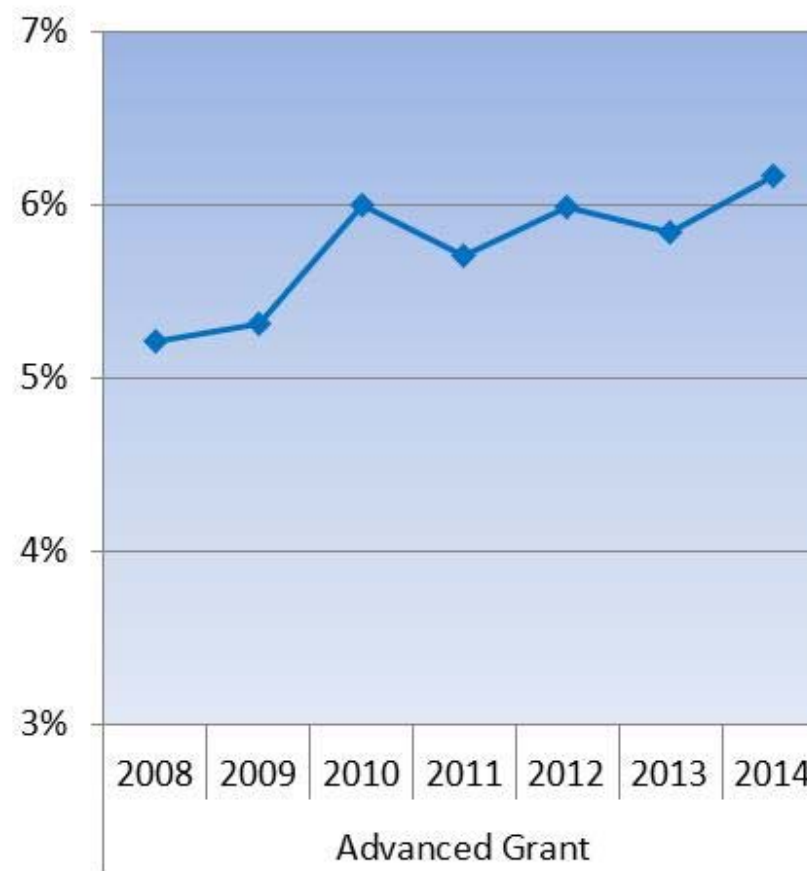
## Evaluated Proposals from non-ERA Nationals



# Participation of non-ERA Nationals in 2014



Proportion of evaluated proposals from non-ERA nationals by call year



# Grantees outside ERA at application



Mainly European researchers moving/returning from the US

Country of residence	International grantees	ERA nationals	Total
Argentina	1		1
Australia	1	4	5
Canada	2	3	5
India	1	1	2
Japan		2	2
Korea		1	1
Lebanon		1	1
Russia	1		1
USA	34	89	123
Total	40	101	141

Note: ERC grantees residing outside the European Research Area at the time of application



# The European Research Council



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