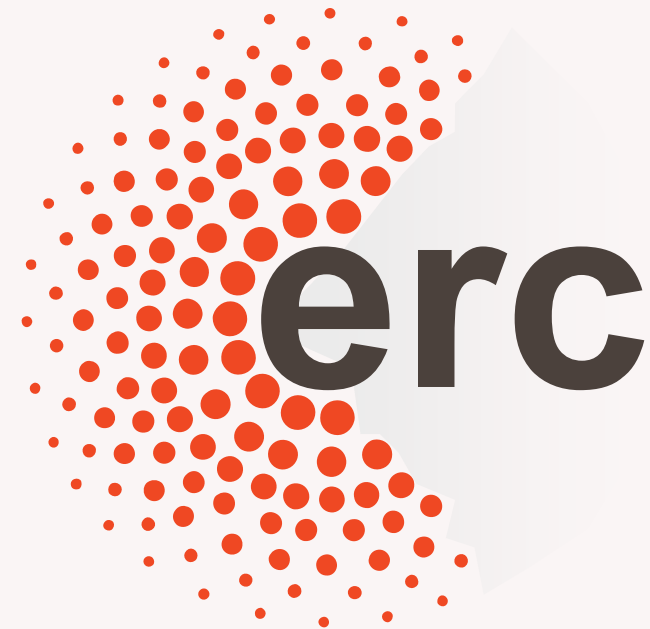


# ERC – European Research Council

## Overview: ERC Starting Grants

Monique SMAIHI  
ERC

Florence, 30 November 2011



# Outline

## Part 1 - ERC

- What is the ERC?
- ERC Starting and Advanced Grant Schemes

## Part 2 – Evaluation

- Submission
- Evaluation process
- What's new & deadlines

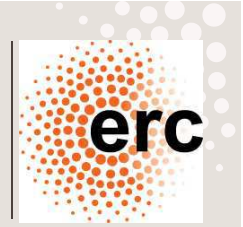
## Part 3 - Data from previous calls

- General
- Italy



# Seventh Framework Programme for Research and Technological Development FP7 (2007-13)

European Research Council



Main instrument of the EU for funding research

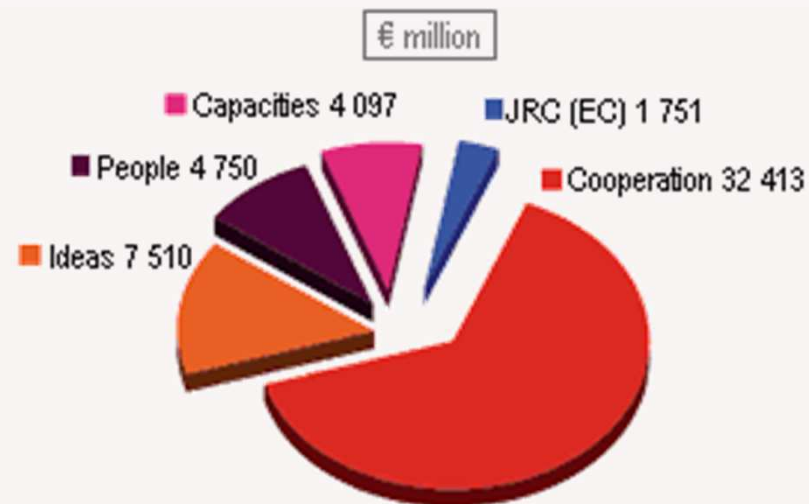
Cooperation – *Collaborative Research*

Ideas – *Frontier Research*

People – *Marie Curie Actions*

Capacities – *Research Capacity*

Total FP7 Budget:  
€ 50.4 billion



# ERC Grant Schemes

## Funding Strategy

- Funds top scientists based all over Europe working on “Frontier Research”
  - ➔ Evaluation only based on “**excellence**”
  - ➔ Bottom up, Principal Investigator approach
  - ➔ Sizeable and flexible grants that make a difference
- **Activities:** 4 grant schemes



# ERC Grant Schemes

## Funding Strategy

- ERC **Starting** Grants (**StG**)
- ERC **Advanced** Grants (**AdG**)
  
- ERC **Synergy** Grants (from 2012)
- ERC **Proof of Concept** Grants (only for ERC grantees!)

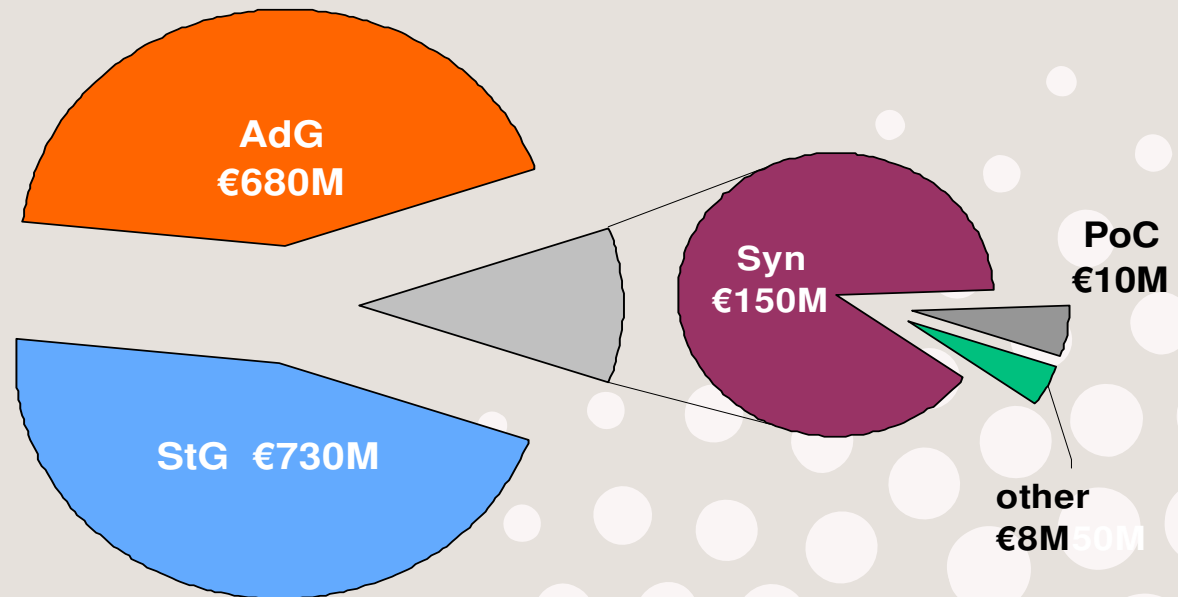


# ERC grant schemes

## 2012 Call budget distribution

2012 total budget: **€1,578.1M**

AdG: Advanced Grants  
StG: Starting Grants  
Syn: ERC Synergy  
PoC: Proof of Concept



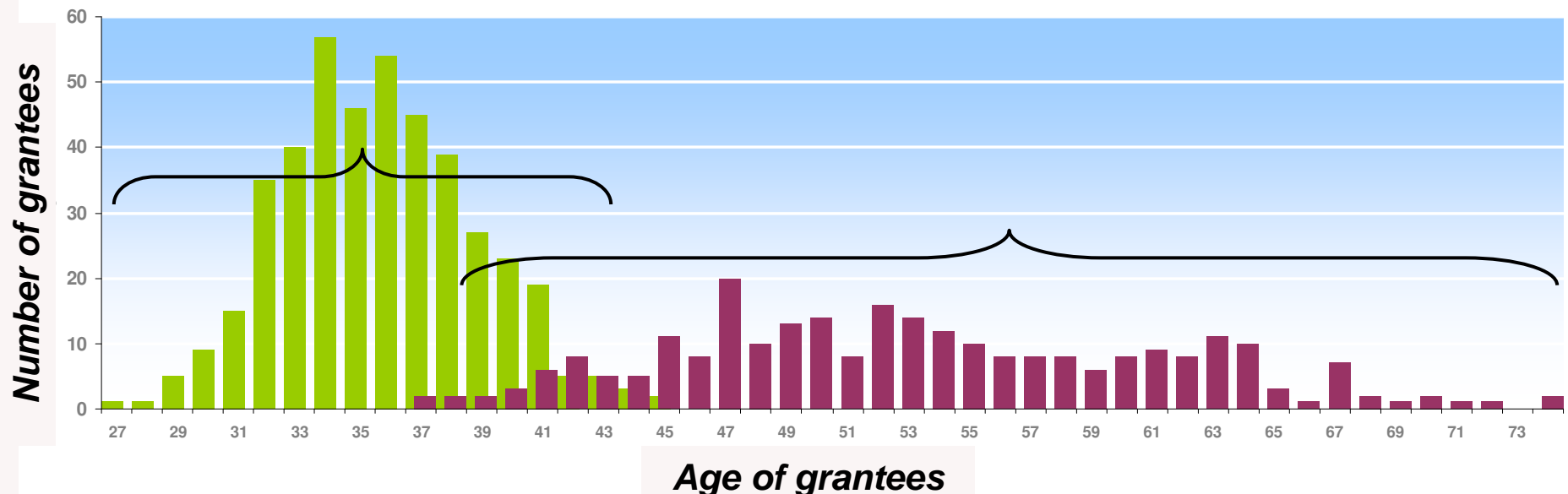
# ERC Granting schemes

## Starting Grants

- Attract/retain **next-generation top scientists**
- Address **funding gap** early in independent career
- Establish or consolidate an independent **research team & program**
- Up to **€ 2.0 Mio**

## Advanced Grants

- Attract/retain **current world-top scientists**
- Stimulate investigator-driven, **breakthrough research**
- Up to **€ 3.5 Mio**



# ERC Starting Grants

## Size of the grant and eligibility



- **Possible requested amount:**

**max. € 1,500,000 for 5 years**

+ € 500,000 if new research activity in EU: moving from third country or purchase of major equipment

- **Eligible costs:** Costs supporting the project (personnel, equipment, consumables, travel, admin)
- **Dedication of min. 50%** of PI's working time to the ERC-funded project and min. 50% of PI's working time to the ERC-funded project
- **First PhD awarded 2-12 years** before call publication date (i.e. 20 July 2011)
  - **starters** (PhD award: **2-7** years)
  - **consolidators** (PhD award: **7-12** years)
  - Extension may be accepted for specific and duly justified reasons (maternity leave,...)





# ERC Advanced Grants (AdG)

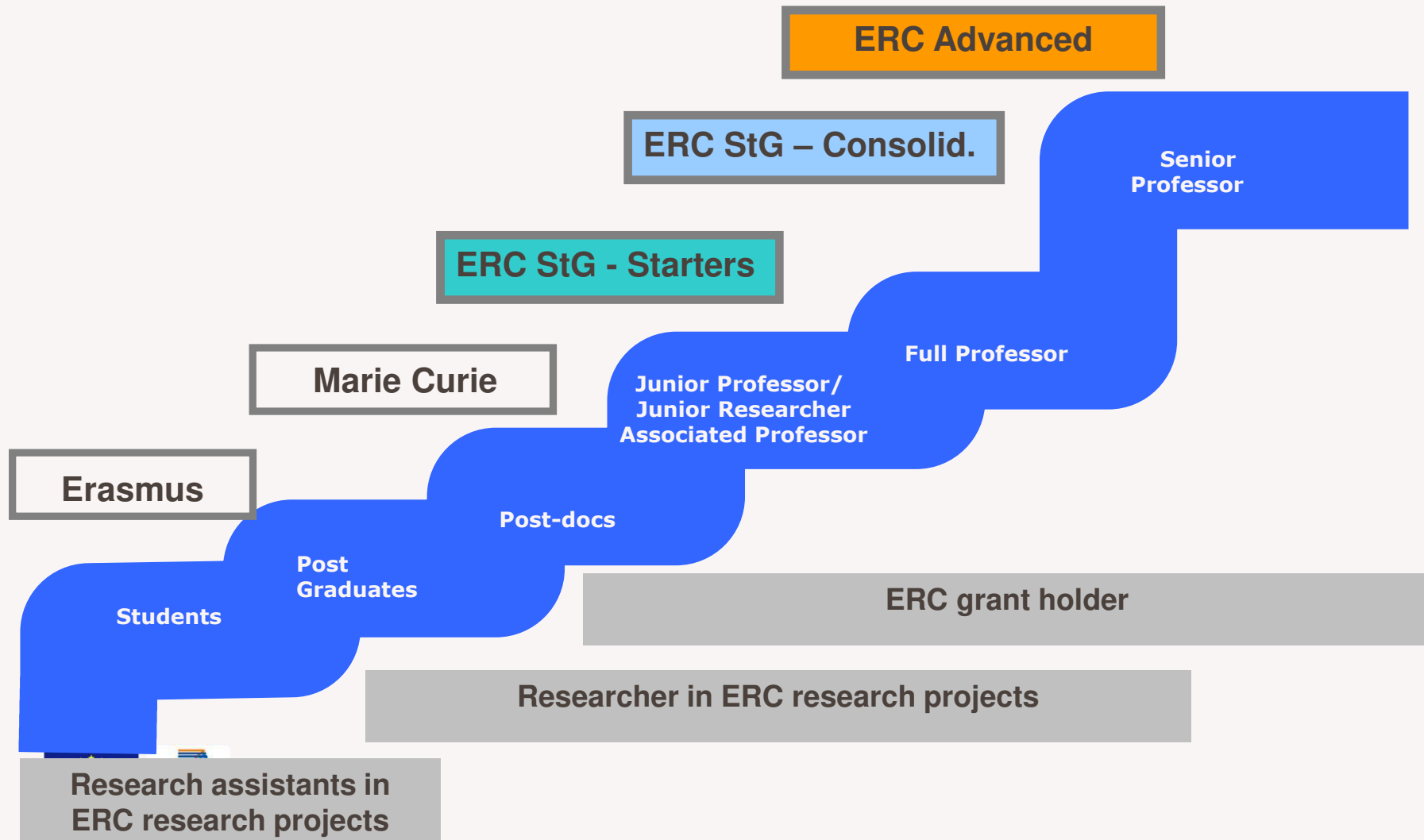
## Size of the grant and eligibility



- Possible requested amount:
  - **max. € 2,500,000 for 5 years**
  - + € 1,000,000 if new research activity in EU by moving from third country to MS or AC or if purchase of major equipment
- Eligible cost: costs supporting the project (personnel, equipment, consumables, travel, admin)
- Dedication of **min. 50%** of PI's working time in a EU MS or AC and **min. 30%** of PI's working time to the ERC-funded project



