

# ERC Grant Writing Workshop

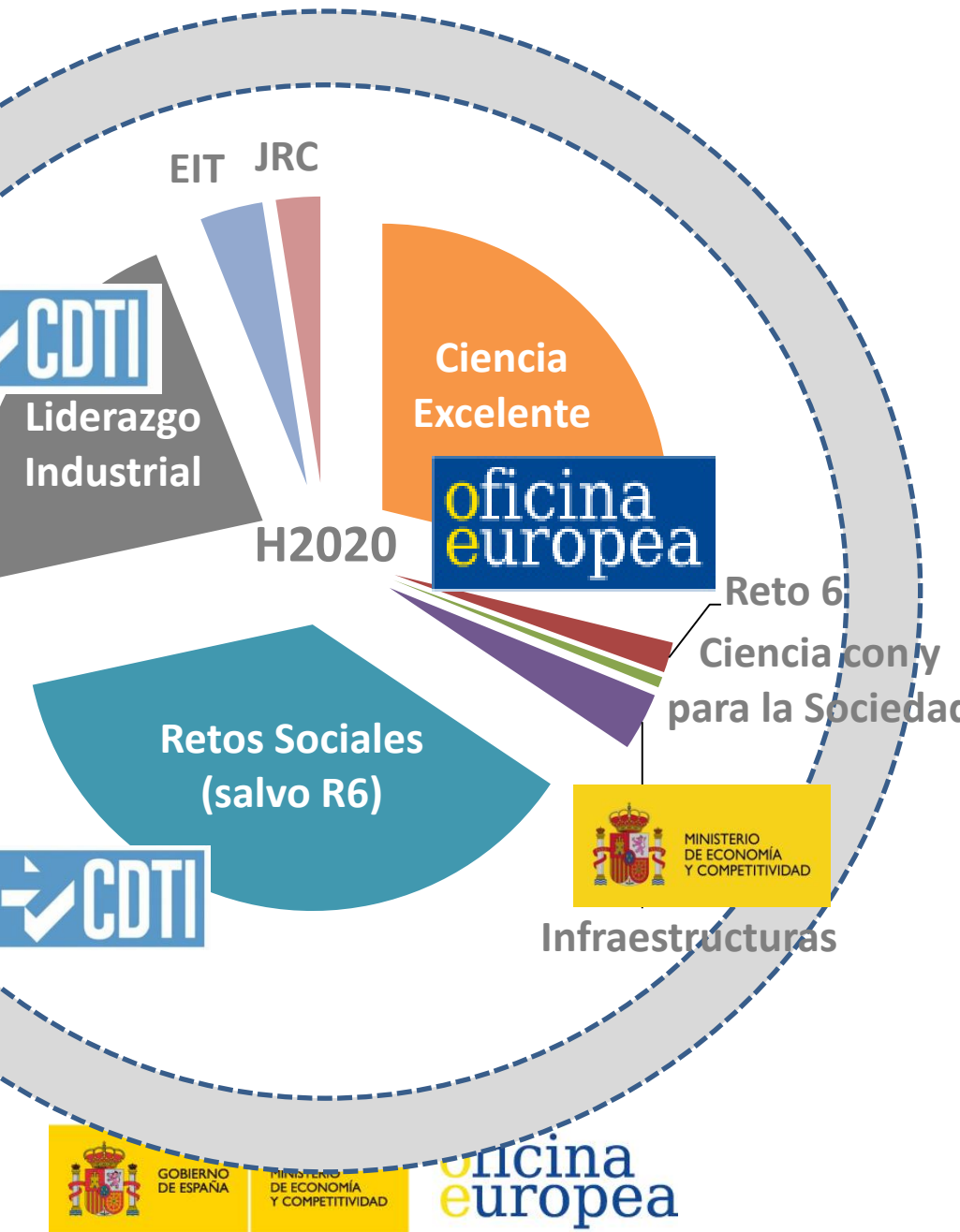
Esther Rodriguez, ERC Spanish NCP



What the ... is a National Contact Point?

# LA OFICINA EUROPEA

# La OFICINA EUROPEA



## Objetivo

- Promote the participation and leadership of the Spanish R&I system in H2020.

## Areas

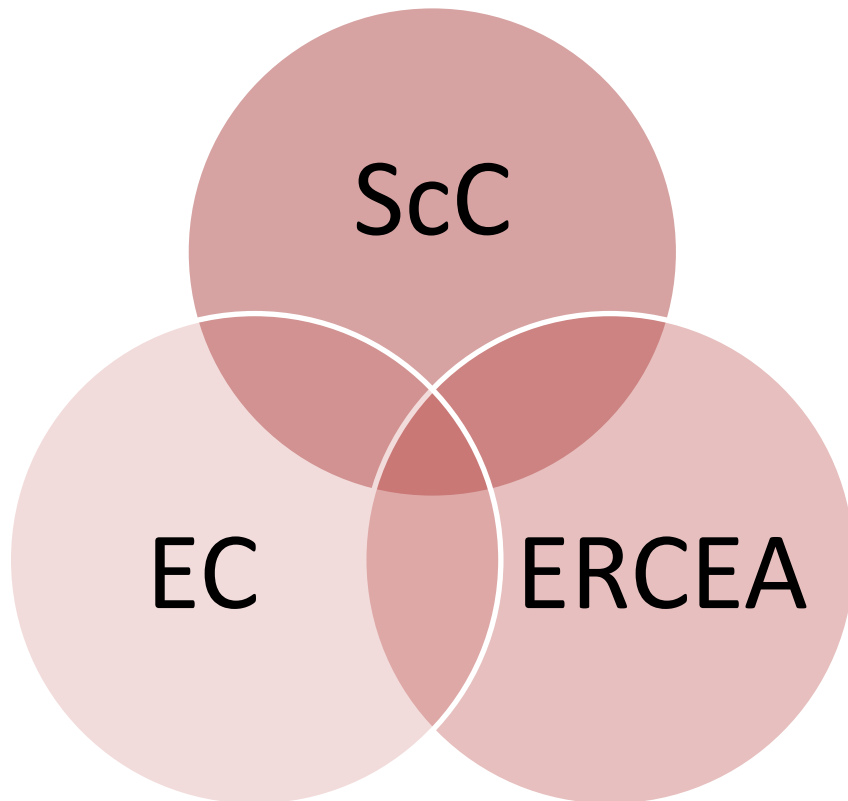
- EXCELLENT SCIENCE: ERC, FET & MSCA
- SWAFS
- Challenge 6
- COST

