



Evaluation of Interdisciplinary proposals at the ERC

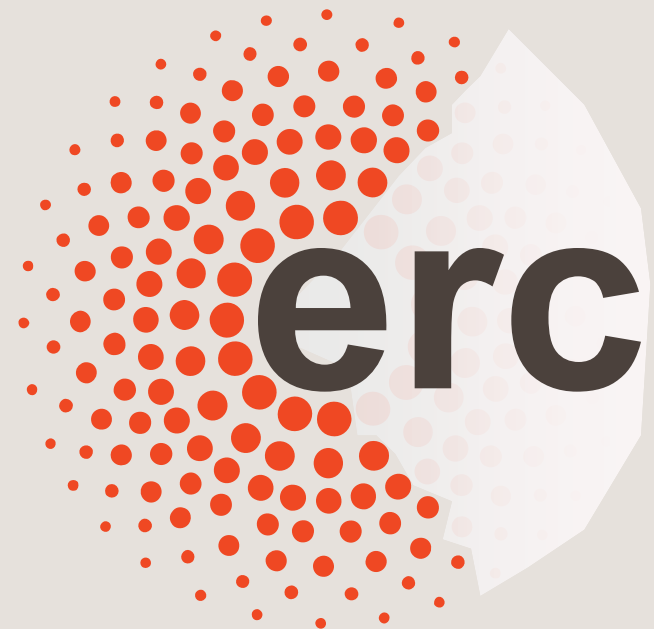
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Unit B2 - Starting Grants

Call Coordinator





Outline

- **ERC Overview**
- **ERC Review Process**
- **Interdisciplinary proposals**
- **Data**



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

Call for proposals

Two calls

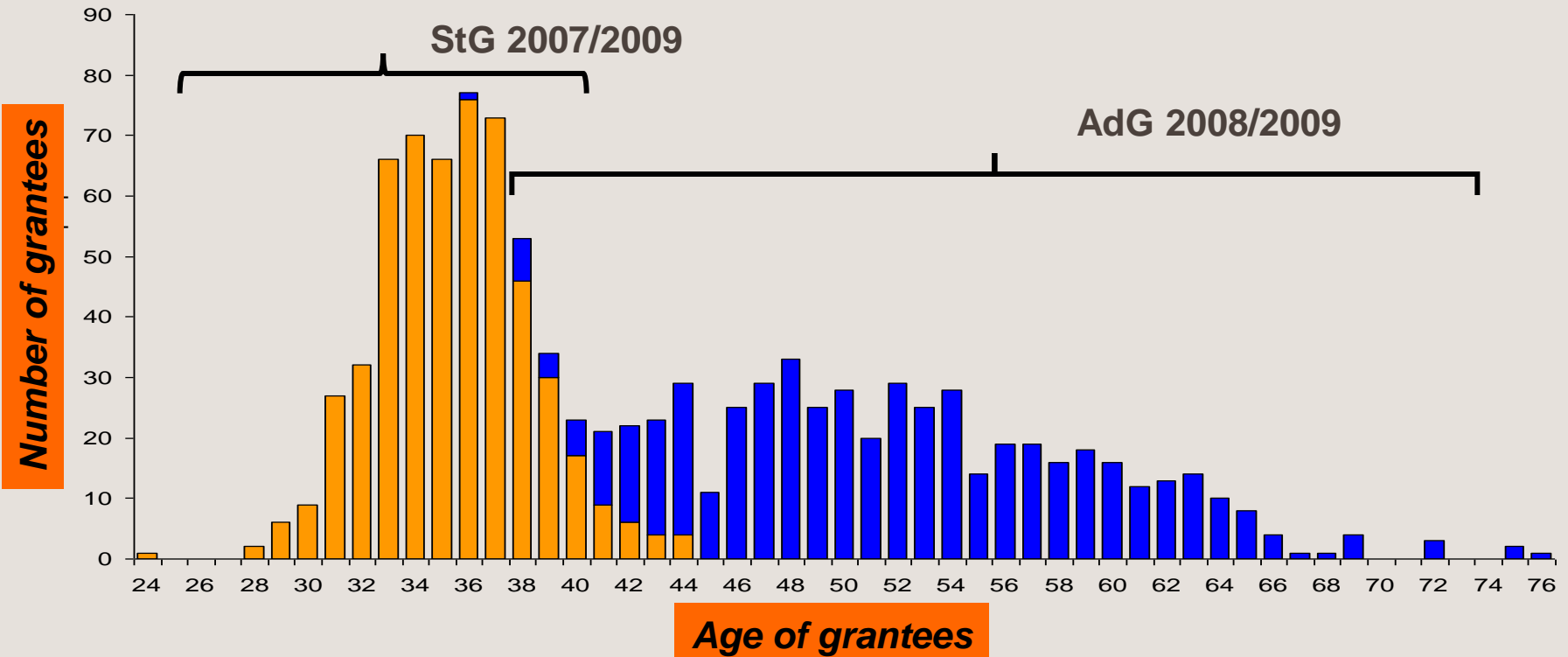


Starting Grants

- Attract/retain **next-generation leaders**
- Establish independent **research team & program**