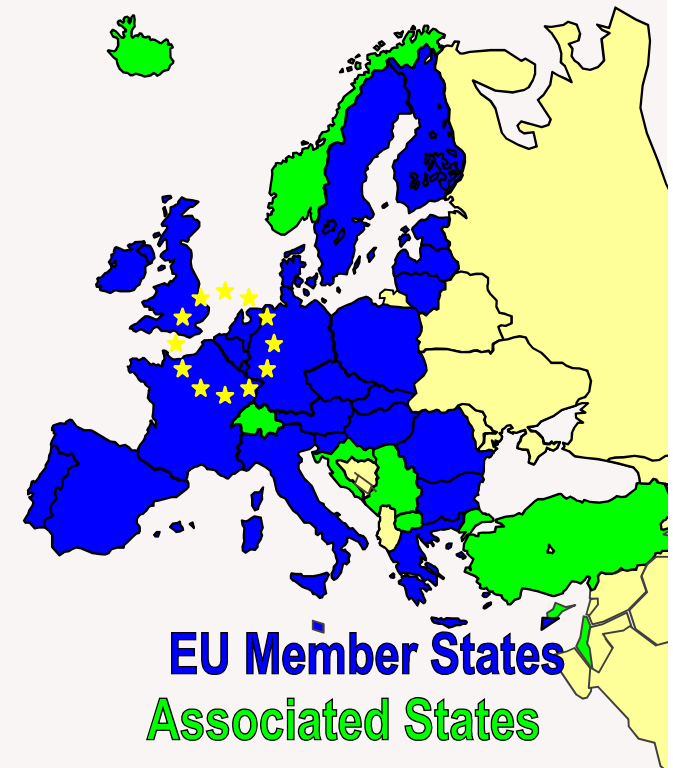
# Researchers Career development and complementary funding schemes



# ERC Grant schemes:

## Who can apply? What type of research – General requirements

- Excellent Researchers (PIs)
  - Any nationality, age or current place of work
- In conjunction with a Host Institution
  - Based in EU or associated countries
- Individual research team
  - Under control of the lead researcher (PI)
- All fields of science and scholarship are eligible
  - Investigator-driven, bottom-up (no thematic priorities)
- Research
  - Innovative breakthrough research: high risk/high gain



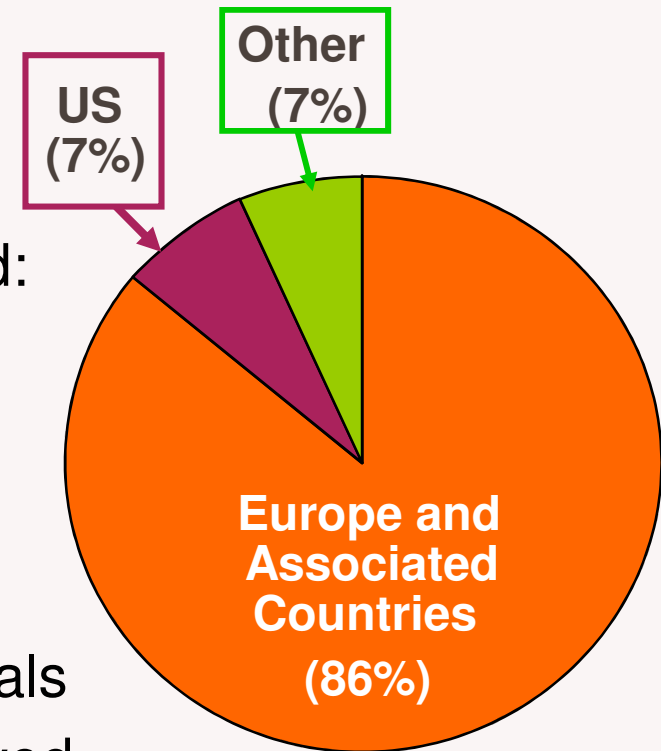
# Who evaluate the proposals ?

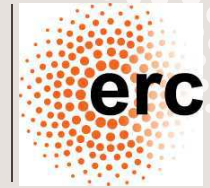
**Panel members:** typically 600 / call

- High-level scientists
- Recruited by ScC from all over the world:  
~14% from outside Europe
- About 12 members plus a chair person

**Referees:** typically 2000 / call

- Evaluate only a small number of proposals
- Similar to normal practise in peer-reviewed journals





# ERC review panels

## International peer-reviewing

- Peer review is carried out through 25 panels
- Panels have about 12 members plus a chair person and are coordinated by an ERC Research officer
- Panels may be assisted by external reviewers
- Panels are grouped along the main scientific domains covering all fields of science, engineering and knowledge



# ERC Grant Schemes (StG & AdG)

## Panel structure : 3 domains and 25 panels

Each panel :  
Panel Chair and  
10-15 Panel Members

### 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 Institutions, values, beliefs and behaviour
- SH3 Environment & society
- SH4 The Human Mind and its complexity
- SH5 Cultures & cultural production
- SH6 The study of the human past

### Physical Sciences & Engineering

- PE1 Mathematical foundations
- 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



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- General
- Italy

# 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
  - ➔ Part B: Scientific proposal itself

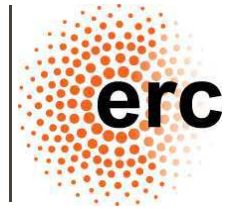


# Submission is to Panels

- Applicant submits to a *Targeted Panel* (of PI choice)
  - ➔ Can flag one “*Alternative Review Panel*”
- **Applicant chooses his/her panel**, that panel is “responsible” and takes ownership for the evaluation of that proposals
- Only switch proposals between panels in case of clear mistake on part of applicant
- Switching proposals between domains (deadlines) not possible
- But: In case cross-panel or cross-domain proposals, evaluation by members of other panels possible

# Proposal structure: Part A

- **Part A:** “Administrative forms” containing
  - ➔ A1 Information on PI
    - Request for change of stream (StG only)
  - ➔ A2 Information on Host Institution
  - ➔ A3 Budget breakdown by year and partner
    - Not detailed



# Proposal Structure: Part B

- **Section 1 = “The PI”**
  - Scientific Leadership profile (1 page)
  - CV (including “funding ID”) (2 page)
  - 10-year track record (or “early achievements” for StG) (2 page)
  - Extended synopsis (5 page)
- **Section 2 = Full Scientific proposal** (15 page)
- Ethical Review information (where appropriate)
- Separate additional document:
  - ➔ Host Institution Support Letter (compulsory StG + AdG)
  - ➔ Copy of Ph.D. (compulsory StG)
  - ➔ Documents to prove extension to 10 year eligibility window (StG)



# ERC Grant Schemes

## Evaluation criteria

- **Criterion 1: Quality of Principal Investigator**
- **Criterion 2: Quality of Research Project**

Numerical **score** for each criteria

- 4 (A) : outstanding
- 3 (A or B) : excellent
- 2 (B) : very good
- 1 (C) : non-competitive

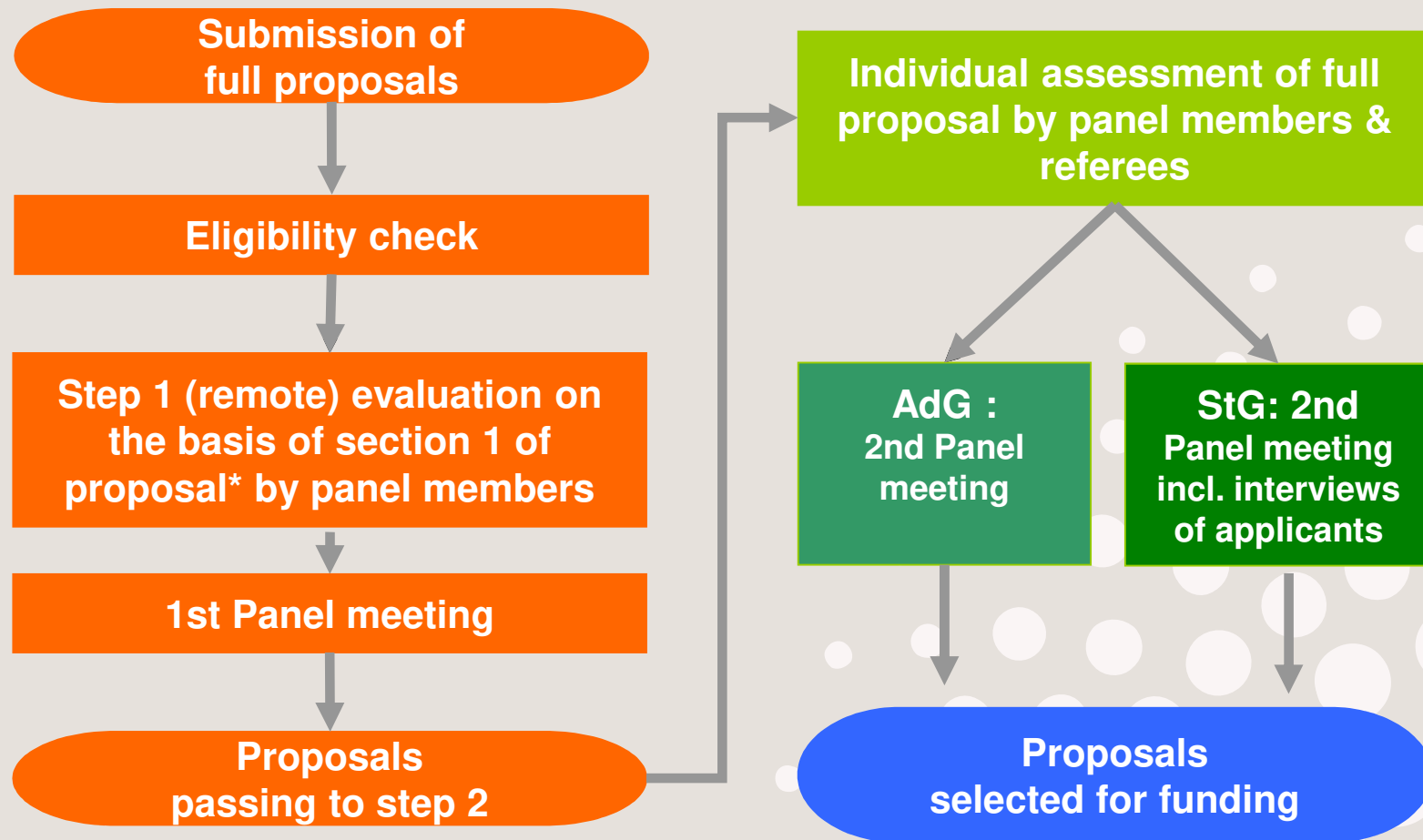
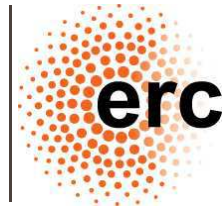
Referees and panel members **evaluate and score** each criteria  
→ **ranking** of the projects

# Two step evaluation

- **Step 1**
  - Section 1 of Part B evaluated
  - Evaluated by Panel Members + possibly “alternate” panel members where necessary
- **Step 2**
  - Sections B1 + B2 evaluated
  - Evaluated by Panel Members + Remote Referees
  - StG: Step 2 includes interviews in all cases

# ERC Grants: how does it operate?

## Submission, evaluation and selection



# Remote part of evaluation

- Remote part of evaluation takes part completely electronically
- **Step 1:** proposals assigned to ~4 PMs
- **Step 2:** proposals also sent to specialized remote experts (to be determined at Step 1 panel meeting)



# What are panels looking for in an interview? (StG only)

- Maturity, leadership and vision
- Proposal is the applicant's (not his/her supervisor's)
- Answer technical questions and uncertainties / feasibility
- Mastery of detail



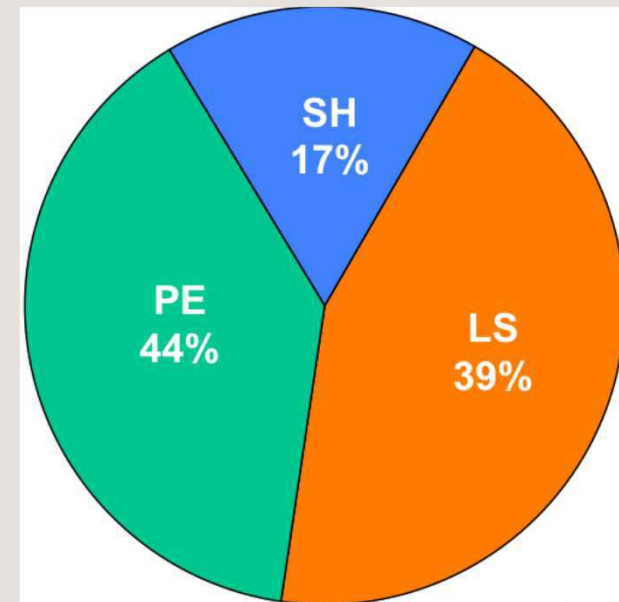


# Call budget distribution for 2012 calls

- Starting Grant : ~ €730m
- Advanced Grant: ~ €680m

## Indicative call budget

- Life Sciences – LS
- Physical Sciences & Engineering – PE
- Social Sciences & Humanities – SH



- ➔ Within each domain, **budget is broken down according to total funding requested per panel** (equal chance in each panel)

# New “scoring”

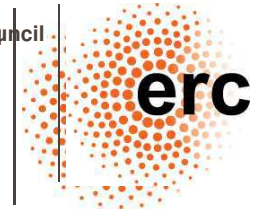
Move away from “absolute marks” and towards A, B and C + approximate rank-in-panel information to give applicants a better idea of how close (or how far) they got to being funded

## In Step 1:

- **A** is of sufficient quality to pass to Step 2 of the evaluation;
- **B** is of high quality but not sufficient to pass to Step 2 of the evaluation;
- **C** is not of sufficient quality to pass to Step 2 of the evaluation.