## Target group

- OPIs, Universities, public R&I centres

# ERC WP2017

# European Research Council



- Scientific **excellence**: sole evaluation criteria (IP and project)
- **Bottom-up approach: All fields**
- **Individual projects (IP)**
- **Attractive funding** [StG: 1,5 M€] [CoG: 2,0M€] [AdG: 2,5 M€] 5 years
- **Portability of grants**
- **3<sup>rd</sup> countries incentives (additional budget)**



European Research Council  
Established by  
the European Commission

# Three types of grants + PoC

## 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

## Proof-of-Concept

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



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# ERC 2016 & 2017 : Calendar & Budget

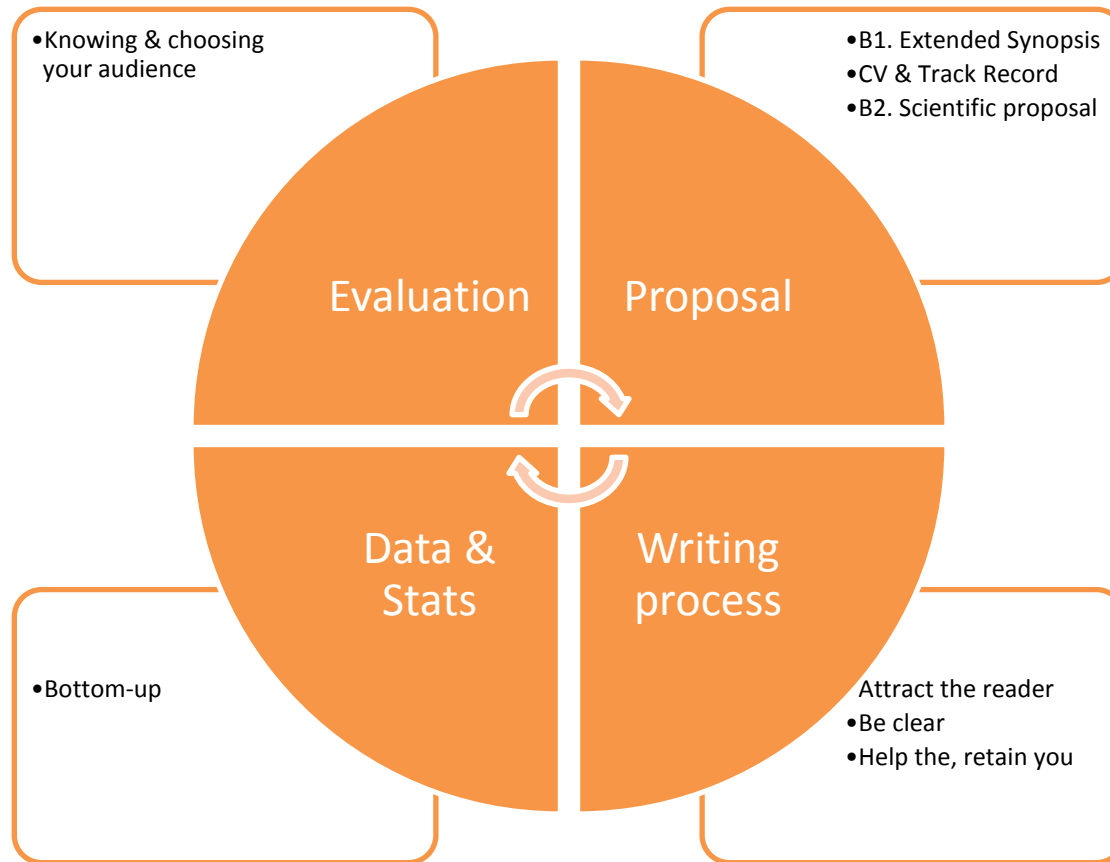
|                 | StG                      | CoG                    | AdG                          | PoC  |
|-----------------|--------------------------|------------------------|------------------------------|--|
| Call Opens      | 19 July 2016             | 20 Oct. 2016           | 24 May 2016                  | 7 Nov. 2016                                |
| Deadline(s)     | 18 OCT 2016              | 09 FEB 2017            | 01 SEP 2016                  | 16 Feb. 2016<br>26 May 2016<br>4 Oct. 2016 |
| Budget (M€)     | 605                      | 575                    | 540                          | 20   |
| (nr. of grants) | (415)                    | (320)                  | (235)                        | (130)                                      |
| Results         | April 2017<br>Sept. 2017 | July 2017<br>Dec. 2017 | 16 Jan. 2017<br>16 Mar. 2017 | May 2016<br>Oct. 2016<br>Jan. 2017         |

# Novelties in WP2017

- Gender in research
- Ethical Principles
- Research Integrity
- Open data as the default option



# THE WORKSHOP



# THE EVALUATION PROCESS



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# The evaluation process: 3 key elements

S

2 step procedure

Different people/profile involved

Different documents

Slight different evaluation questions

Panel Members  
(10-15)

Final Meeting

Decisions are made by consensus

Chair + lead reviewer have a key role but anyone may intervene

External referees make their technical reports but the decision is taken inside the panel

**FINAL  
RANK**

Proposed  
reviewed  
members

Panel

It is a (very) competitive process

High visibility

12%-15% success rate

**RANK**

Panel  
Final



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# 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 & Humanities

SH1 Individuals, Markets and Organisations

SH2 Institutions, Values, Environment and Space

SH3 The Social World, Diversity, Population

SH4 The Human Mind and Its Complexity.