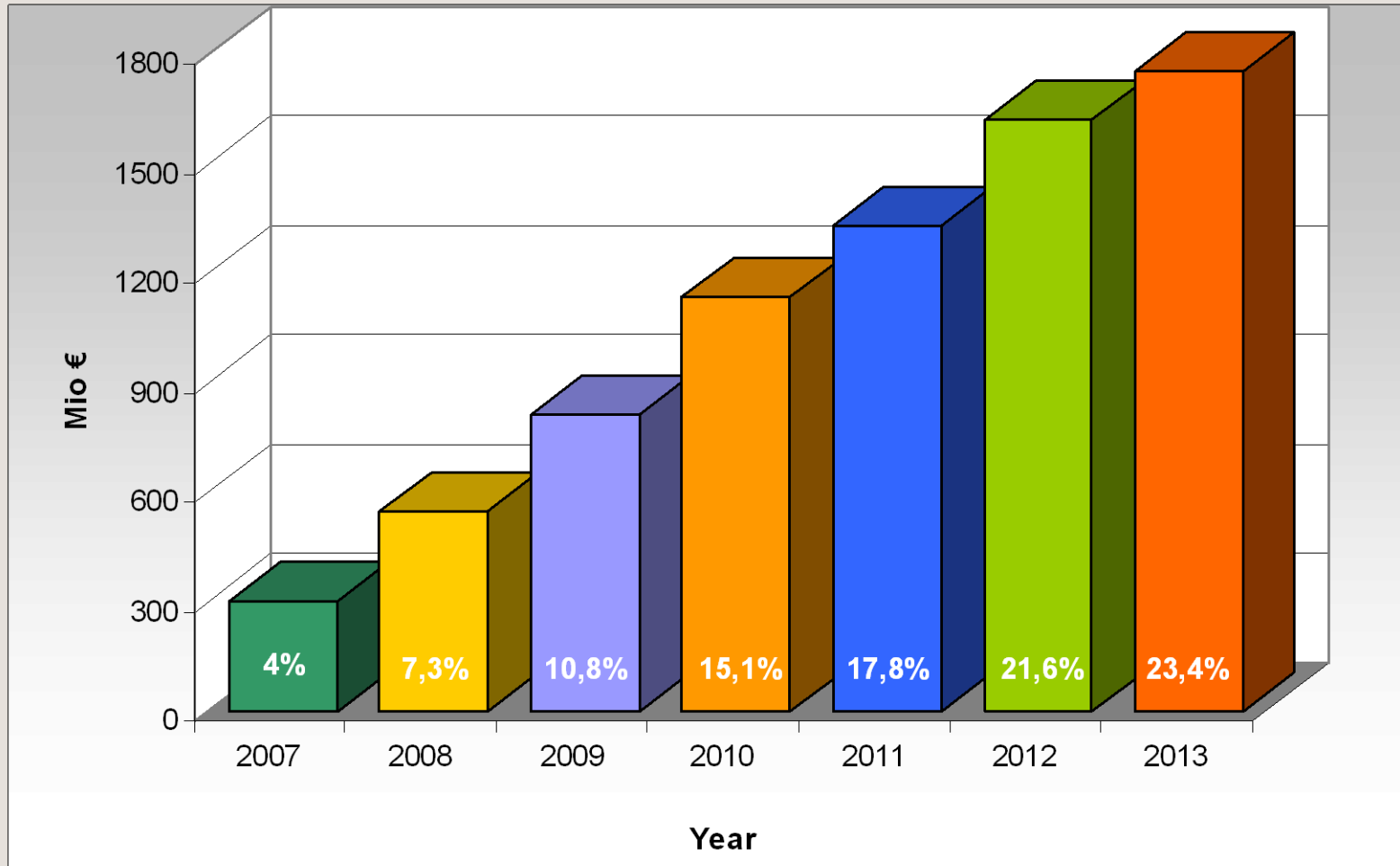
Advanced Grants

- Attract/retain **current world-leaders**
- Stimulate investigator-driven, **breakthrough research**



ERC Budget 2007 – 2013 : € 7.51 bn

Annual budget evolution (prospective schedule)



Scientific domains

budget pre-allocation in 3 + 1 areas

- For operational reasons : 25 panels in 3 main domains
 - ☞ **PE: Physical Sciences, Engineering** (10 panels)
 - ☞ **LS: Life Sciences** (9 panels)
 - ☞ **SH: Social Sciences and Humanities** (6 panels)

- Allocation of **call budget** per domain as follows:
 - ☞ **PE domain: 40%**
 - ☞ **LS domain: 35%**
 - ☞ **SH domain : 15%**
 - ☞ **Interdisciplinary domain: 10%**

- Within domains, indicative budget is allocated to panels on a demand basis
 - probability of success independent of panel*

ERC Panel structure

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

ERC Grant Schemes

- **All fields of science and scholarship are eligible**
Investigator-driven, bottom-up
- **Flexible grants, up to five years**
max € 1,500,000 (for 5 years)
+ € 500,000 if new research activity in EU by moving from TC *OR*
purchase of large equipment
- **Independent individual teams**
Nationality and Age of researchers is not relevant
Host organisation to be located in MS or AC