## In Step 2:

- **A** fully meets the ERC's excellence criterion and is recommended for funding if sufficient funds are available
- **B** meets some but not all elements of the ERC's excellence criterion and will not be funded



# Timetable of StG and AdG calls

ERC open calls	Publication of call	Size of Grants	Submission Deadline(s)
<b>Starting Grants</b> ERC-2012-StG	20 July 2011	Max. €1,500,000 for five years (+ €500,000*)	<b>PE: 12 Oct. 2011</b> <b>LS: 09 Nov. 2011</b> <b>SH: 24 Nov. 2011</b>
<b>Advanced Grants</b> ERC-2012-AdG	16 Nov. 2011	Max. €2,500,000 for five years (+ €1000,000*)	<b>PE: 16 Feb. 2012</b> <b>LS: 14 Mar. 2012</b> <b>SH 11 Apr. 2012</b>

\* Extra funds for PIs to establish themselves in EU or assoc. country:

- 'start-up' costs for PIs moving from abroad
- Purchase of major equipment

Panels decide whether requests are justified





# Summary

- Funds top scientists all over Europe working on “Frontier Research”
  - ➔ Evaluation only based on “excellence”
  - ➔ Bottom up, Principal Investigator approach
  - ➔ Sizeable grants that make a difference
- Has the ambition/objective of having a “structuring effect” on European research
- Continued growth in FP7: future in FP8 under discussion





# Essential documents

<http://erc.europa.eu> => funding and grants

- ERC Work Programme **2012**
- ERC Guide for Applicants – **StG, AdG, PoC, SyG**
- ERC Rules on submission, evaluation, selection and award procedures
- ERC Grant agreement (and guidance)
- ERC Guide for Grant Holders
- ERC Guide for Peer Reviewers



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# ERC Competitions 2007-2011

	Total number of applications received	of which		
		Evaluated*	Funded	success rates**
Starting Grant 2007	9.167	8.794	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	478	11,9
<b>Starting Grant</b>	<b>18.623</b>	<b>17.958</b>	<b>1.458</b>	<b>10,3</b>
Advanced Grant 2008	2.167	2.043	282	13,8
Advanced Grant 2009	1.587	1.526	245	16,1
Advanced Grant 2010	2.009	1.967	271	13,8
Advanced Grant 2011***	2.284	2.246		
<b>Advanced Grant</b>	<b>8.047</b>	<b>7.782</b>	<b>798</b>	<b>14,5</b>

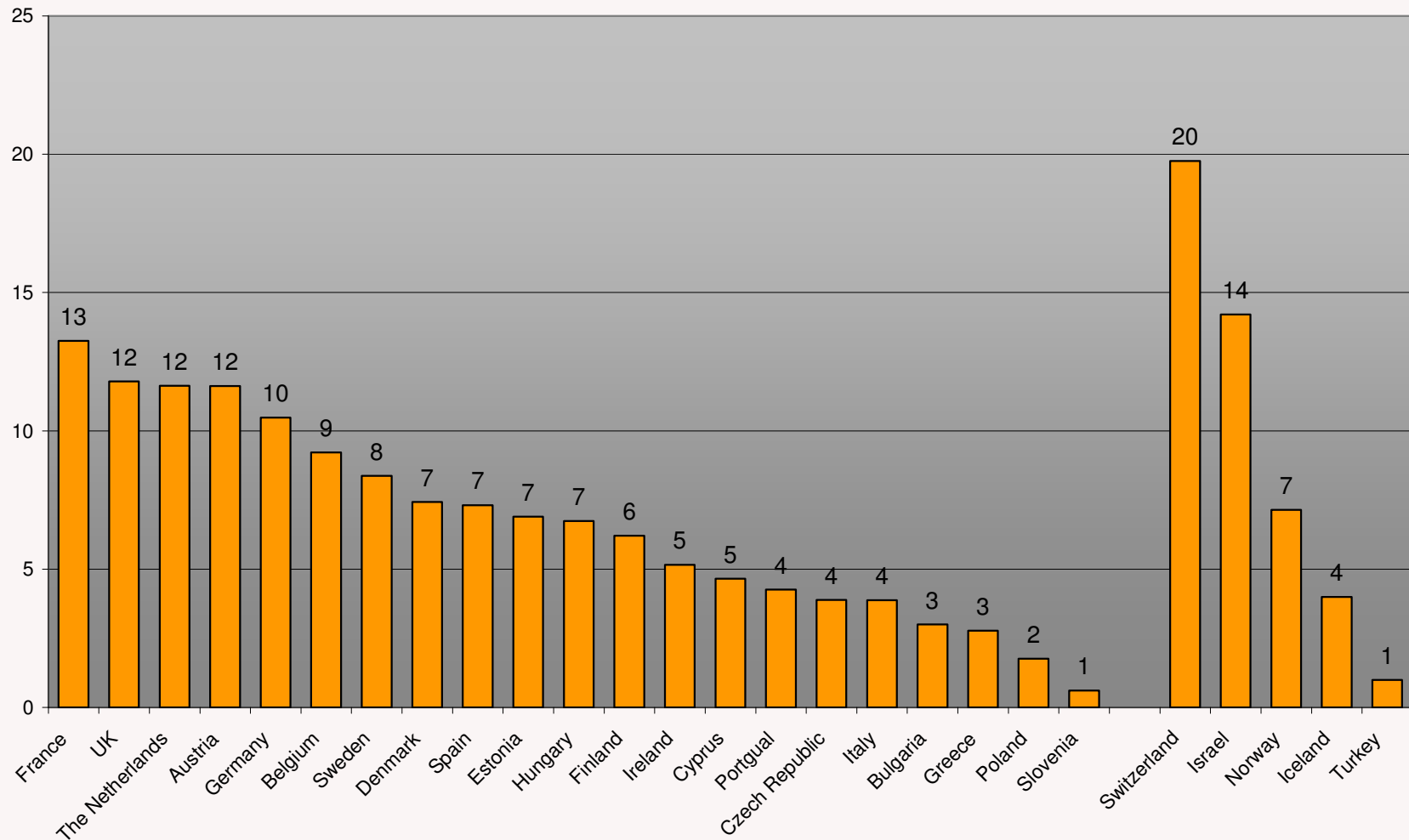
\* withdrawn and ineligible proposals not taken into account;