SH5 Cultures and Cultural Production

(antropology)

SH6 The Study of the Human Past

## 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

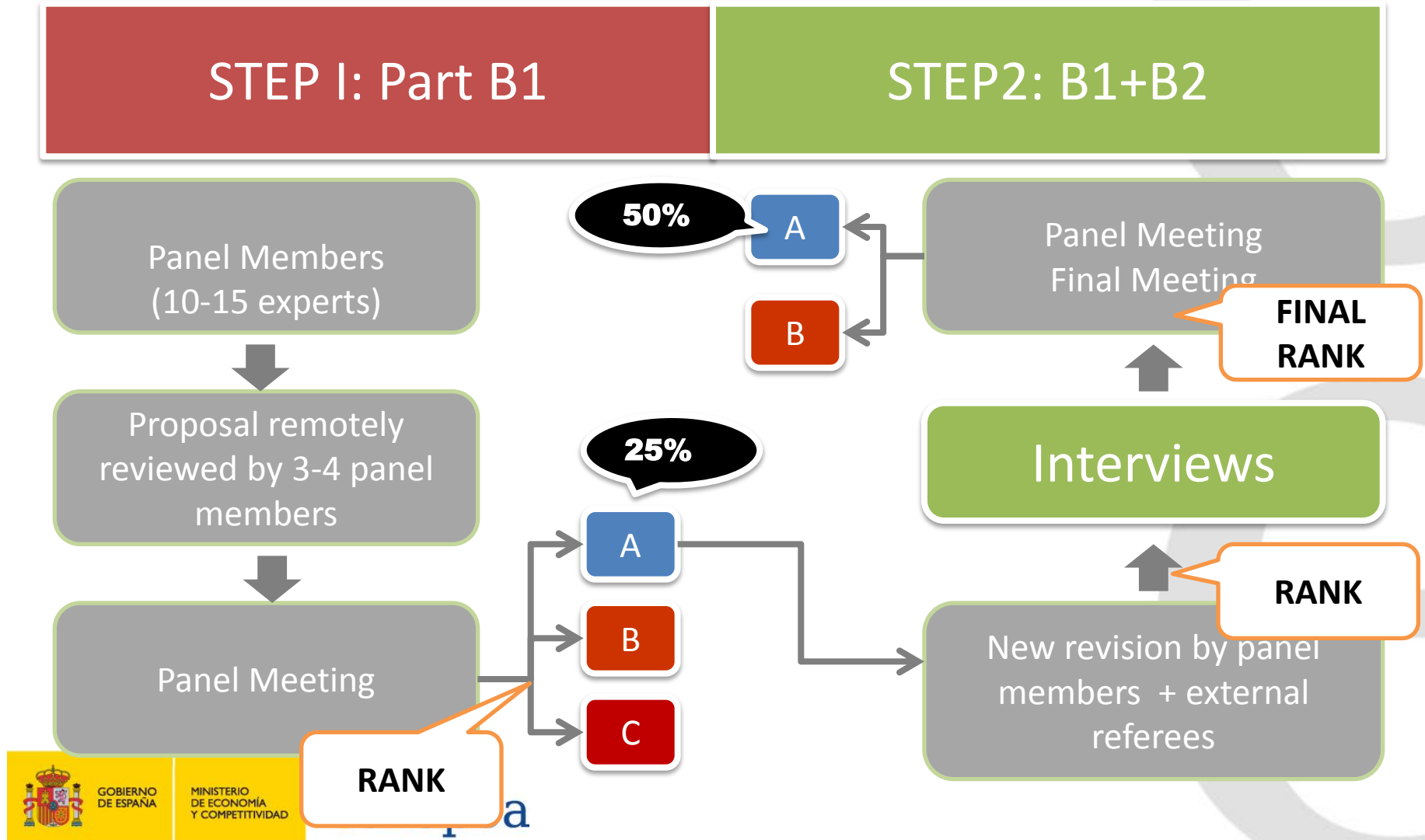
PE7 Systems & Communication Engineering

PE8 Products & Process Engineering

PE9 Universe Sciences

PE10 Earth System Science

# The evaluation process: 2 steps



# THE SCIENTIFIC PROPOSAL



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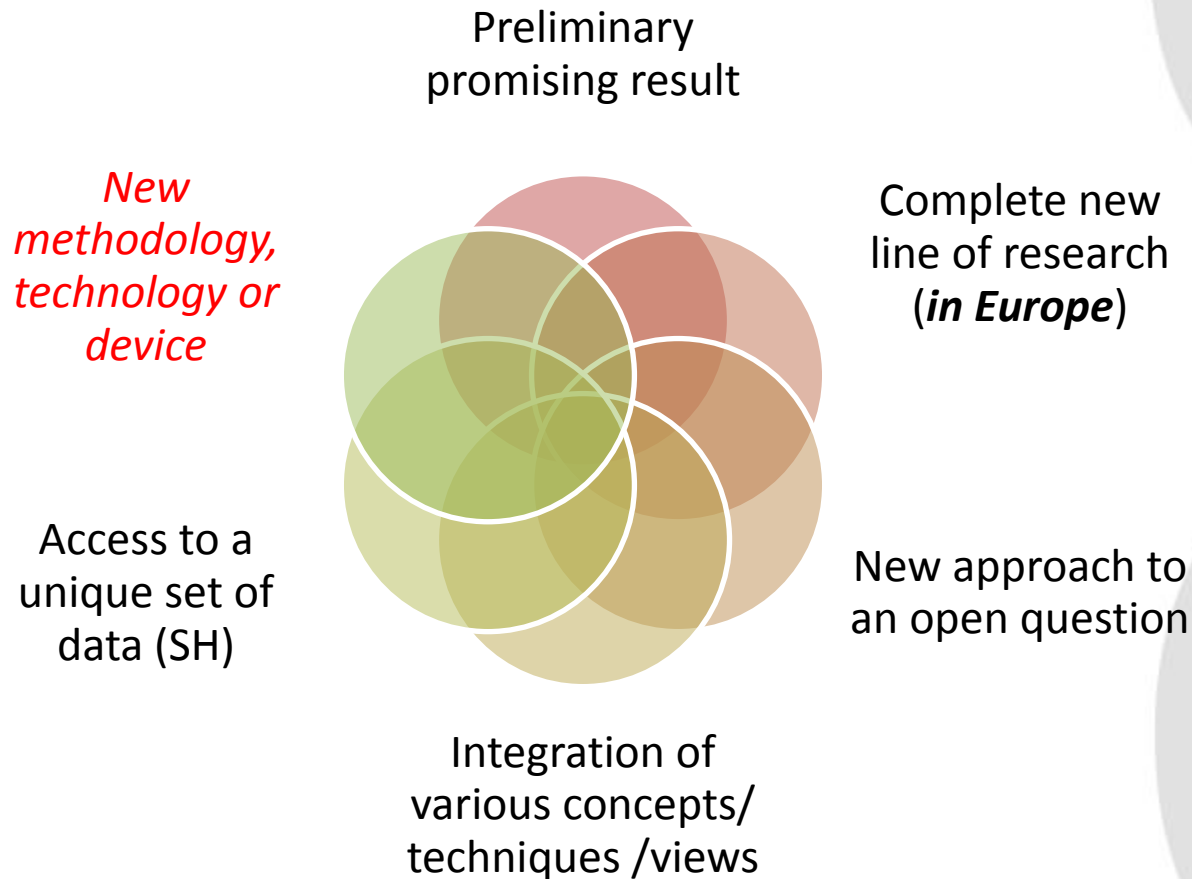
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# Messages