Interdisciplinarity : principles

ERC Workprogramme 2011:

- Applications can be made in any field of research (...)
- with particular emphasis on the frontiers of science, scholarship and engineering

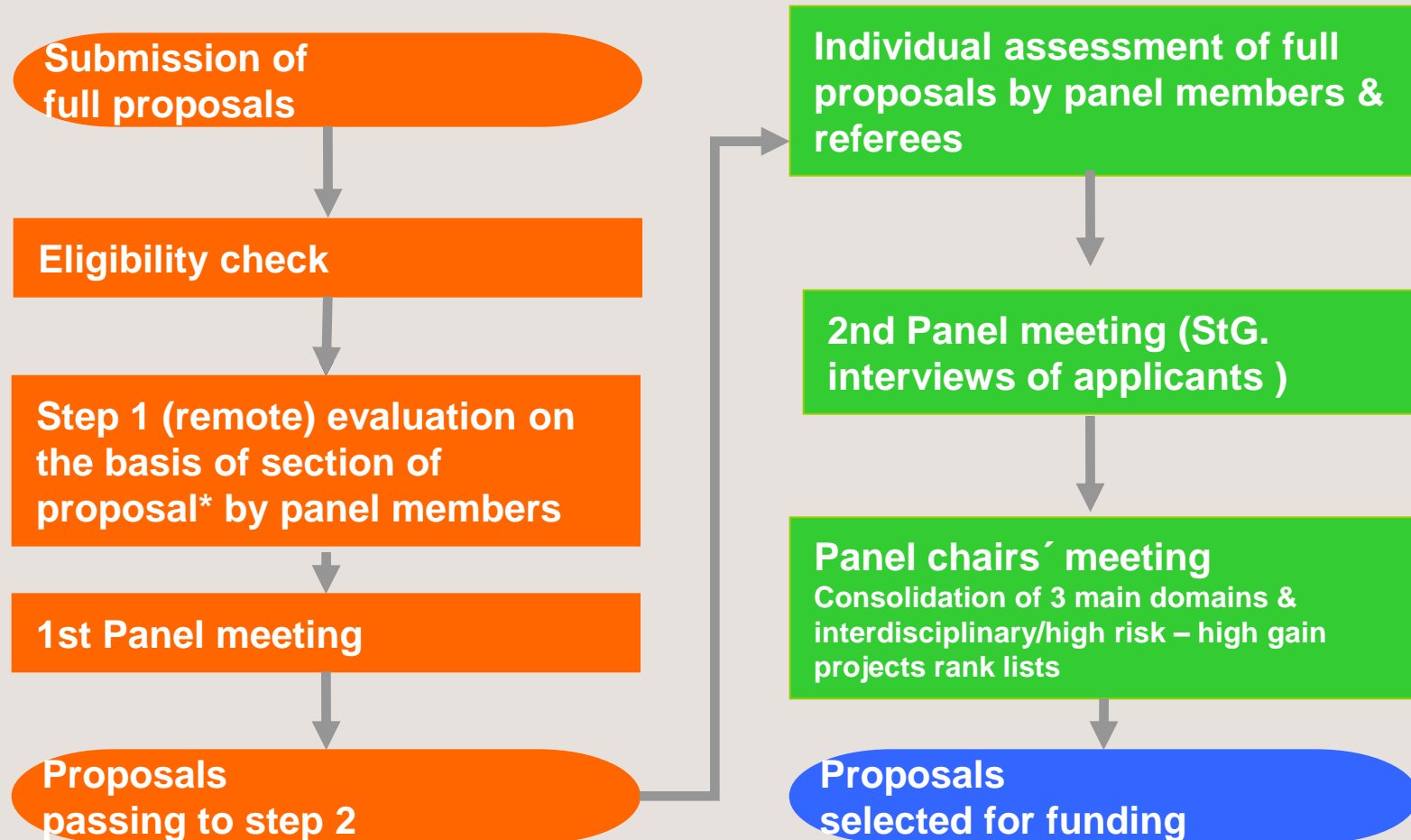
Proposals of an interdisciplinary nature :

- ◆ which cross the boundaries between different fields of research,
- ◆ addressing new and emerging fields of research
- ◆ introducing unconventional, innovative approaches and scientific inventions

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ERC Grants: how does it operate?

Submission, evaluation and selection



* Profile of PI, projects extended synopsis



Allocation of proposals to panels

- Proposals are allocated to the panel chosen by the applicants
- A change of panel can be considered only in case of clear mistake → exceptional
- The approval of both panel chairs is required

What are the evaluation criteria ?