\*\* percentage of funded proposals in relation to evaluated proposals

\*\*\* evaluation not yet completed



# Success rates per country

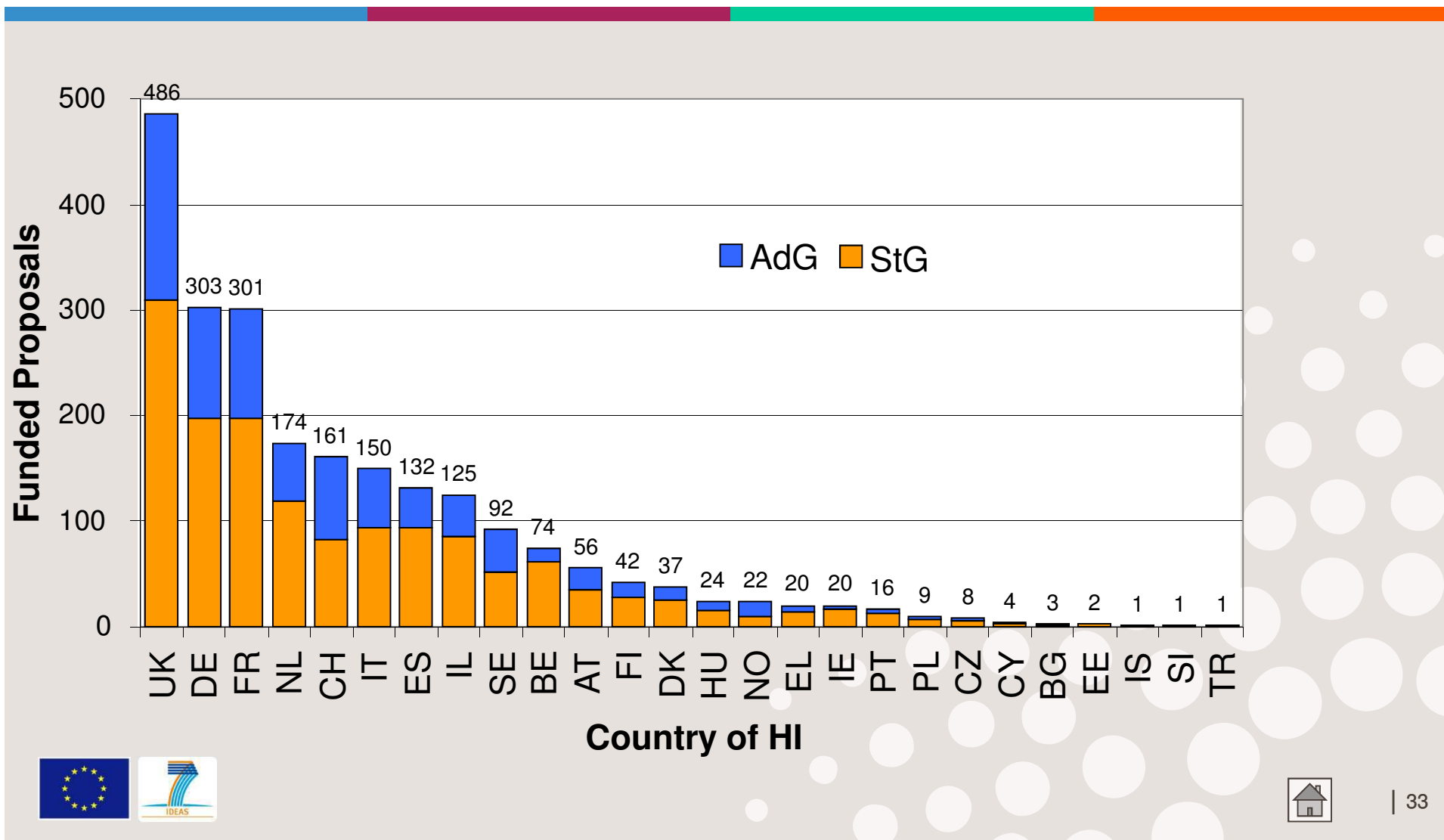




# ERC Starting grant 2007-2011

## ERC Advanced grant 2008-2010

### Over 2000 ERC grantees

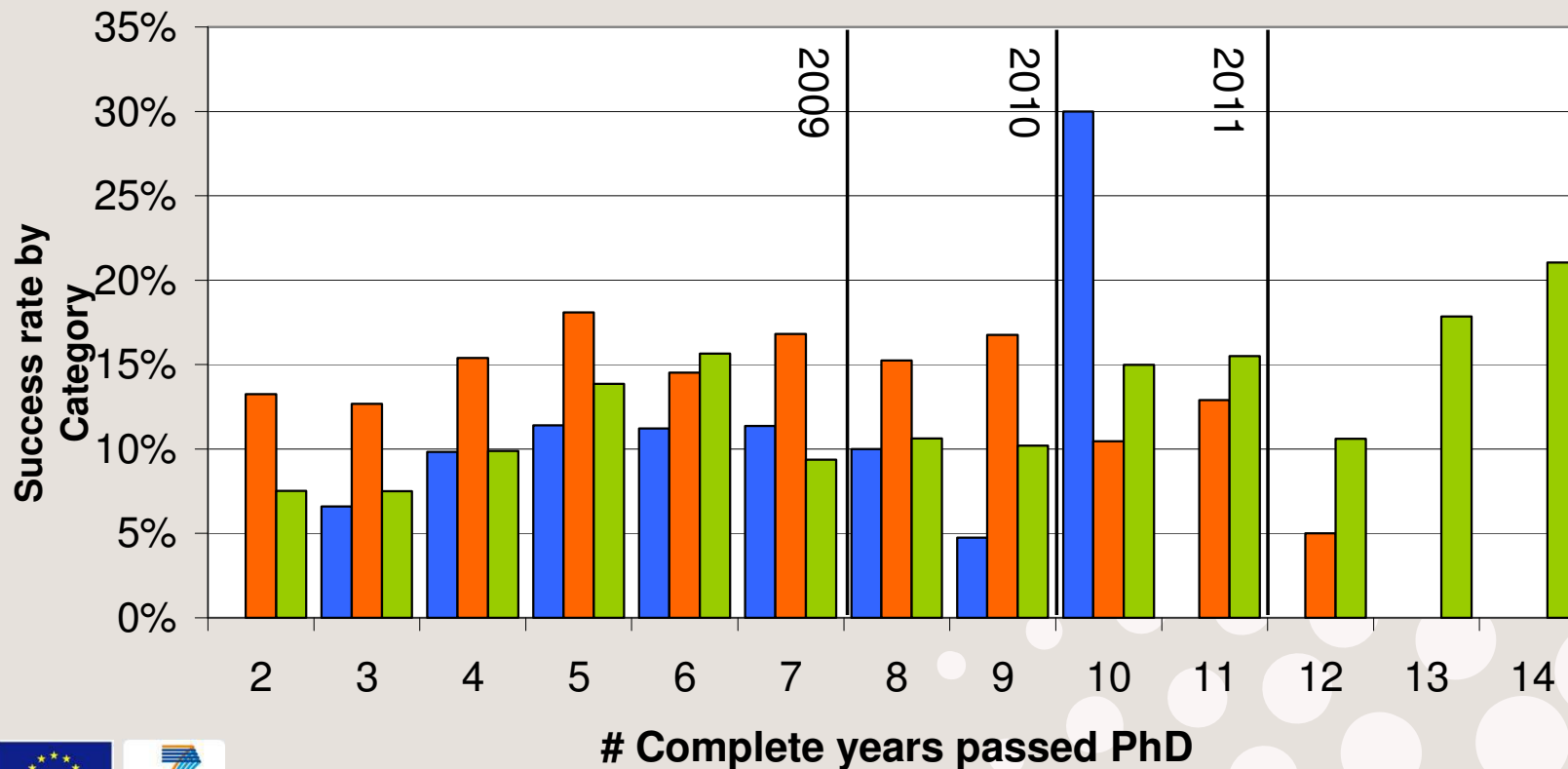




# ERC STG 2009-2011 Success Rates

## ERC STG 2009-2011 Success rates by Years passed PhD with eligibility limits

- success rate 2009
- success rate 2010
- success rate 2011

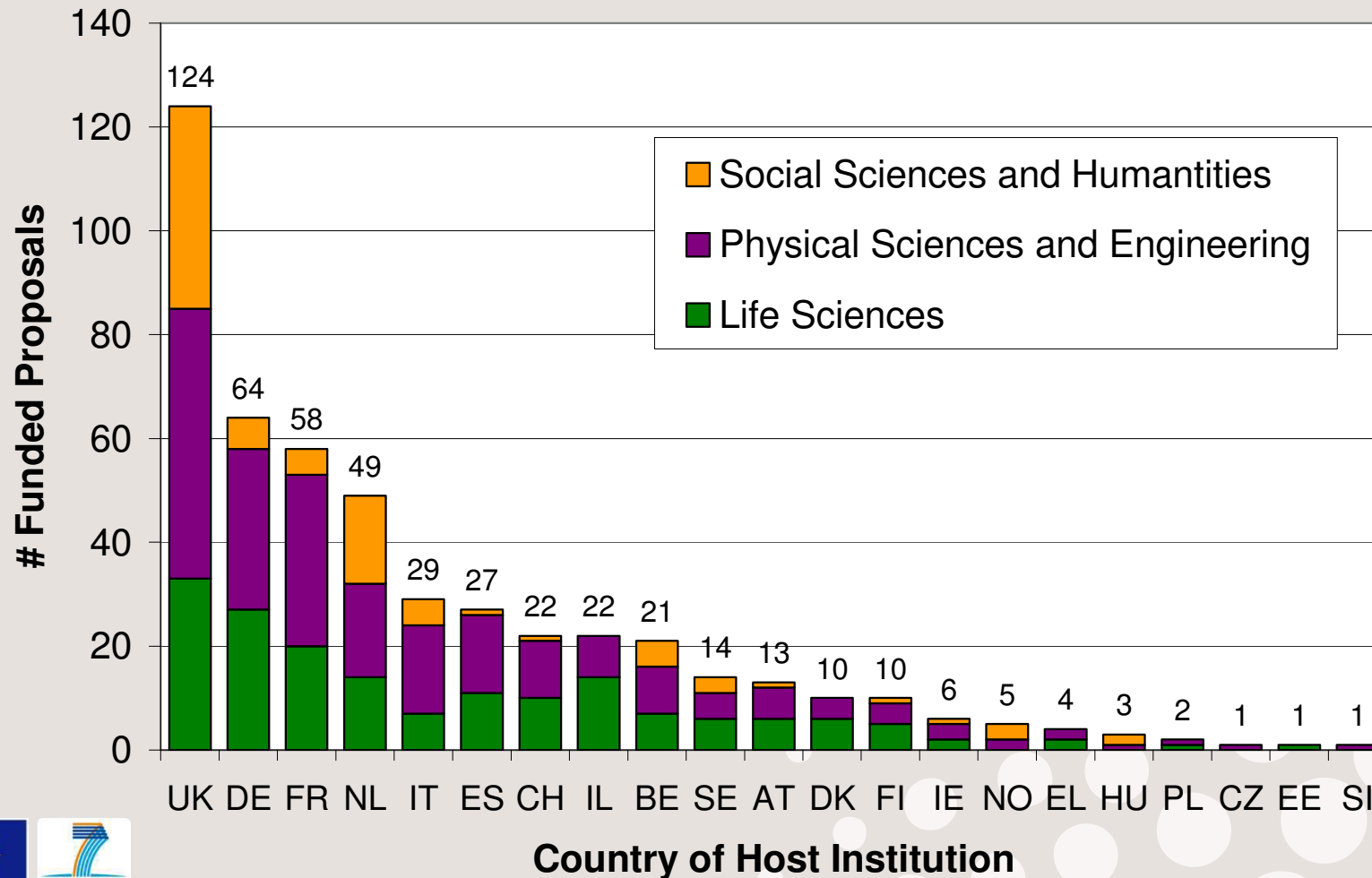




# ERC Starting Grant: 2011 Call

## Grantees by country of host Institution, 21 countries

Source: 486 proposals



# ERC Starting Grant: 2011 Call

## Grantees by nationality – 38 nationalities

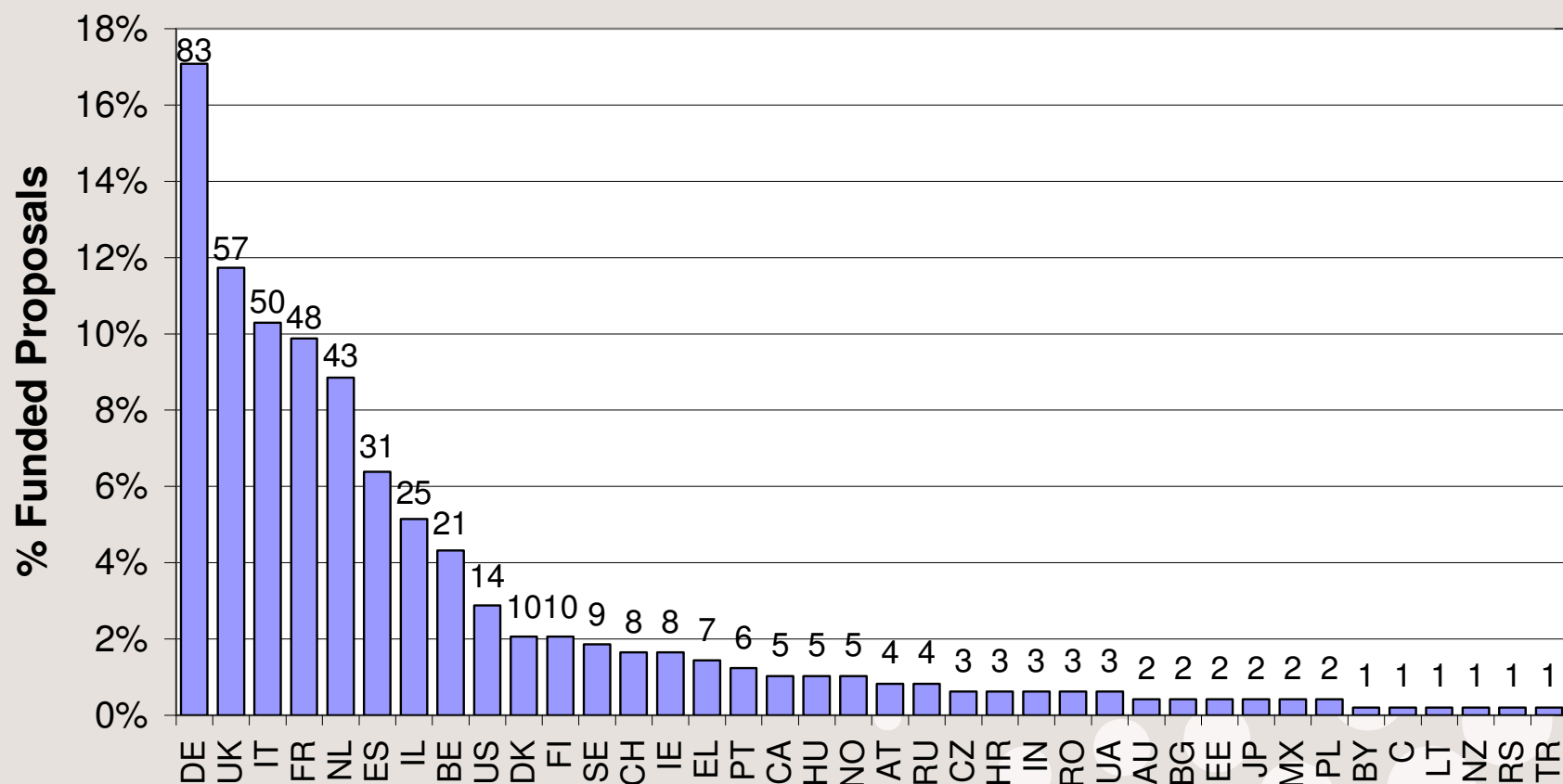
European Research Council



Source: 486 proposals

### ERC STG 2011 Results Of Call

#### % Funded proposals, and # proposals, by Applicant Nationality



90

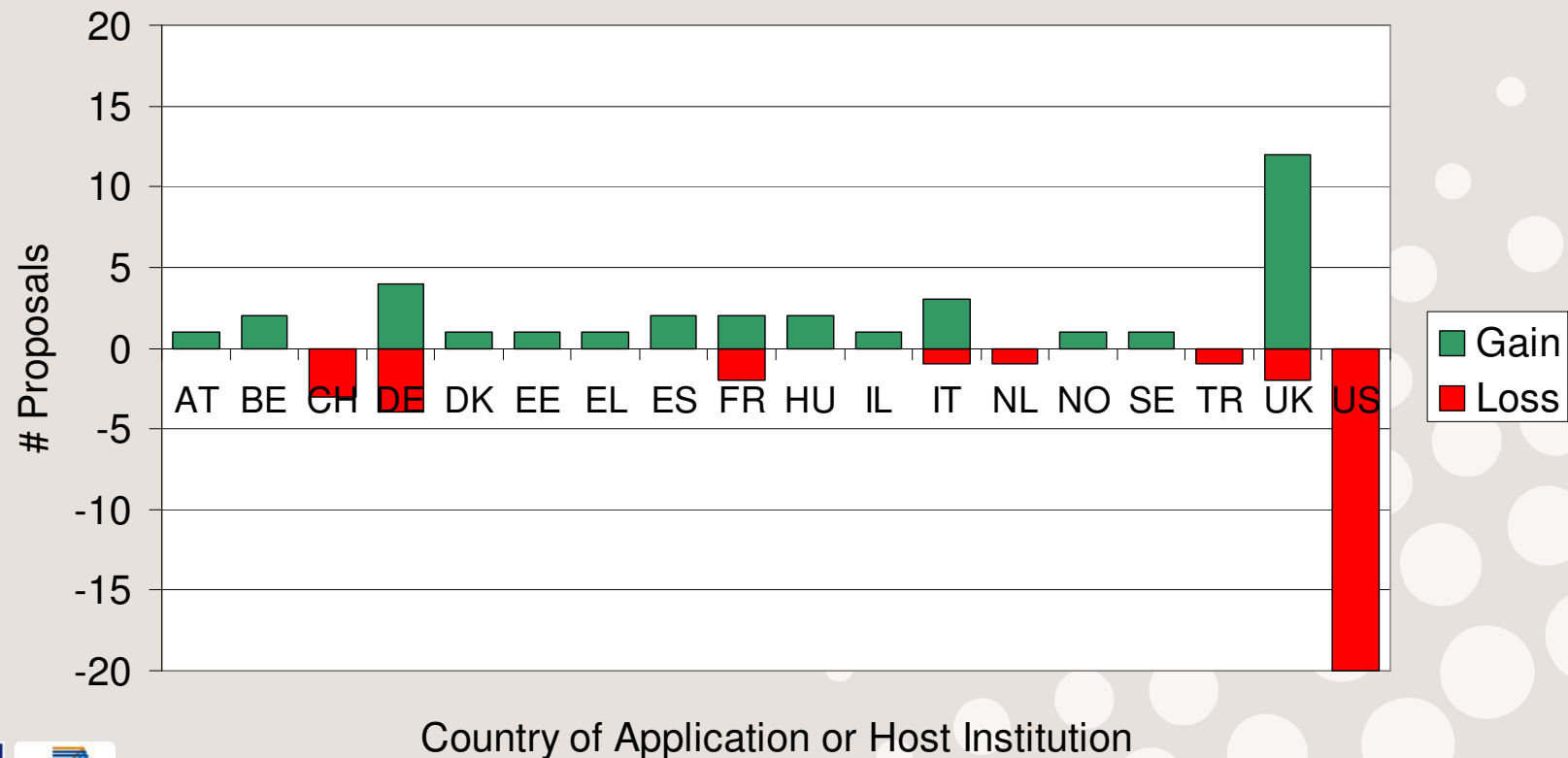


Applicant Nationality



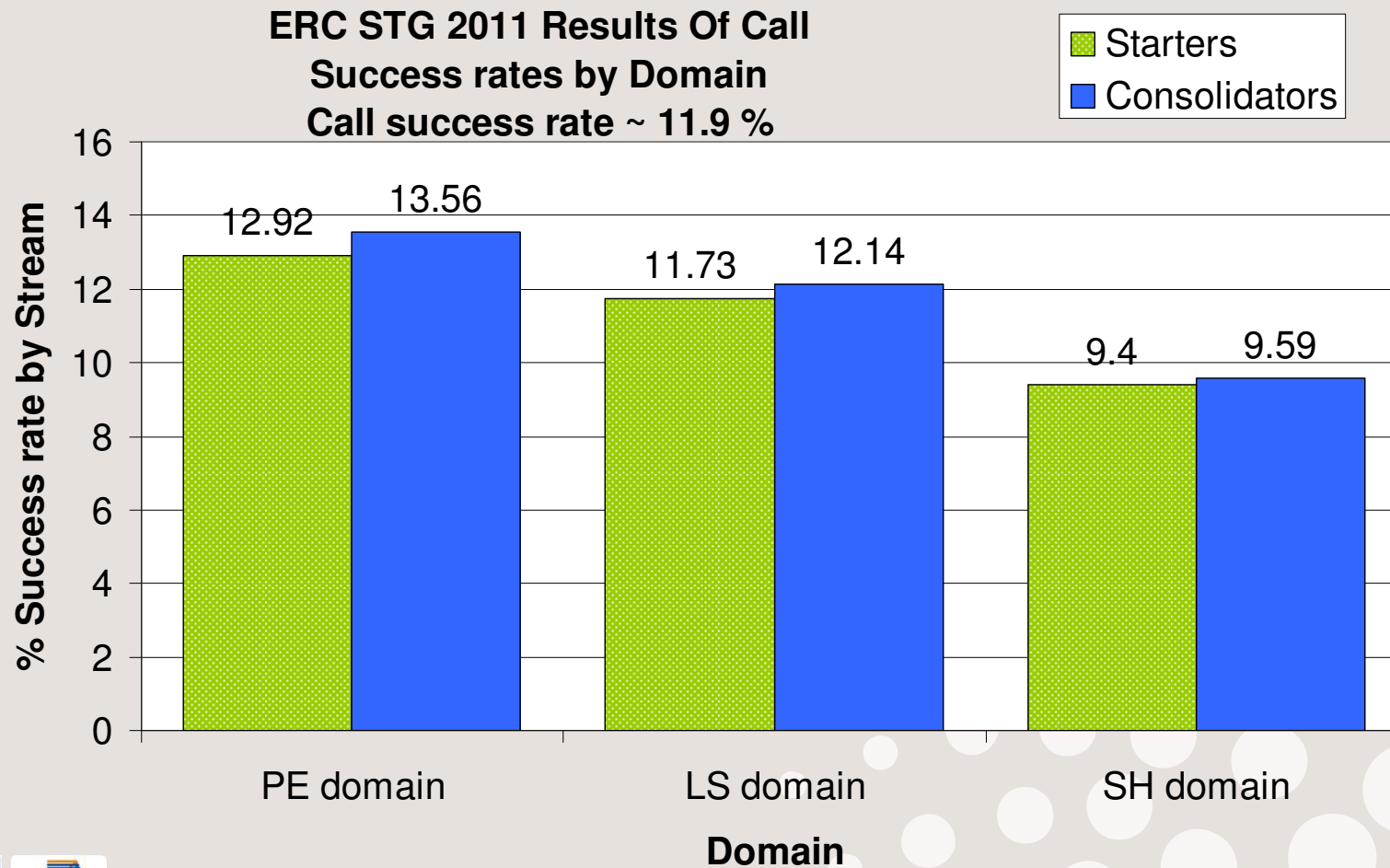
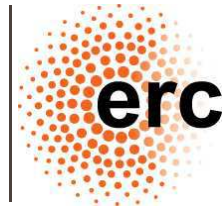
# ERC Starting Grant: 2011 Call - Mobility