1. It is not THAT difficult: 25%-30% Success rate in STEP1
2. You need a very good IDEA
3. You need to write it down WELL:
  1. Clear picture of what you want to do: writing is doing research
  2. Understanding your readers: details of the evaluation process
  3. Devoting time & effort to the writing process & following some basic rules about writing

# What makes your proposal unique?





# Proposal structure: Participant Portal

## PART A – online forms

- A1 Proposal and PI info
- A2 Host Institution info
- A3 Budget

- 
- 
- 

## Annexes – submitted as .pdf

- Statement of support of HI
- If applicable: explanatory information on ethical issues; copy of PhD (StG, CoG); document for extension of eligibility window (StG, CoG)

-

# Administrative information

- A1, A2 on-line forms.
- A3 budget : Total budget must be equal than the one stated in B2.
- HI support letter: template given\*, duly signed and stamped with date.
- PhD Diploma
- Extension of eligibility: official docs.
- Ethics self-assessment on-line form → If needed, extra annex with relevant certificates/procedures...

# Exclusion of reviewers

- Up to three names, not reason needed
- Usually respected, but the panel chair has the last word.

# Panel Structure

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LS1 Molecular & Structural Biology & Biochemistry

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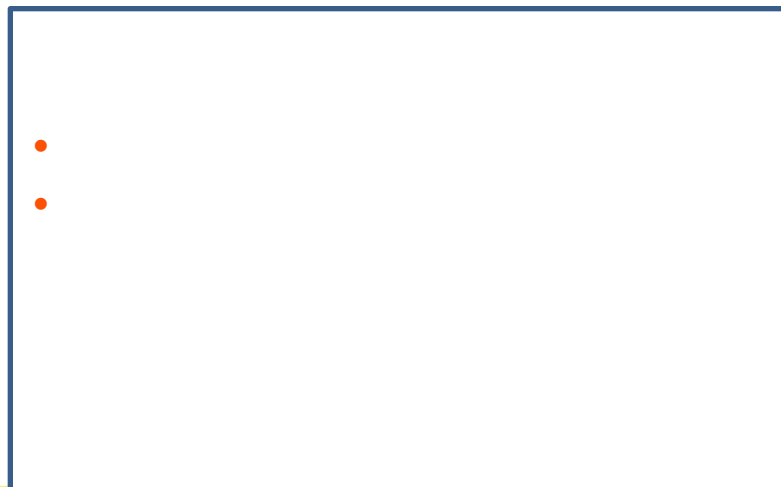
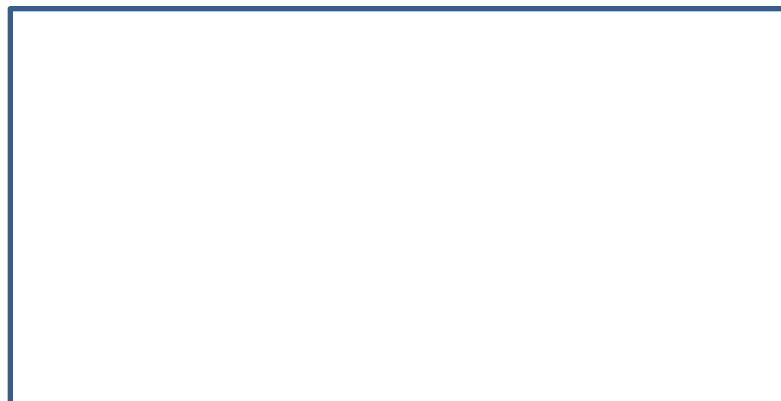
PE10 Earth System Science

Acronym, full title, abstract, B1, and B2

# THE FIRST DRAFT



# Submission of proposals



## PART B1 – submitted as .pdf

- Extended Synopsis 5 p.
- CV 2 p.
- Track Record 2 p.

## PART B2 – submitted as .pdf

- Scientific Proposal 15 p.

# General considerations

- [Success rate]+[resubmission restriction] = take it seriously!
- Writing an excellent proposal takes **time** and effort
- All retained proposals are excellent, but an excellent proposal can fail.
- Within the good ones, decisions are made in the margins
- Writing is a difficult task: when writing, actively try to be as clear and attractive as you can. And do **critically review your proposal**

# On acronyms and titles

## ACRONYM

- Stellarages
- ChinaCreative
- BNYQ
- BIODESERT
- MUSIC
- NANO**HEDONISM**

## FULL TITLE

- Accurate ages of stars
- From Made in China to **Created in China** - A Comparative Study of Creative Practice and Production in Contemporary China
- Breaking the Nyquist Barrier: A New Paradigm in Data Conversion and Transmission
- Biological feedbacks and ecosystem resilience under global change: a new perspective on dryland desertification
- Quantum Metamaterials in the Ultra Strong Coupling regime
- A Photo-triggered On-demand Drug Delivery System for **Chronic Pain**



# On acronyms and titles

## ACRONYM

- Pronounceable
- Catchy
- Evoquator of the science behind
- May be a short title!