Scientific Excellence is the sole criterion

- Only the criteria published in the Call are applied
- Evaluation of *excellence* at 2 levels:
 - Quality of Principal Investigator
 - Quality of the Research Project
- Referees and panels **evaluate and score** criteria 1 & 2 numerically which **results in the ranking** of the projects:
 - 1-4 per criterion
 - threshold ≥ 2 per criterion

4: outstanding
3: excellent
2: very good
1: non-competitive

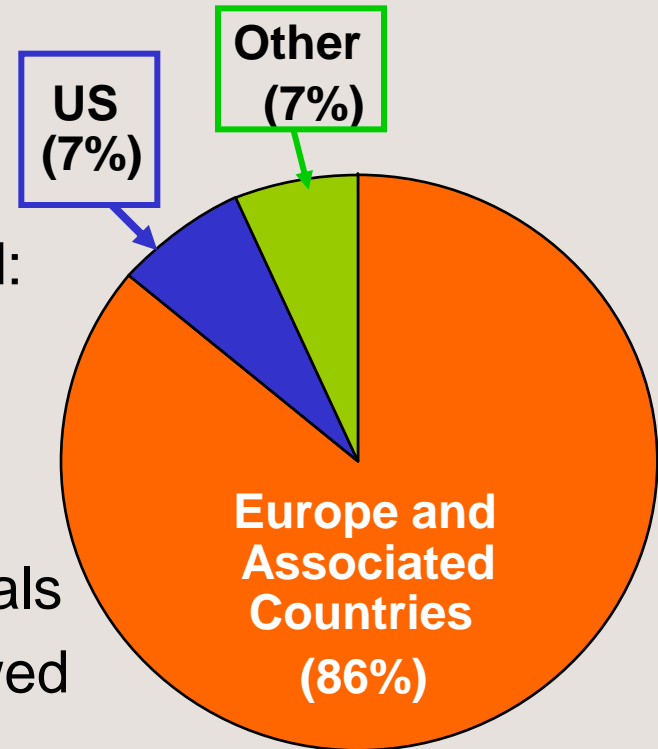
Who evaluate the proposals ?

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

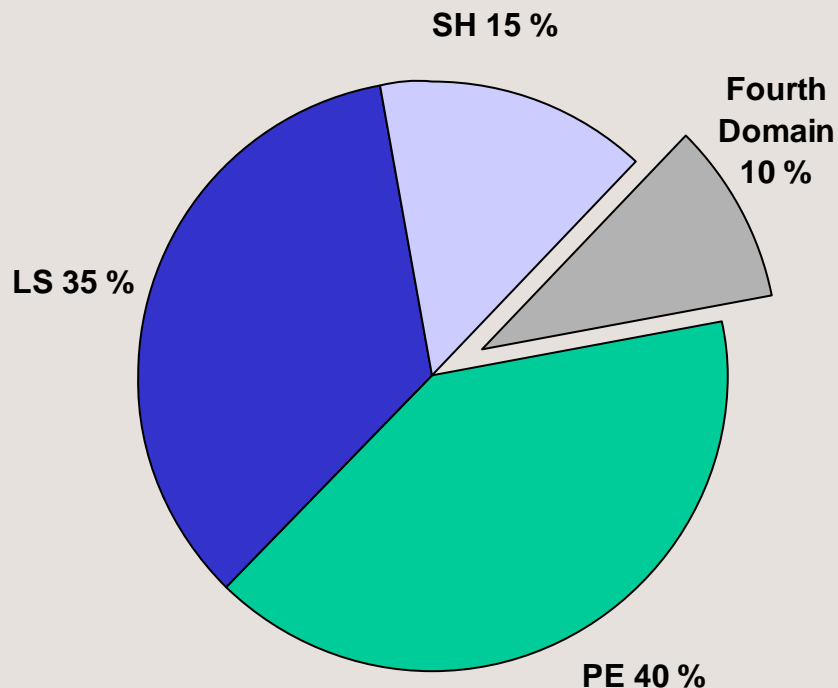
- Evaluate only a small number of proposals
- Similar to normal practise in peer-reviewed journals



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Cross-disciplinary and Cross-Domain in ERC Peer review system

Budget allocation in Work
Programme 2011



- Proposals flagged for the Fourth Domain are discussed in a meeting of panel chairs (or their deputies)
- Fourth Domain not to be considered an extra-source of budget for panels
- Panels are encouraged to „mainstream“ ID proposals

Current policy with ID proposals

Mainstreaming: Panels should bring in the necessary expertise right from Step 1 using panel members from other panels and appropriate Remote Referees and PMs in Step 2

Only bring to Final Panel Chair meeting those proposals for which the panels have not had the necessary expertise to take a decision one way or the other

Max 10% funds are kept for such proposals

Principle of Mainstreaming

A substantial number of proposals require expertise outside of the primary panel.