## ERC STG 2011 Results Of Call # Main list Proposals Changing Country (total 34)

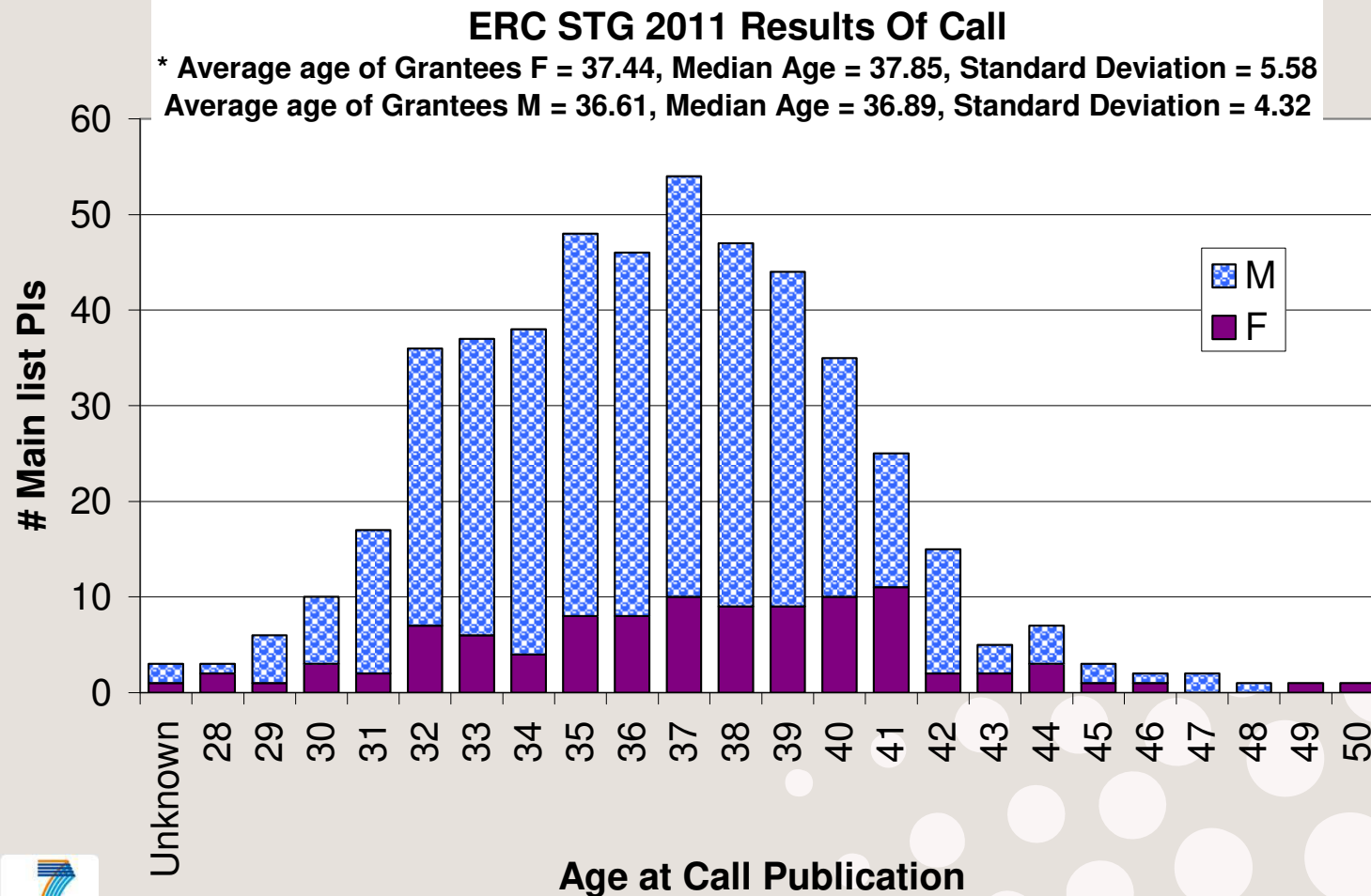


# ERC STG 2011

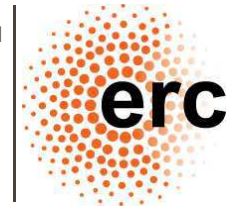
## Success Rates by Domain



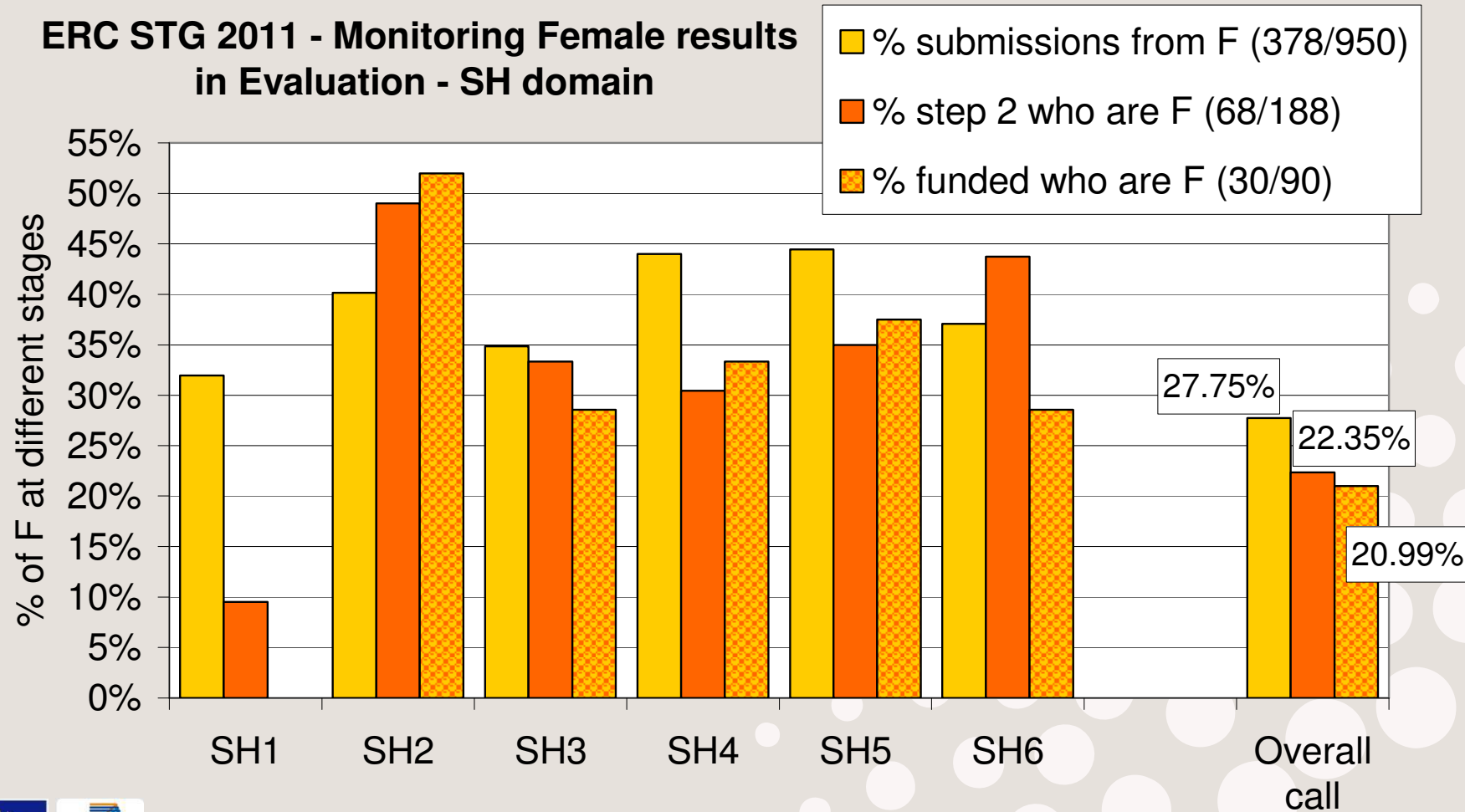
# StG 2011 – Age of Grantees



# SH – Female Applicants vs. Female Interviewees vs. Female Grantees



**ERC STG 2011 - Monitoring Female results in Evaluation - SH domain**

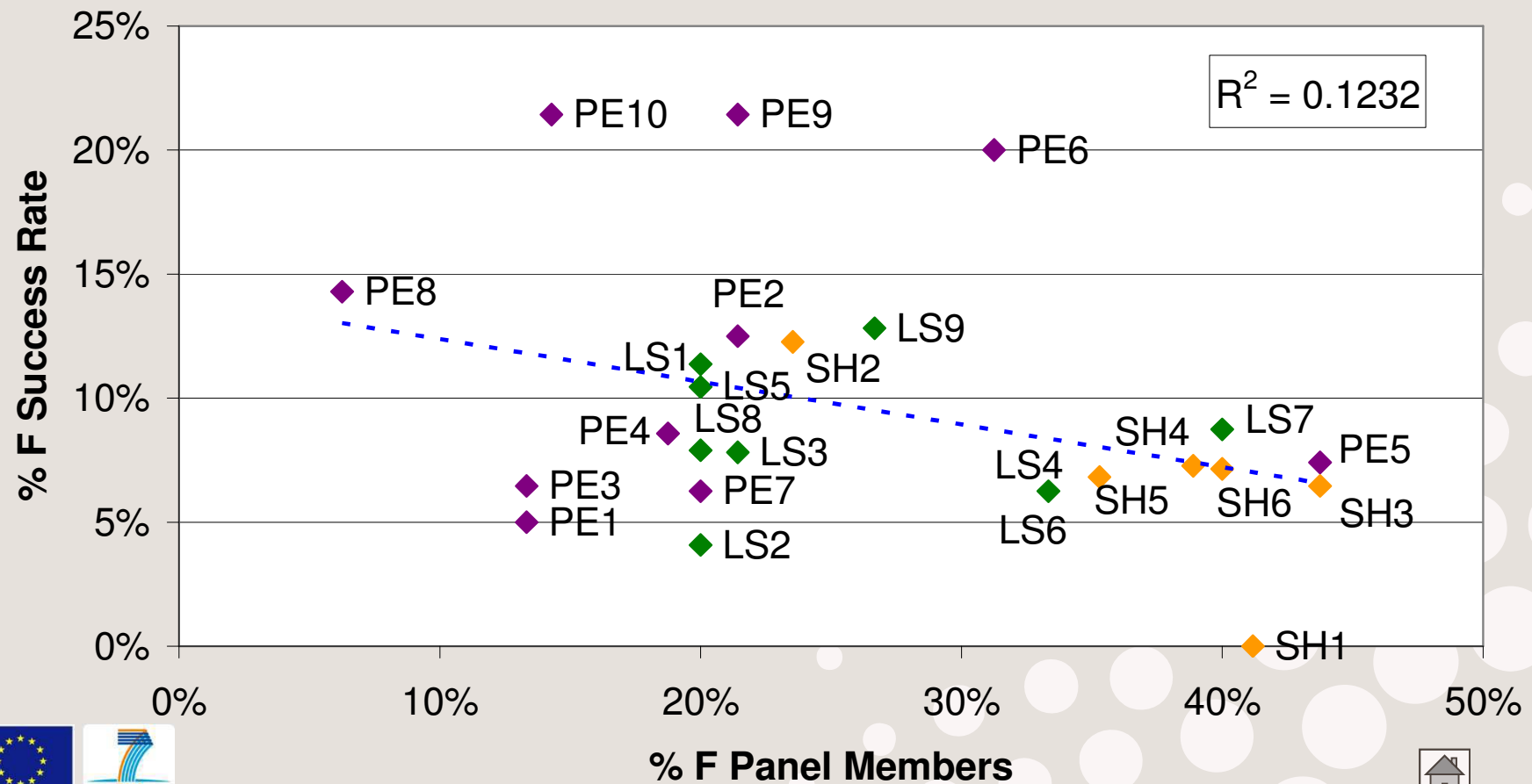






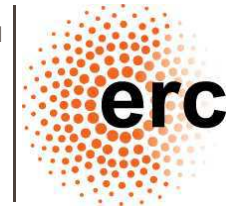
# STG 2011 F Panel Members Vs F Success rate