## FULL TITLE

- Meaningful
- ... but not too specific

# The Cover Page: abstract + title + basic info

Proposal Full Title

PROPOSAL ACRONYM

Cover Page:

- Name of the Principal Investigator (PI)
- Name of the PI's host institution for the project
- Proposal duration in months

Proposal summary (identical to the abstract from the online proposal submission forms, section 1).

The abstract (summary) should, at a glance, provide the reader with a clear understanding of the objectives of the research proposal and how they will be achieved. The abstract will be used as the short description of your research proposal in the evaluation process and in communications to contact in particular the potential remote referees and/or inform the Commission and/or the programme management committees and/or relevant national funding agencies (provided you give permission to do so where requested in the online proposal submission forms, section 1). It must therefore be short and precise and should not contain confidential information.

Please use plain typed text, avoiding formulae and other special characters. The abstract must be written in English. There is a limit of 2000 characters (spaces and line breaks included).

SHORT and PRECISE  
with NO  
CONFIDENTIAL  
information

Explanation/justification of cross-panel or cross domain nature, if a secondary panel is indicated in the online proposal submission forms. There is a limit of 1000 characters, spaces and line breaks included.

justification on ID  
nature!! (key for the  
panel)



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# ABSTRACT: the door

## Possible structure

- Relevance
- Main objective
- Novelty
- Some hints of methodology
- Impact

## Most common errors

- No novelty (highlighted)
- No impact
- Too wordy
- Too many info on the state of the art and not the idea itself
- Info on the PI, or not relevant info



# Unified Principles of Interaction



## ONE

### Cover Page:

- Name of the Principal Investigator (PI): Michel BEAUDOUIN-LAFON
- Name of the PI's host institution for the project: Université Paris-Sud, France
- Proposal duration in months: 60 months

Most of today's computer interfaces are based on principles and conceptual models created in the late seventies. They are designed for a single user interacting with a closed application on a single device with a predefined set of tools to manipulate a single type of content. But **one is not enough!** We need flexible and extensible environments where multiple users can truly share content and manipulate it simultaneously, where applications can be distributed across multiple devices, where content and tools can migrate from one device to the next, and where users can freely choose, combine and even create tools to make their own digital workbench.

The goal of ONE is to fundamentally re-think the basic principles and conceptual model of interactive systems to empower users by letting them appropriate their digital environment. The project will address this challenge through three interleaved strands: **empirical studies** to better understand interaction in both the physical and digital worlds, **theoretical work** to create a conceptual model of interaction and interactive systems, and **prototype development** to test these principles and concepts in the lab and in the field. Drawing inspiration from physics, biology and psychology, the conceptual model will combine **substrates** to manage digital information at various levels of abstraction and representation, **instruments** to manipulate substrates, and **environments** to organize substrates and instruments into digital workspaces.

**By identifying first principles of interaction, ONE will unify a wide variety of interaction styles and create more open and flexible interactive environments.**

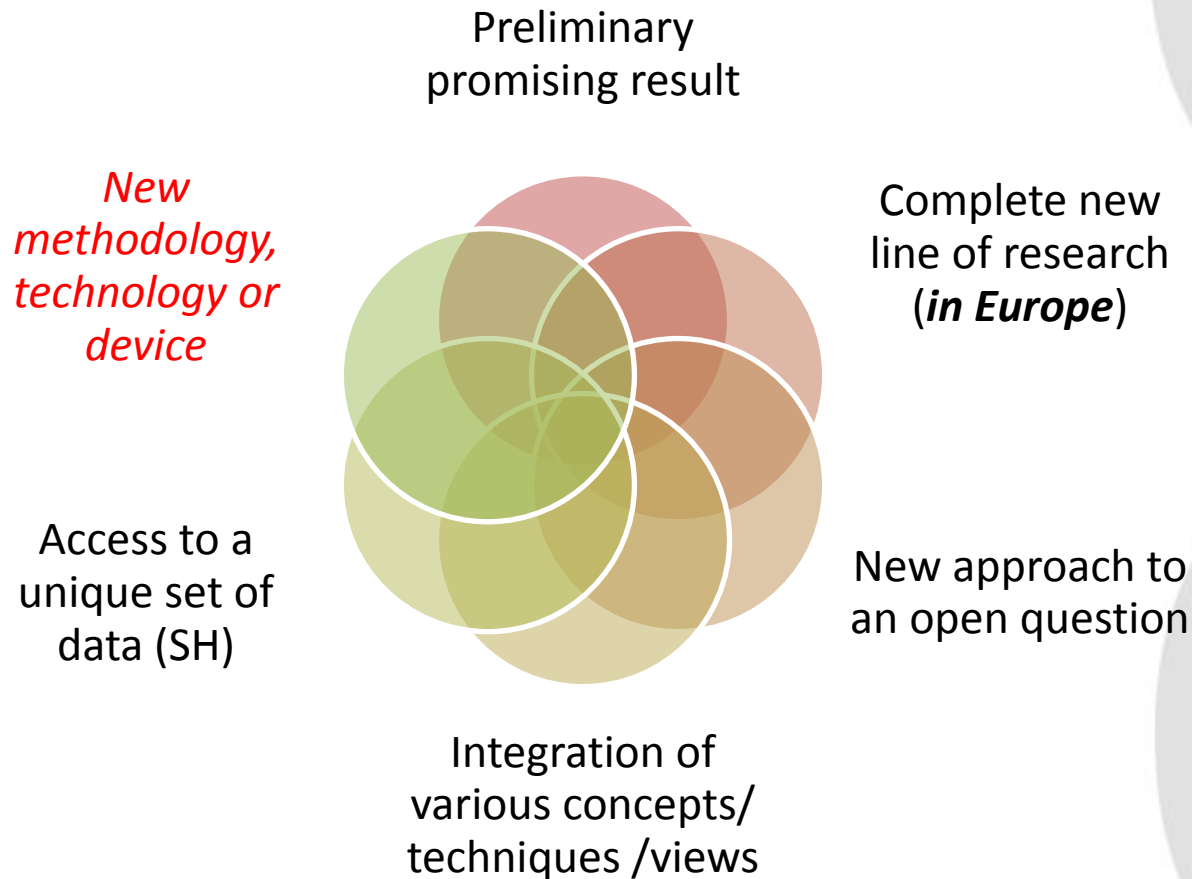


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# What makes your proposal unique?