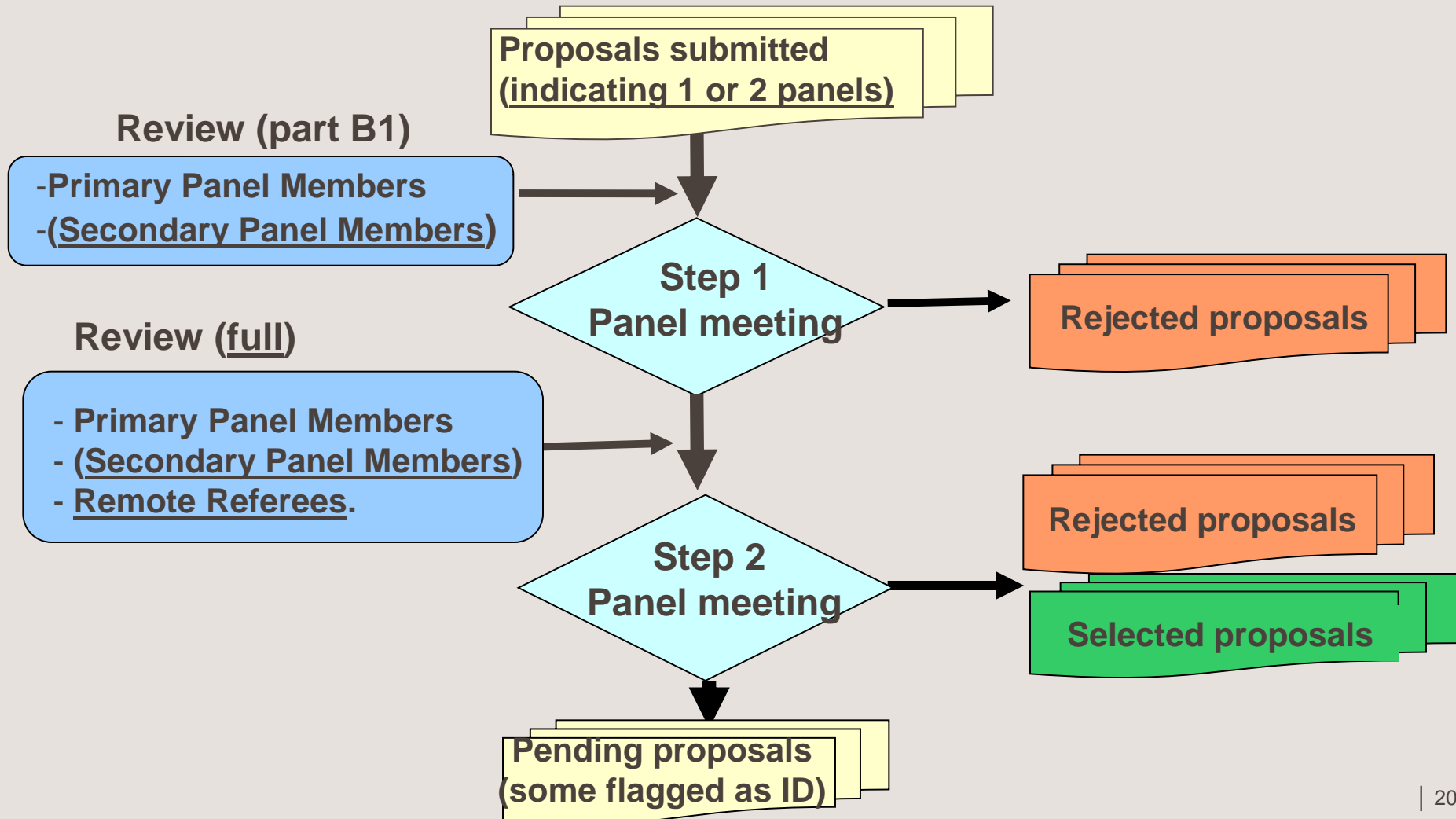
- At step 1 : Panels seek reviews from other panels for the proposals requiring additional expertise outside the primary panel.
- At step 2 : The same secondary panels (or additional ones) provide a review on the previously identified cross-panel proposals. The panel, with the secondary panel member involved in the discussion, decides on the fate of the proposal.
- If despite the external reviews the panel does not feel competent to judge the excellence of the proposal it can be put forward as a candidate for Domain 4.