## ERC STG 2011 % F Panel Members vs F Success rate

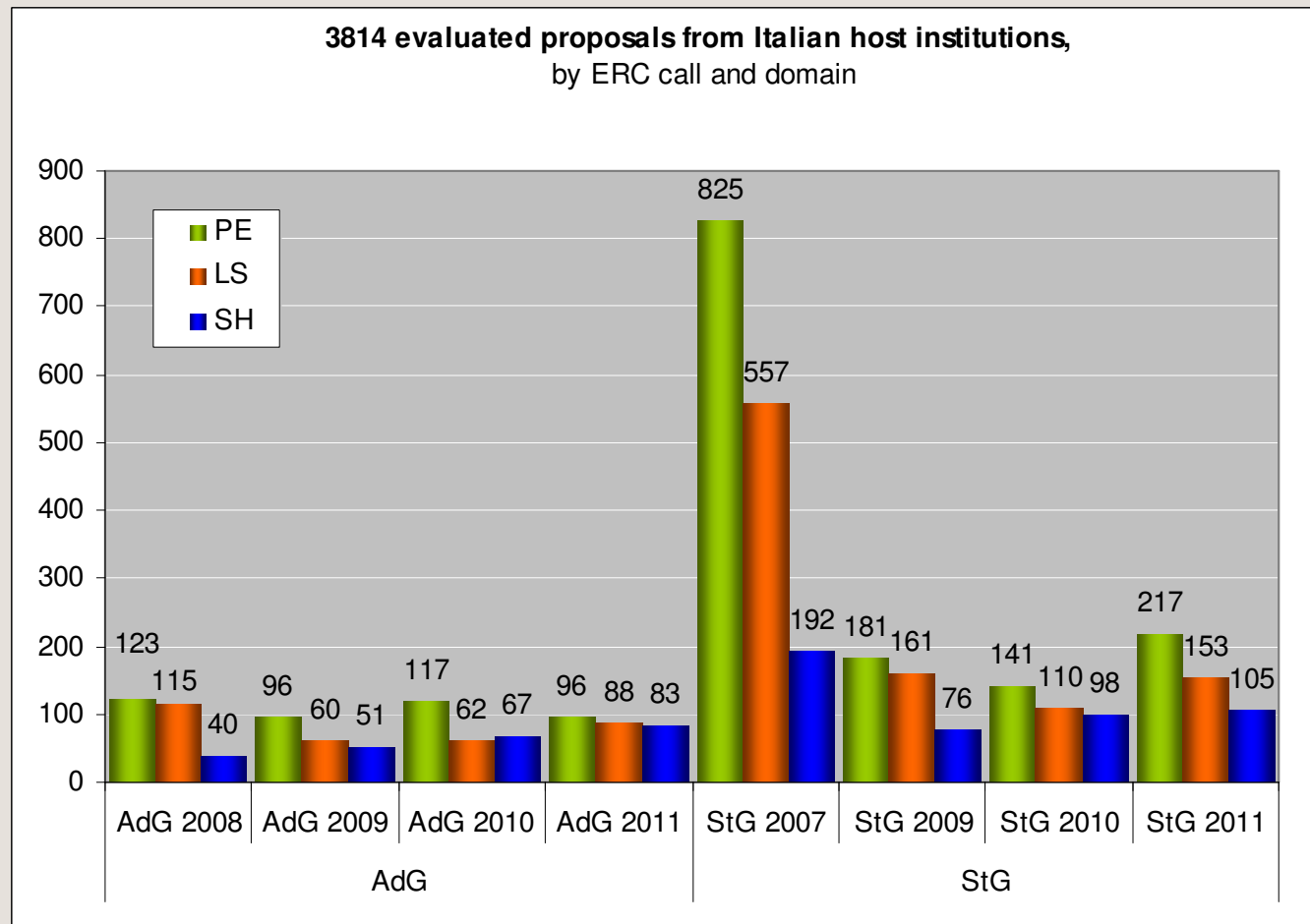


# ITALY in ERC Competitions





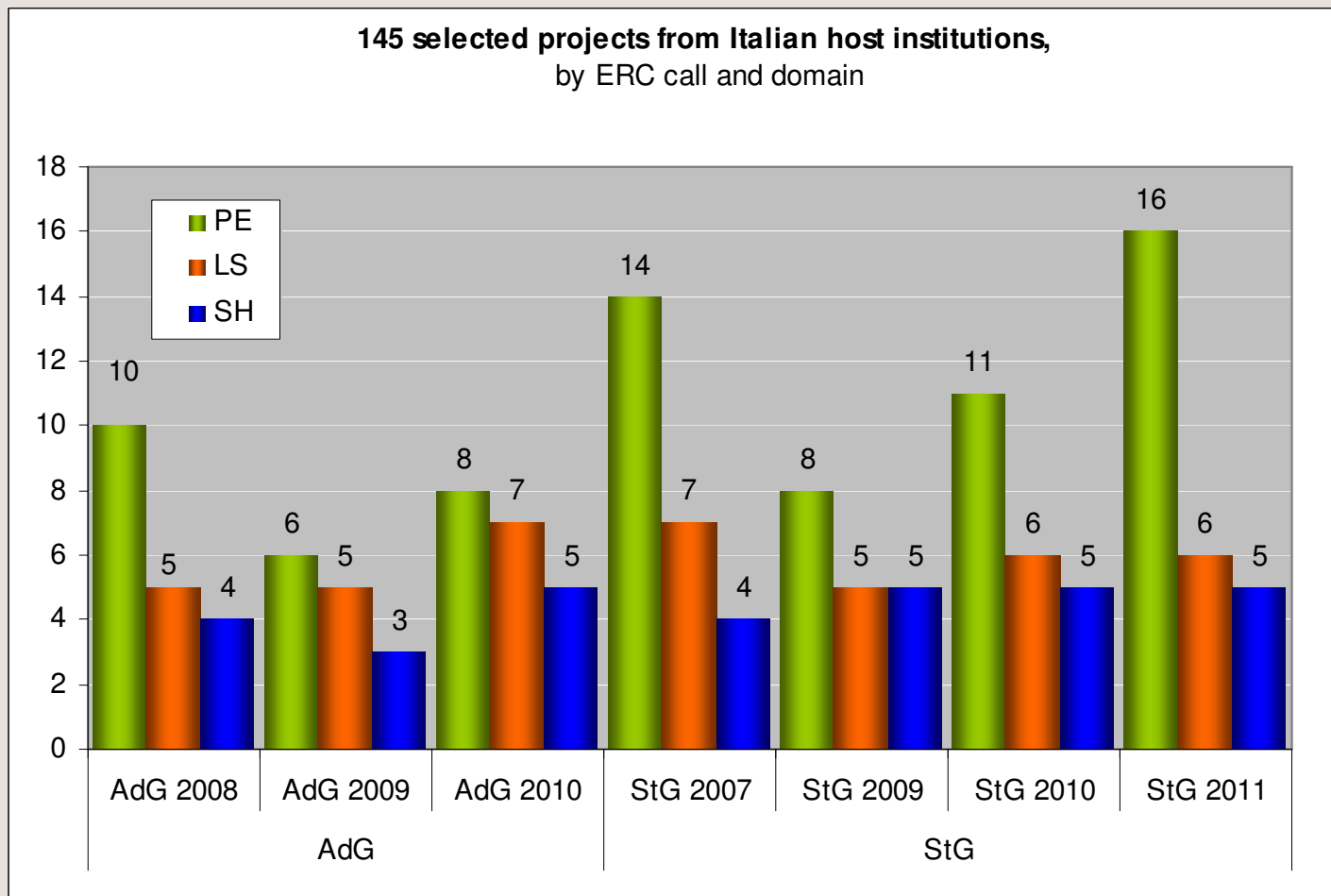
# Proposals by Host Institutions from Italy by call and domain



\* Basis: ERC Starting & Advanced grant calls 2007 - 2011, evaluated proposals (withdrawn and ineligible proposals not taken into account)



**Granted proposals at Italian host institutions,  
by call and domain**

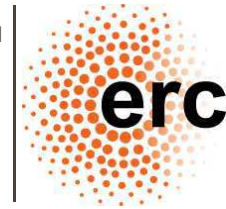


\* Italian research organisation to which the first grant agreement was signed

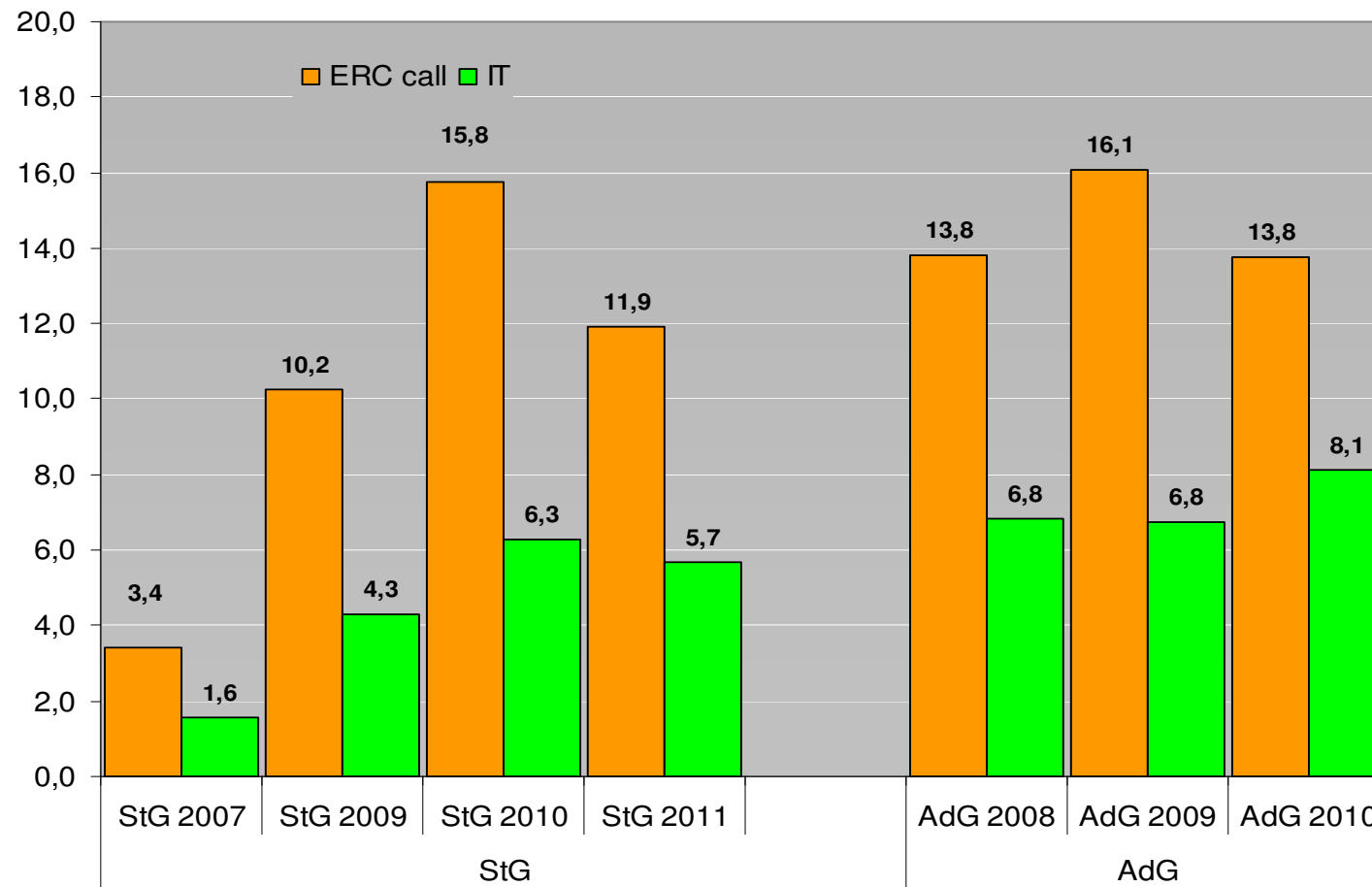


# Success rates Italian Host institutions

European Research Council



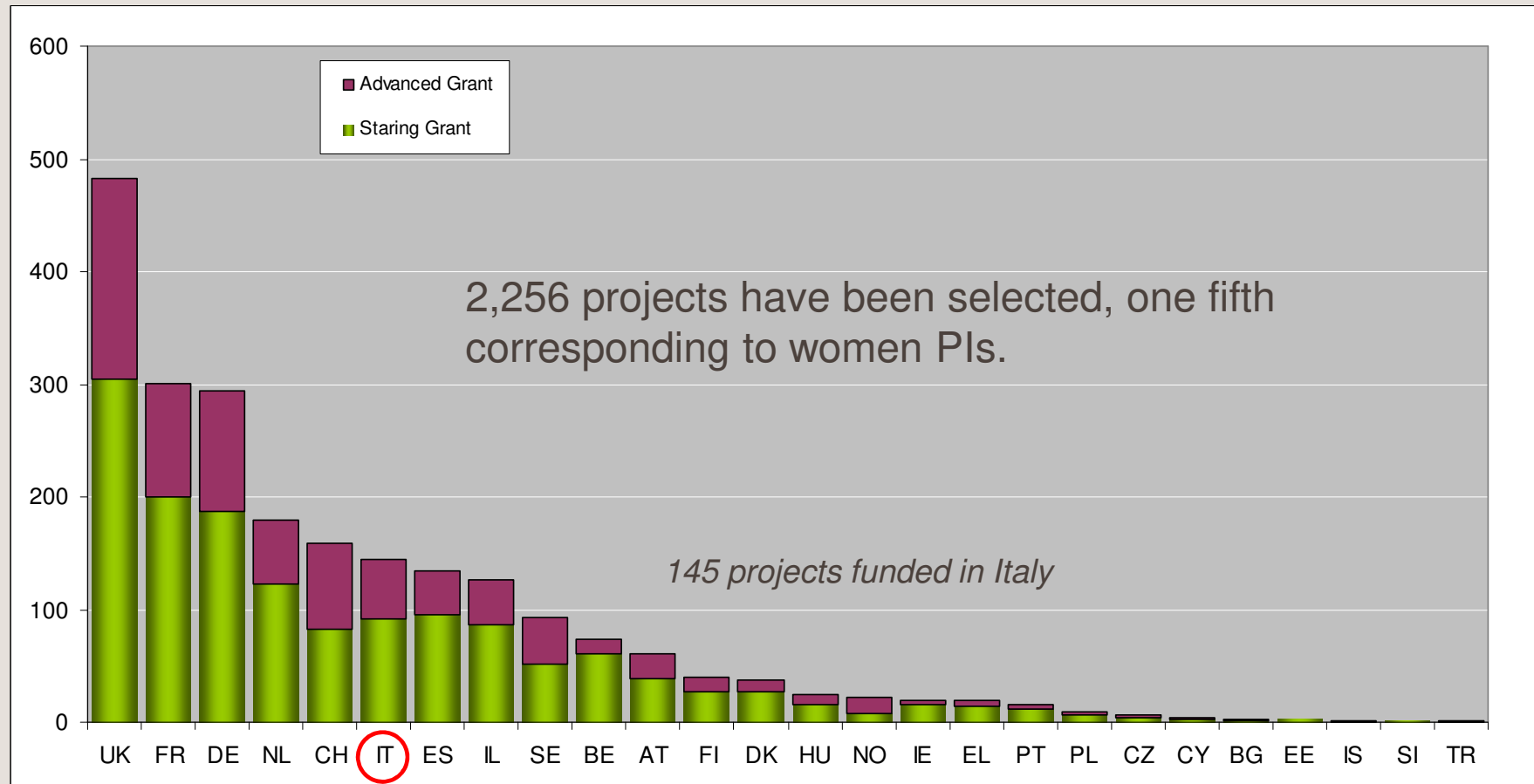
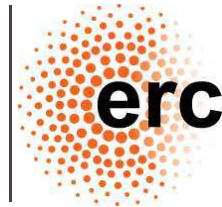
Success rates: selected over evaluated proposals