# 1. Research project: Ground breaking nature, ambition and feasibility

RELEVANCE

## Ground-breaking nature and potential impact of the research project

To what extent does the proposed research address **important challenges**?

To what extent are the objectives **ambitious and beyond the state of the art** (e.g. novel concepts and approaches or development across disciplines)?

How much is the proposed research **high risk/high gain**?

NOVELTY

IMPACT

## Scientific Approach

To what extent is the outlined scientific approach **feasible bearing in mind the extent that the proposed research is high gain/high risk** (based on Extended Synopsis)?

To what extent is the proposed research methodology appropriate to achieve the goals of the project (based on full Scientific Proposal)? **(FEASIBILITY)**

To what extent does the proposal involve the development of novel methodology (based on full Scientific Proposal)? **(GROUNDBREAKING NATURE)**

To what extent are the proposed timescales and resources necessary and properly justified (based on full Scientific Proposal)? **(FEASIBILITY)**

FEASIBILITY



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# The extended synopsis

- Extended synopsis (5 pages): should give a concise presentation of the scientific proposal, including the scientific feasibility of the project, with particular attention to its ground-breaking nature and how it may open up new horizons or opportunities for research
- **Free format**
- **References do not count towards page limit**



# The Extended Synopsis

Evaluators say:

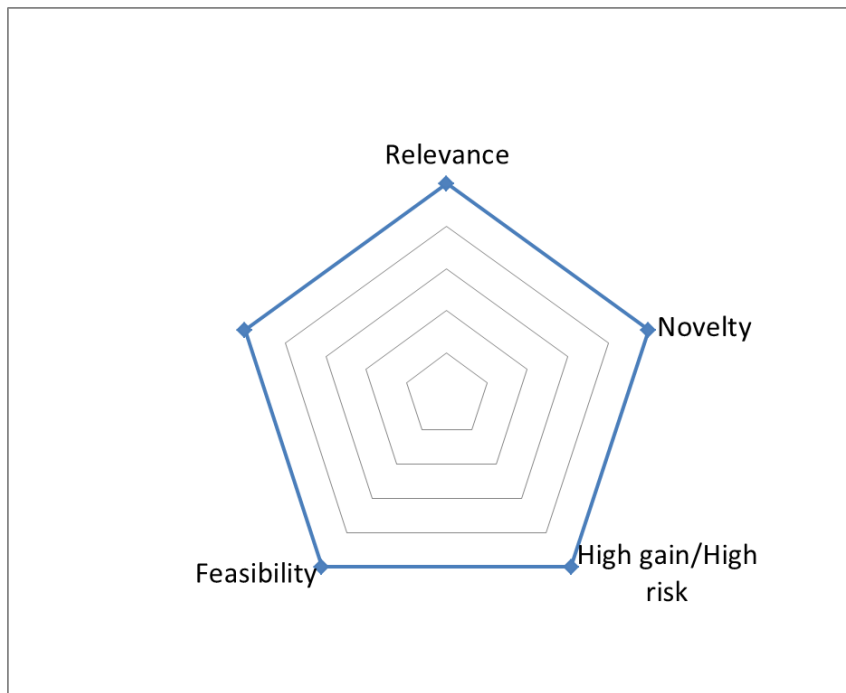
- Know the field
- Not a continuation of your postdoc but built on your previous experience
- Original and groundbreaking
- Ambitious but realistic (not mad)
- Hypothesis driven



# Extended Synopsis: Elementos en la evaluación

## Criterios

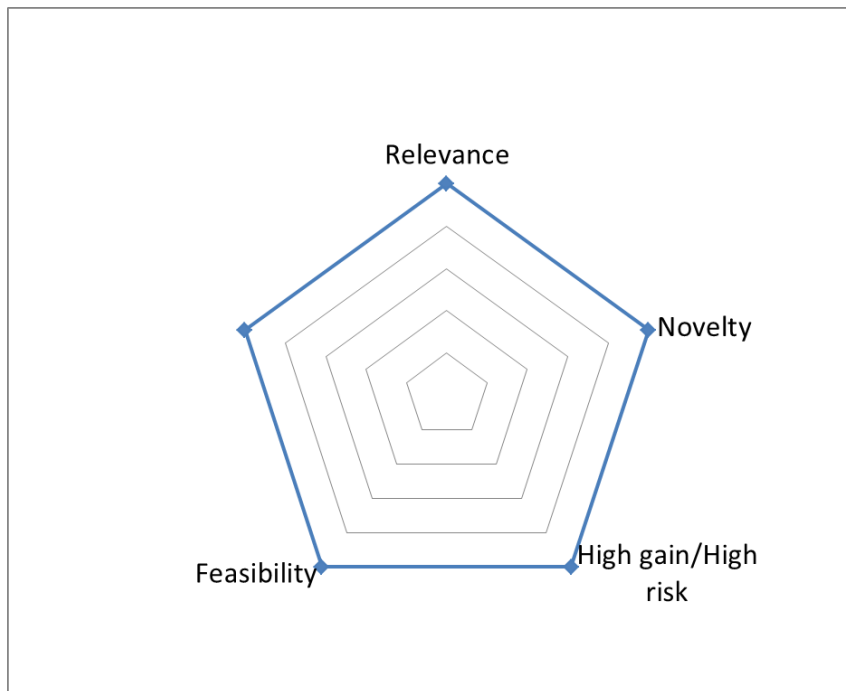
## Evidencias B1



?