Domain 4 discussion : Principles

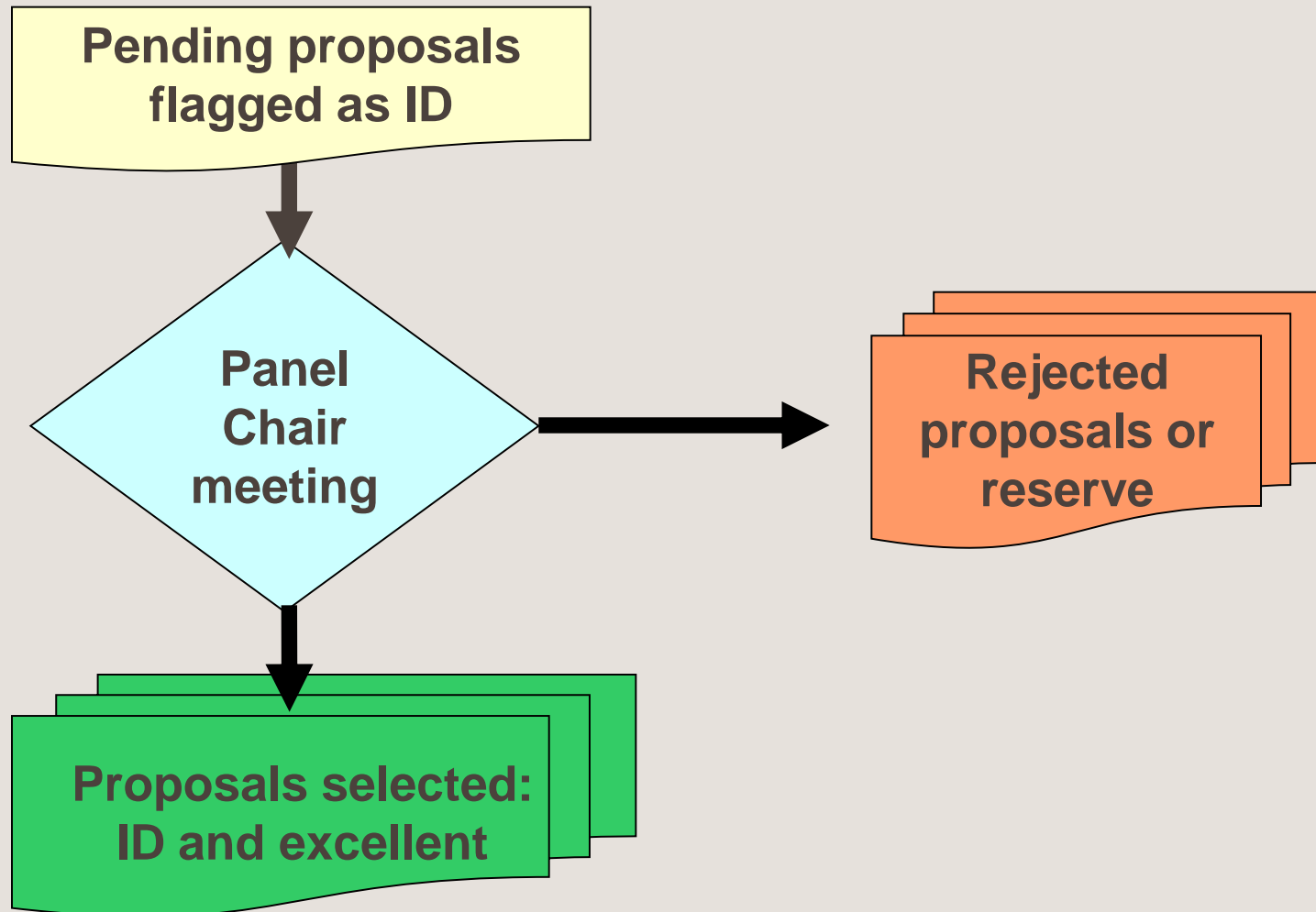
- Domain 4 **complements** the main-streaming of inter-disciplinarity already carried out by the panels
- Domain 4 ranked list is reserved for interdisciplinary proposals only
- Selection into Domain 4 **is based only on excellence: proposals should be same quality as those on main list**

Principle of Mainstreaming



Panel Chair meeting

Interdisciplinary discussion



Why a Final Panel Chair Meeting?

- For practical reasons we have set up 25 panels to judge all areas of science and humanities
- Budget allocation to panels is by demand to assure equal opportunities to all proposals independent of area (no priorities)
- This raises 2 challenges:
 - Proposals that do not fit perfectly in any 1 panel (“cross panel proposals”)
 - Similar level of quality for proposals funded in each panel
- The Final Panel Chair meeting deals with each of those issues



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Starting and Advanced Grants

High volume operation

European Research Council



	Budget (M€)	Received proposals	Selected proposals	Success rate
StG2007	289	9167	299	3%
StG2009	296	2503	244	9.5%
StG2010	530	2873	427	15%
AdG2008	542	2167	282	13%
AdG2009	515	1584	244	15.4%
AdG2010	590	2009	266	13%