\* Basis: ERC Starting & Advanced grant calls 2007 - 2011, success rates : selected over evaluated proposals



# ERC grant distribution by countries of HI

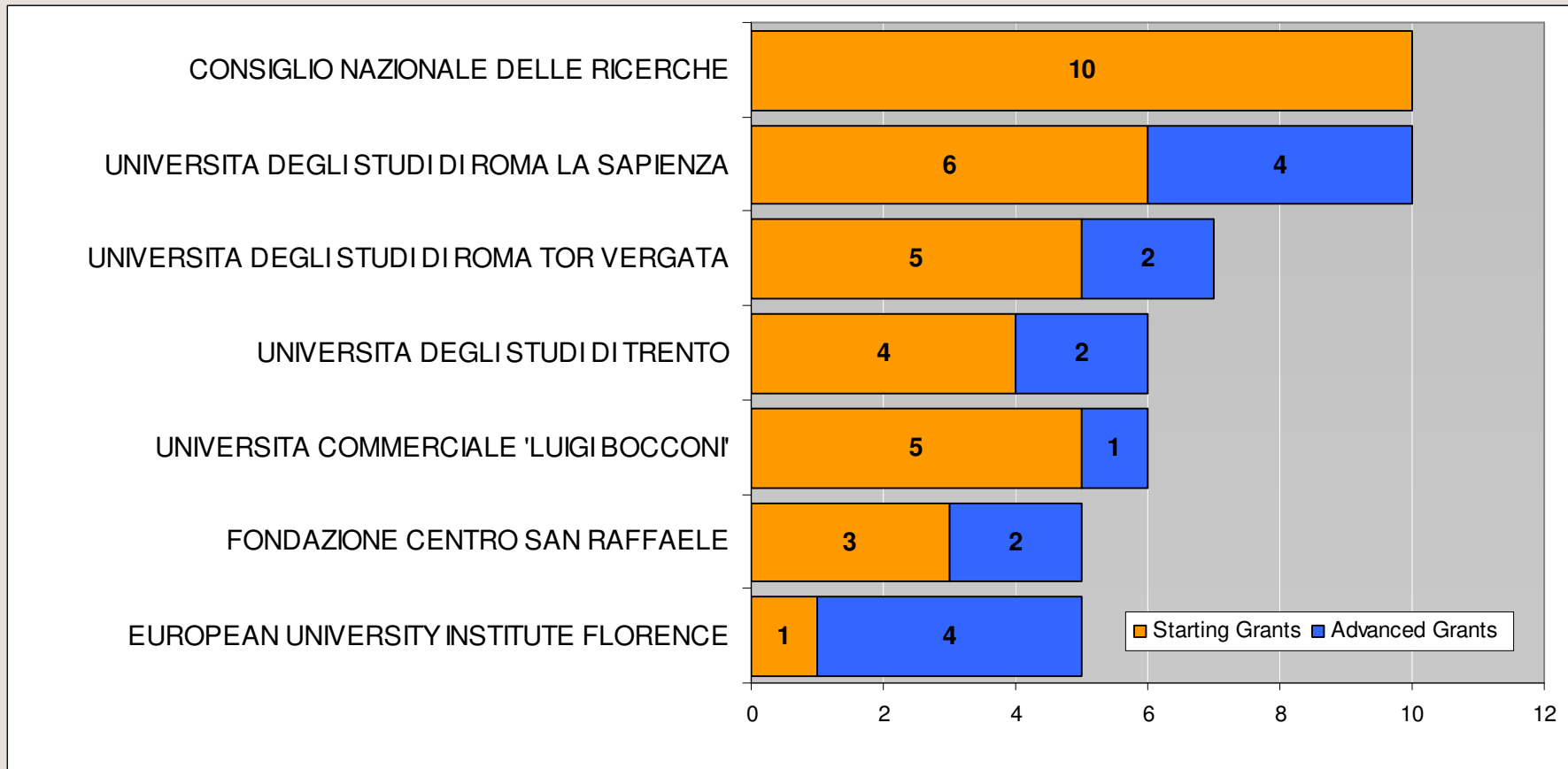
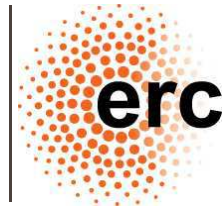


\* Institutions to which the first grant agreement was signed



# Selected institutions hosting ERC Grantees in Italy

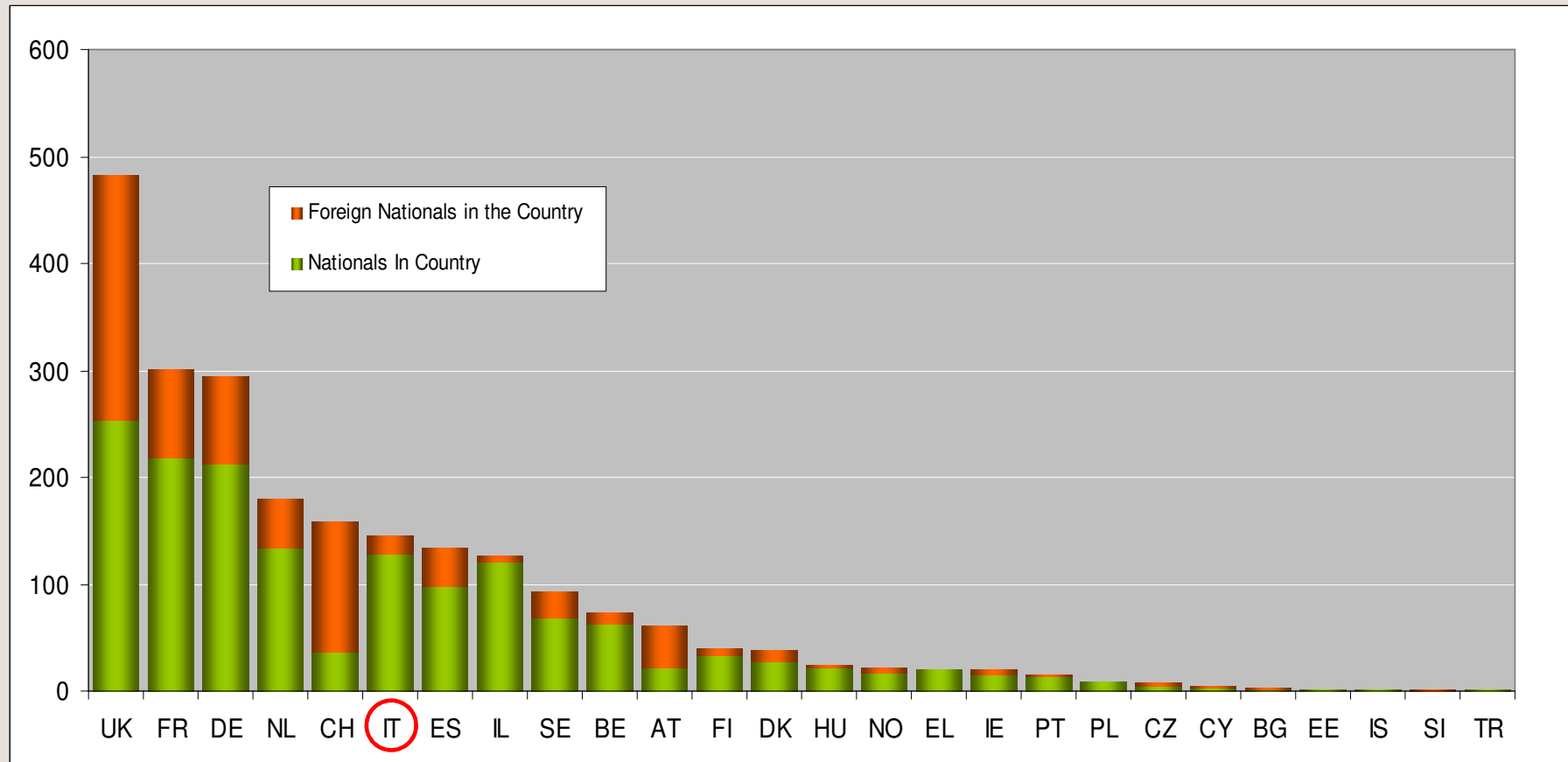
European Research Council



\* Institutions holding 5 or more grantees



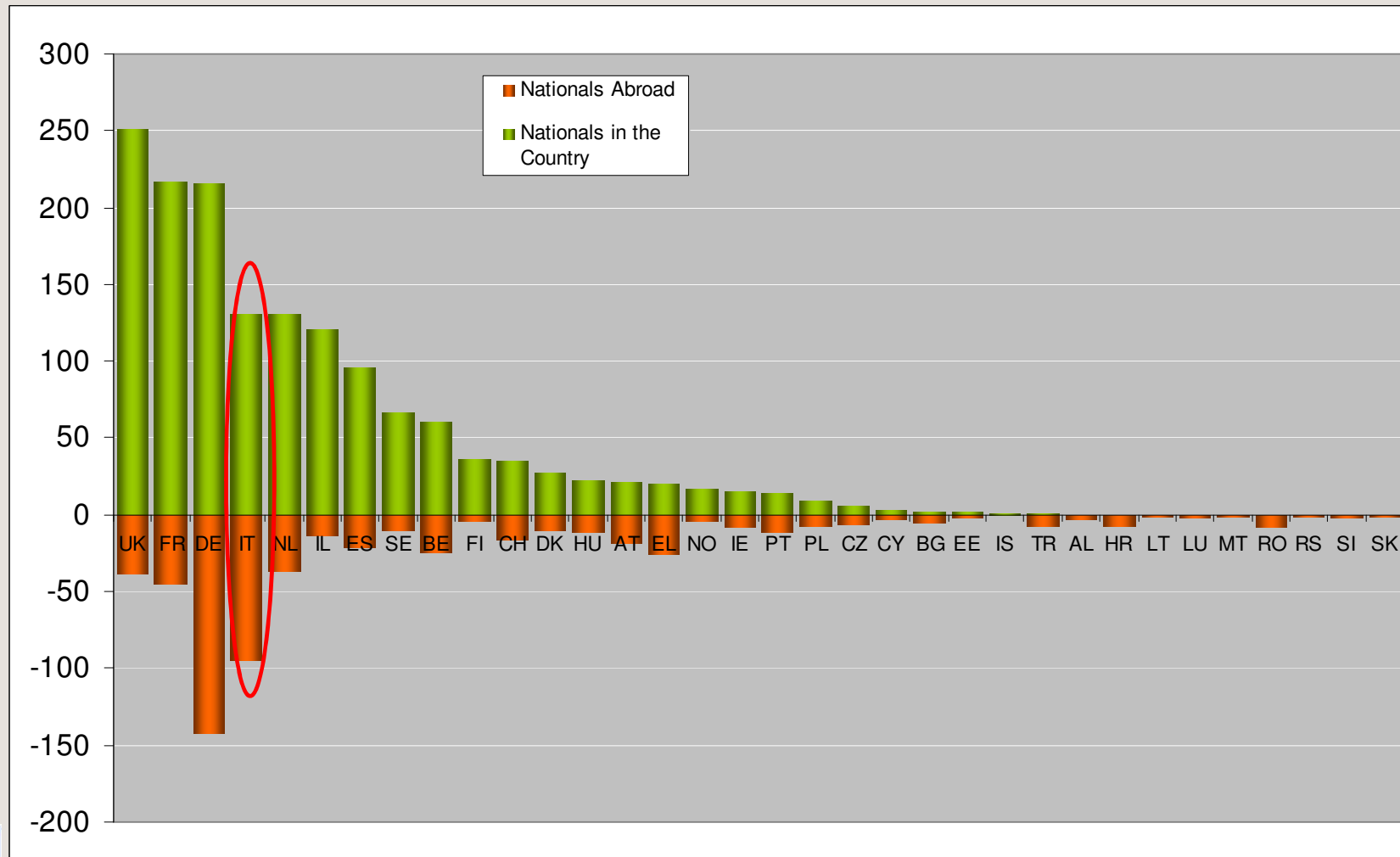
# Mobility Patterns I : Origin of Grantees