# Extended Synopsis : Elementos en la evaluación

## Criterios



## Evidencias B1

- Encaje en el panel
- Scope/ Ambición
- Novedad PARA el panel (concepto, enfoque, metodología, integración)
- Limitaciones, planes B
- Impacto científico: SoA, (before/after)
- Metodología
- Recursos
- **Coherencia**
- Oportunidad,

# Extended synopsis

## Possible structure

- Main objective/idea /core concept of the project focusing on its novel aspects
- State of the art, nowadays limitations
- Methodology, challenges & risks: preliminary results, contingency plans
- Potential Impact
- Resources & team (optional)

## Most common errors

- Lack of clarity
- Ambiguity
- No risk analysis

## Opening statement

- “Age is a fundamental property of stars. **It is an essential tool to understand many diverse phenomena in astrophysics**, including the evolution of stars, planetary systems, and the Galaxy **Relevance for the WHOLE panel**”
- One of **the most intriguing topics in neuroscience and memory research today is 'reconsolidation'** : the phenomenon that a brief reminder renders an already consolidated memory labile again and that this fragile memory requires de novo protein synthesis to be reconsolidated. *Very attractive opening. Clear, self-explanatory*
- The disappearance of the earliest human culture, the Oldowan, and its substitution by a new technology 1.6 million years ago, the Acheulean, **is one of the main topics in modern Paleoanthropology**

## Limitations, need, OPORTUNITY:

- Despite the fact that magnetic fields have been known to be crucial in accretion discs since the early 90s, **the majority of astrophysical questions that depend on the details of how disc accretion proceeds are still being addressed using the standard accretion disc model (developed in the early 70s), where magnetic fields do not play an explicit role** *Very striking sentence highlighting the NEED of a new approach*
- These primate species and their tool use traditions are under imminent threat of extinction, and the **opportunity to collect such data will likely be lost within a few decades.**

# Clear objectives

- This project's **primary objective is to quantify degrees of gene flow between different populations of wild and domestic species** in order to address where and how many times early animal domestication took place . Very clear unique main objective
- This program has **two main objectives**: 1) Develop the theoretical framework to incorporate magnetic fields, and the ensuing turbulence, into self-consistent accretion disc models, and investigate their observational implications. 2) Investigate transport and radiative processes in collision-less disc regions, where non-thermal radiation originates, by employing a kinetic particle description of the plasma

# Impact & take home message

However, age is currently the most poorly known property of a star, often to no better than **30-40%** accuracy, which is not good enough ... Asteroseismology, the study of stellar oscillations, **offers the unique opportunity to estimate the ages of stars to within 5-10% of their lifetime.**

My eventual aim is to produce a coherent understanding of brain function from neural representations to systems-level involvement in behaviour **which might help to understand the neural mechanisms underlying memory impairments in neuro-degenerative diseases**

# Approach

In order to achieve these goals, we will use, and build upon, state-of-the-art magnetohydrodynamic and particle-in-cell codes in conjunction with theoretical modelling

This project will take advantage of **revolutionary genetic technologies to characterise, for the first time, the nuclear genomes of ancient dogs, pigs, and chickens. By combining the resolution of thousands of DNA markers with the time depth of archaeology**



# Preliminary data:

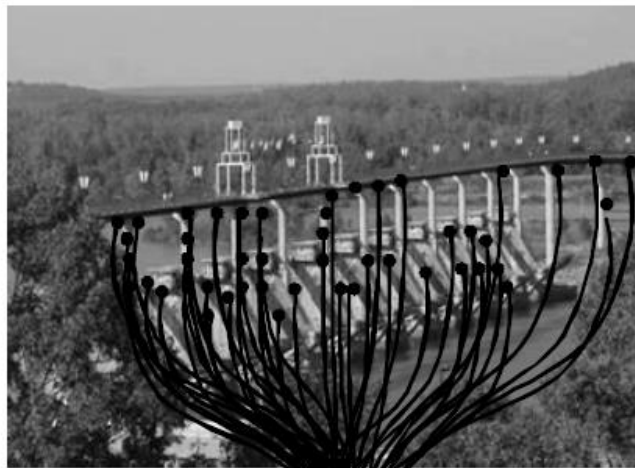
Recently, we developed *in vivo* optogenetic approaches for probing spinal circuits . We identified a novel sensory pathway in vertebrates which interfaces spinal circuits with the cerebrospinal fluid. We demonstrated that remote activation of these inputs triggered slow locomotion.

# PROPOSAL 1 (PE): EXTENDED SYNOPSIS

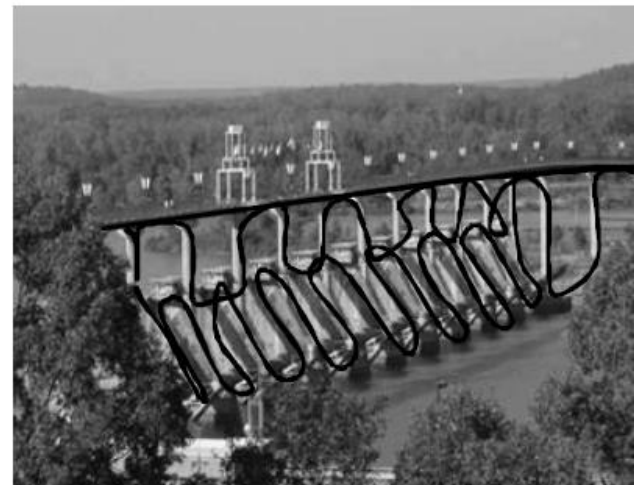
- B1 structure:
  - 1 paragraph: Set the context, the open question and its relevance for the WHOLE domain
  - 2 paragraph: Focus on the particular approach (unique set of data)
  - 3 paragraph. State of the Art (Figure showing nowadays limitations)
  - 4 paragraph. More of the state of the art: open questions (again)
  - Table with 5 objectives (impact: before/after)
  - 5 paragraph: Aims of the project
  - Methodology: two distinct tools
    - Tool1 (state-to-the-art technique, slightly new approach)
    - Tool2 (developed by the PI)
  - Work Plan: very briefly
  - References: 20-25, some of the PI

# Miguel González Herráez (PE7)

## U-FINE: overview



**N sensors, N wires,  
N calibrations**



# PROPOSAL 4 (LS): EXTENDED SYNOPSIS

- State of the art:
  - Relevance of the problem
  - Established as a new line of research from the posdoc stage
- Impact
- Methodology
- Feasibility

# PROPOSAL 6 (SH): EXTENDED SYNOPSIS

- Introduction
  - Aim: Extend the pilot developed by the PI at US
  - Box with the theoretical framework of the proposal
  - Relevance of the problem (social)
  - Context (state of the art)
  - HI paragraph & collaborations (US)
- Objectives: 1 main aim & 4 objectives
- Methods
  - Study design
  - Assessment
  - Figure with the scope of the study
- Risk assessment and feasibility (team profile, risk of data)
- Impact
- References: 12 (3 from the PI)