Total StG

14543 submitted

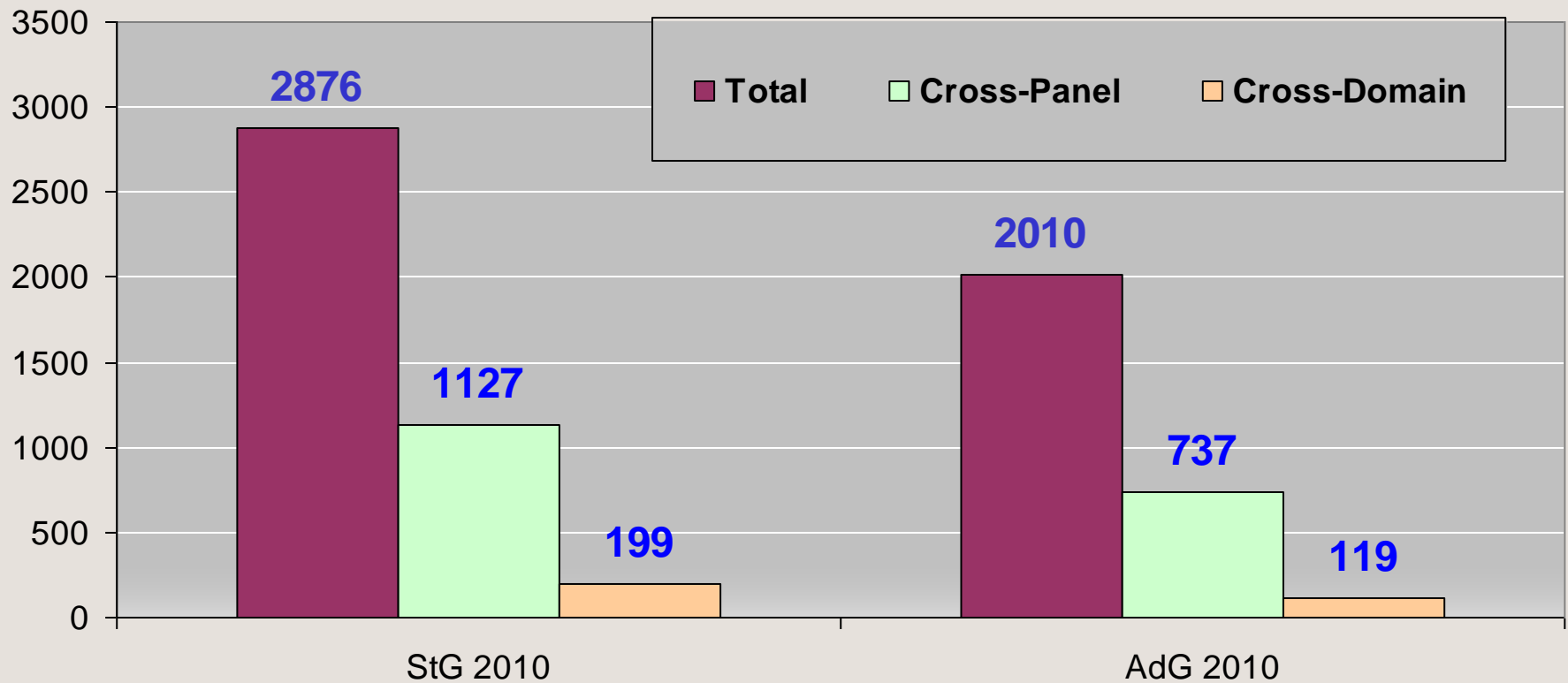
987 funded

Total AdG

5760 submitted

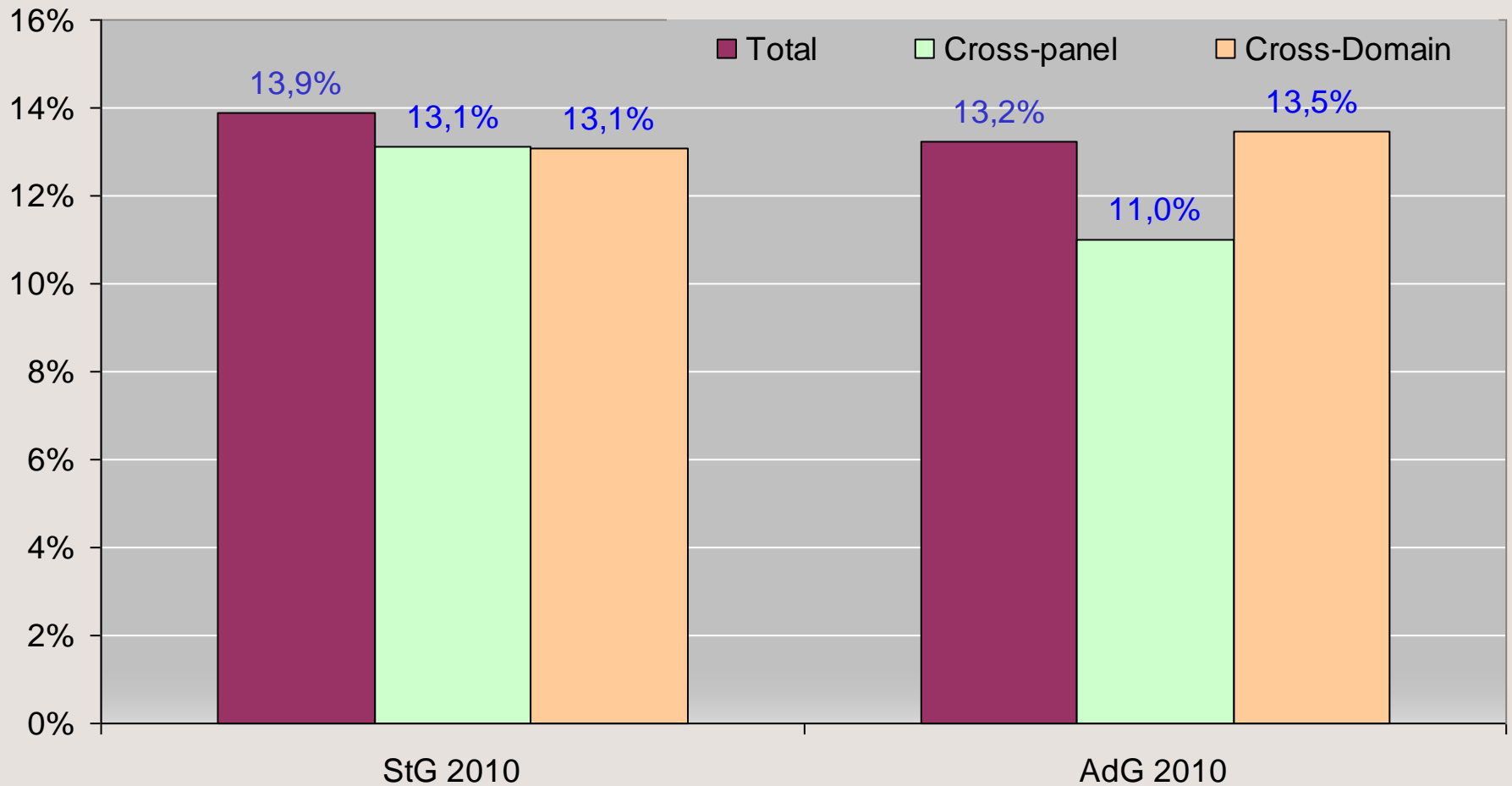
526 funded

StG2010 and AdG2010 CP/CD Submission per call

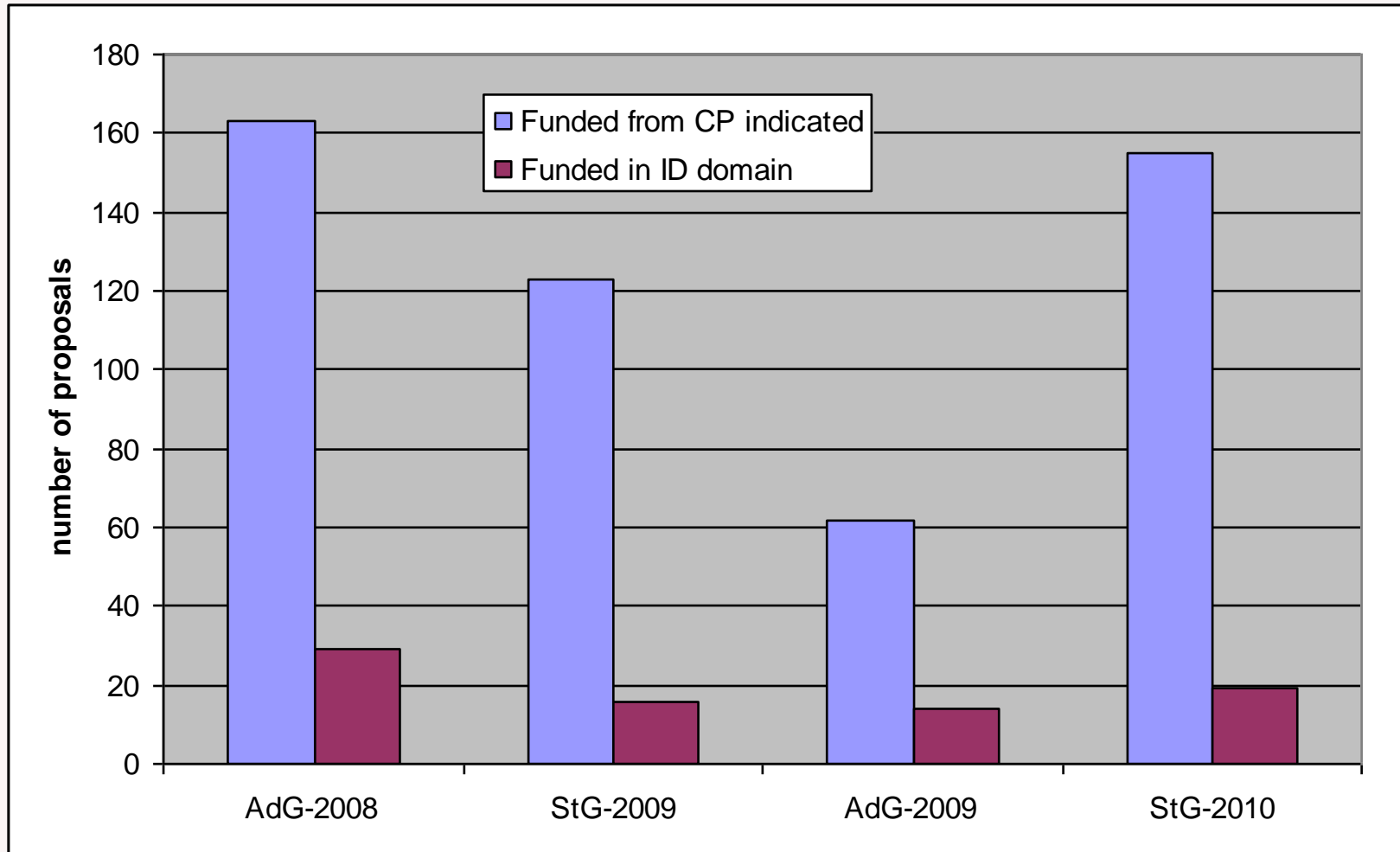


StG + AdG 2010 CP/CD

Success rates per call



Mainstreaming: Cross panel proposals funded via mainstream and via Final Panel Chair meeting



Conclusions and Perspectives I

- The vast majority of submitted proposals are interdisciplinary by nature
- A substantial part of submitted proposals are relevant for more than one panel/domain
- Most of cross-panel/cross-domain proposals are funded within primary panels

Conclusions and Perspectives II

- All three subject domains LS, PE and SH fully engaged with principle of supporting interdisciplinary projects.
- Each panel mainstreams interdisciplinary proposals and brings forward a certain number for discussion and funding under the ID domain
- Projects to be funded under the ID budget line have to meet the same quality criteria level applied in the main domains.



Thank you!