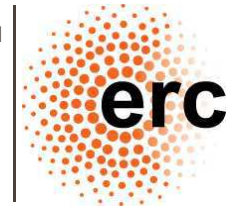




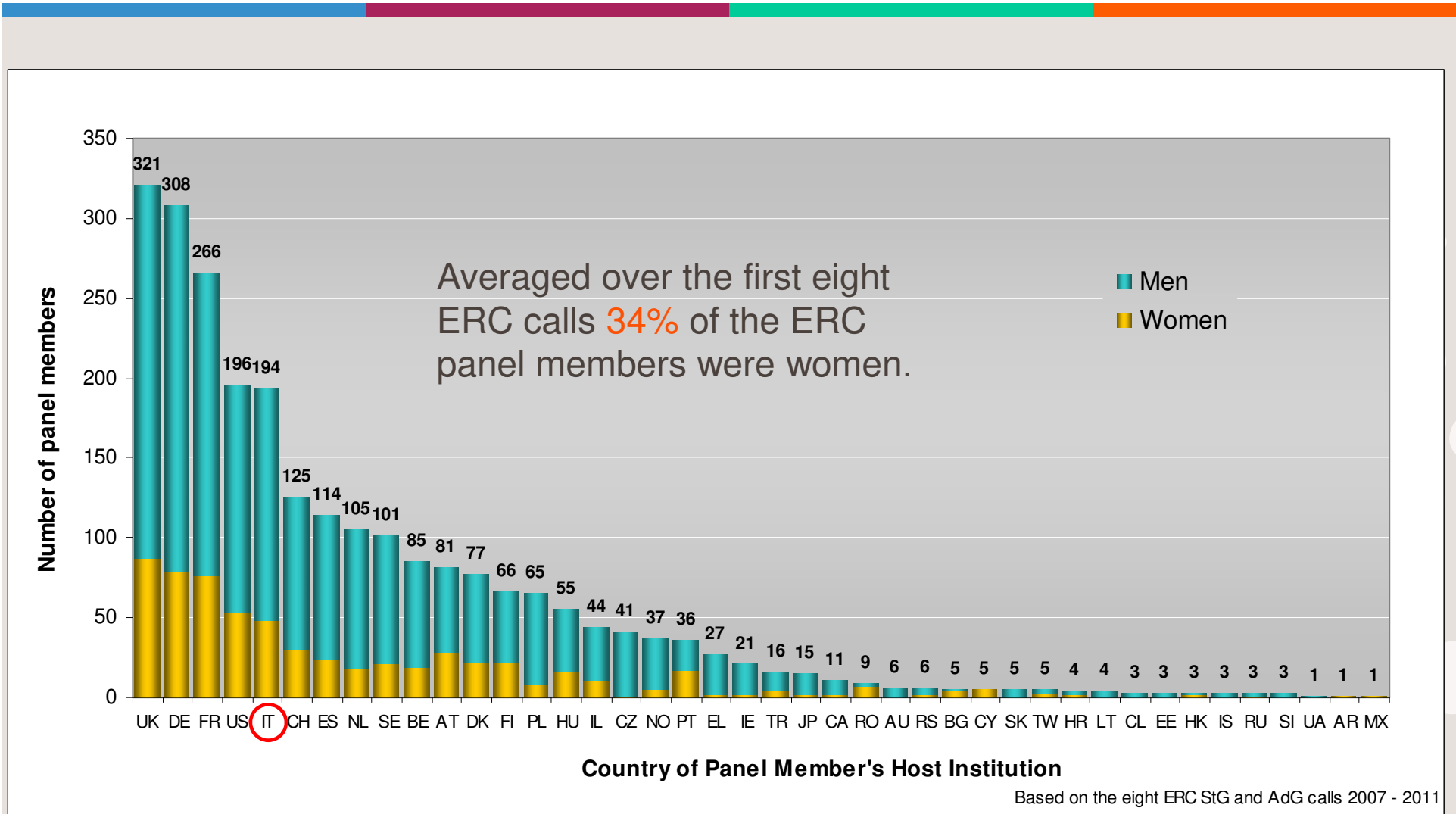


# Mobility Patterns II : Residence of Grantees





# ERC panel members by country of HI and gender





**THANK YOU FOR YOUR ATTENTION !**

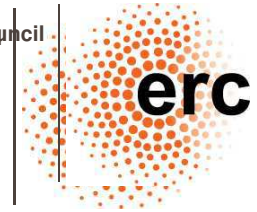
**[Monique.smaihi@ec.europa.eu](mailto:Monique.smaihi@ec.europa.eu)**





# OTHER ERC SCHEMES





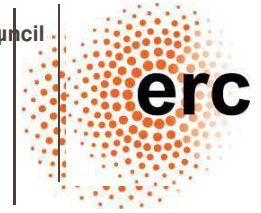
# ERC Synergy Grants

ERC call name	Budget	Size of Grant	Publication of call	Submission Deadline(s)
ERC Synergy grant ERC-2012-SyG	€150M (10% total 2012 budget)	Max. €15M for upto six years	25 Oct. 2011	25 Jan. 2012

- “Investigator-driven ‘blue sky’ research
- 2-4 excellent PIs with complementary skills
- Interdisciplinary research with added value

# ERC Synergy: project profile

European Research Council



- Sole criterion is **excellence** – not collaboration for its own sake
- **Investigator driven**: no preset themes or priorities
- Projects **interdisciplinary** in nature, using multidisciplinary approaches
- Projects involve new combinations of skills and disciplines, bringing together researchers from different institutions, sectors or countries



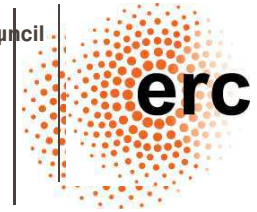
# ERC Synergy: PI profile

European Research Council



- **Small groups** of 2 – 4 Principal Investigators, not consortia
- **No transnationality requirement**
- PIs ideally **located in the same place** for significant periods of the project
- **Time commitment** of all PIs to project: expected to spend at least 30% working time on project and 50% in an EU Member State or associated country
- PIs with **excellent track records** of independent creative thinking, regardless of career stage





# ERC Synergy: proposal

## PART A – online forms

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

## PART B1 – submitted as .pdf

**Section 1** Scientific proposal 15 p.

## Annexes – submitted as .pdf

- Statement of support by HI
- If applicable: explanatory information on ethical issues

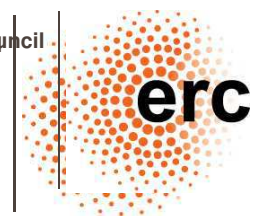
## PART B2 – submitted as .pdf

### **Section 2** Track Record of all PIs

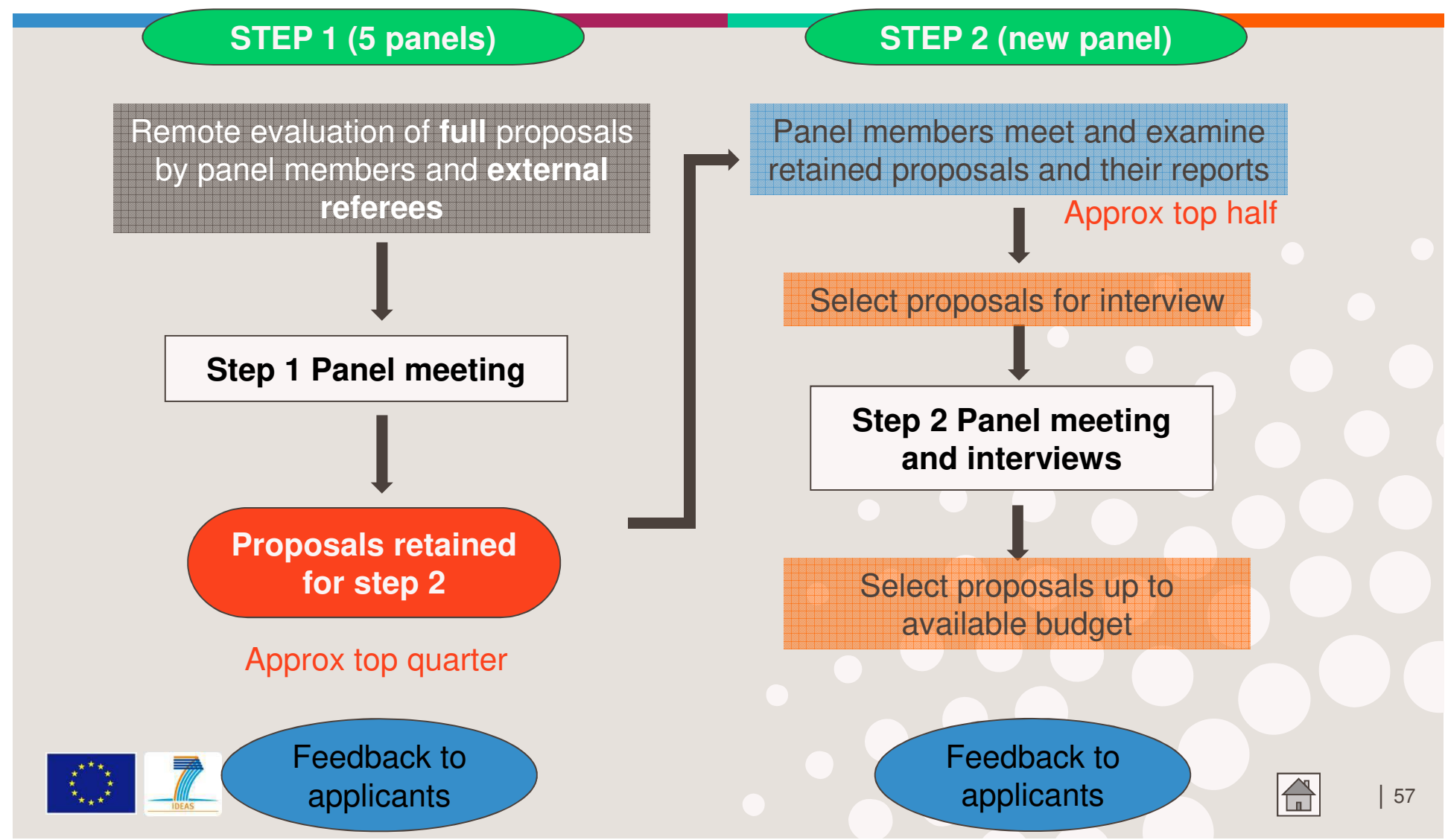
Extended synopsis 5 p.  
 CV (including “funding ID”) 2 p./PI  
 track record 2 p./PI







# ERC Synergy: evaluation



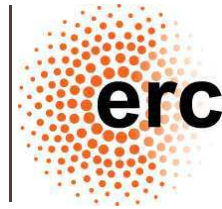
Feedback to applicants



# ERC Proof of Concept Grant

## Objective:

“....to provide funds to enable ERC-funded ideas to be brought to a pre-demonstration stage where potential commercialisation opportunities have been identified.” (*Revised ERC Work Programme 2011*)



## The ERC “proof of concept” funding

- **Eligibility:** Holders of an ERC grant with an idea substantially drawn from an ERC-funded project
- **Possible requested amount**
  - max € 150 000 for a period of 12 months
  - may be awarded only once per ERC funded project
- **Outcome:** A "package" to be presented to venture capitalists

*Total budget for 2011: €10 million*



# Proposal description

- A short **description of the idea** and its relation to the previous ERC grant
- Outline an **early-stage innovation strategy** for the idea
- Outline a reasonable and plausible **plan of the activities**
- **Budget:** list of requested resources and proper justification



# Evaluation

**Evaluation:** check that the proof of concept plan is reasonable and acceptable  
No scientific evaluation

## Evaluators:

- From key innovation stakeholders (national public agencies, government/ministry departments, technology transfer offices of Universities, etc)
- Independent experts working remotely and if necessary meeting as an evaluation committee

# Evaluation Criteria

## Evaluation criteria:

### 1. Innovation potential

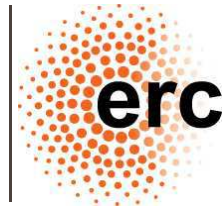
Move the output of research towards the initial steps of pre-commercialisation

### 2. Quality of the proof of concept plan

Sound approach for establishing technical and commercial feasibility

### 3. Budget

Necessary for the implementation of the proof of concept and properly justified



# ERC Proof of Concept Time table 2011

- **2011 call deadlines:**
  - ➔ **1st Deadline: 15/06/2011**
  - ➔ **2nd Deadline: 08/11/2011**

**Guide for Applicants!!**

**Published on the ERC homepage**

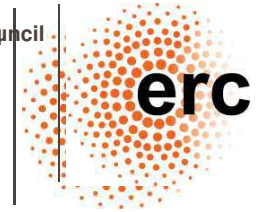




# ANNEXES







# Restrictions on Submissions

- A PI may hold only 1 ERC grant at any one time
- A PI may only submit 1 proposal per **calendar year**
- A PI who holds an ERC grant can only submit a proposal for **ERC synergy** if their grant expires before **November 15<sup>th</sup> 2013**
- A PI who is a **panel member** in 2010 or 2012 may not apply in 2012 for the same type of grant
- A PI who submitted a proposal to a 2011 ERC call can only apply in 2012 for the same type of grant if their proposal was **above the quality threshold** at the end of step 1.

# Host institution

**Applicant legal entity: institution that engages and hosts the PI for the duration of the project**

**Any type of legal entity: universities, research centres, business research units ... **as long as it is in MS or AC****

**Commitment of HI: to ensure that the PI may**

- apply for funding independently
- manage research and funding for the project
- publish independently as senior author
- have access to reasonable space and facilities



# ERC Grant agreements

- **Simple** and **flexible**, no negotiations – take it or leave it
- Are portable
- Additional funding for StG or AdG for researchers moving to Europe or Associated Countries or for purchase of major equipment
- Cover 100% total eligible costs plus 20% indirect costs

# Interdisciplinary Proposals

- Approach for Interdisciplinary proposals: “**mainstreaming**”
- Proposal submitted to a target panel primarily responsible for its evaluation
- Both Step 1 and Step 2:
  - ➔ Assigned for reviews from PMs outside primary panel, if necessary
- Step 2:
  - ➔ Remote reviewers: any reviewer in the world (hence any domain)

# Approach taken for “streaming” (StG only)

- **“By default”**: people fall into the stream that corresponds by the number of years past Ph.D. (covers 90-95% of cases)
  - ➔ Starters 2 – 6 years past Ph.D
  - ➔ Consolidators: 7 – 12 years past Ph.D
- **Change of stream**: rather *strict / conservative approach*
  - ➔ Applicants need to argue their case for different consideration.
  - ➔ All **“objective”** (parental leave, military service, long term illness, etc) reasons that apply for extending the eligibility window apply by analogy to extending the “starter” window.
  - ➔ **Subjective reasons**: **“Career break”** outside science/research (e.g. volunteer work, professional activity *completely unrelated to research career*, unemployment, etc)
  - ➔ Applicant needs to attach a minimum amount of documentation to make claim credible