## 2. PI: Intellectual capacity, creativity and commitment (for StG and CoG)

### Starting and Consolidator

#### Intellectual capacity and creativity

*To what extent has the PI demonstrated the ability to propose and conduct ground-breaking research?*

*To what extent does the PI provide evidence of creative independent thinking?*

*To what extent have the achievements of the PI typically gone beyond the state of the art*

#### Commitment

*To what extent does the PI demonstrate the level of commitment to the project necessary for its execution and the willingness to devote a significant amount of time to the project (min 50% for Starting and 40% for Consolidator of the total working time on it and min 50% in an EU Member State or Associated Country) (based on the full Scientific Proposal)?*

## 2. PI: Intellectual capacity, creativity and commitment (for Advanced)

### Advanced

#### Intellectual capacity and creativity

*To what extent has the PI demonstrated the ability to propose and conduct ground-breaking research?*

*To what extent does the PI provide evidence of creative independent thinking?*

*To what extent have the achievements of the PI typically gone beyond the state of the art*

**To what extent has the PI demonstrated sound leadership in the training and advancement of young scientists?**

#### Commitment

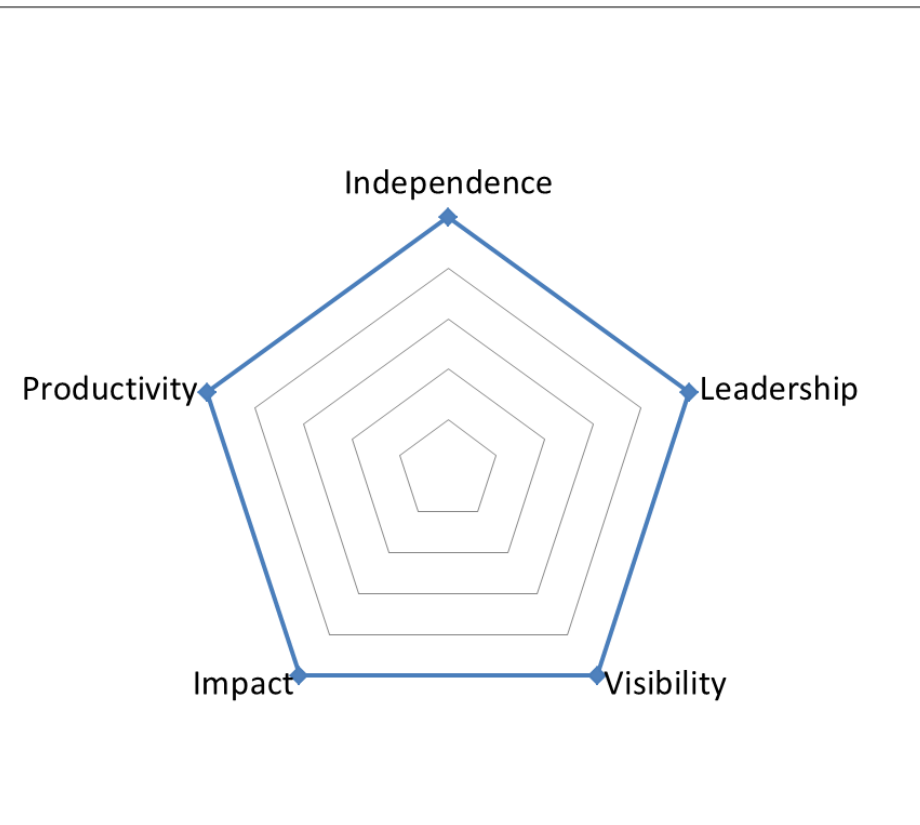
*To what extent does the PI demonstrate the level of commitment to the project necessary for its execution and the willingness to devote a significant amount of time to the project (min 30% of the total working time on it and min 50% in an EU Member State or Associated Country) (based on the full Scientific Proposal)?*

# Principal Investigator

## Criteria

## Evidence

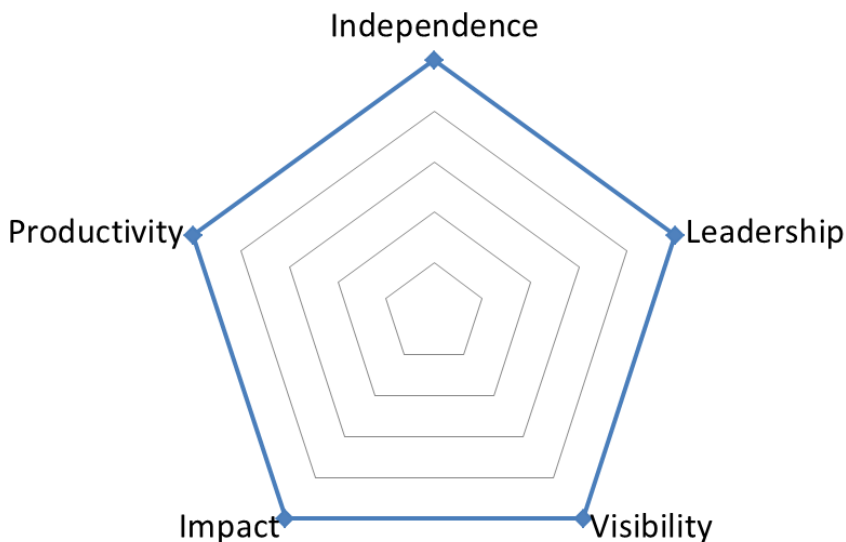
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# PI: Elements for evaluation

## Criteria



## Evidences

- Publications w/o PhD supervisor(s). Authorship
- Grants (role)
- Own line of research
- Mobility
- International collaboration
- Prizes
- High impact journals
- **Coherence**

# CV and Track record

Evaluators say:

- **Independence**
- **CLARITY:** Vague information won't help you.
- **QUALITY** vs QUANTITY
- The track record **must be in line** with the proposed research
- Numbers are ok but explain your contribution
- **EXPLAIN:** The panel members may not know if your merits are relevant or not (prizes, grants, journals...)
- Post-doctoral stays: CLARITY
- Contribution at each career step: explain gaps

# CV & Track record

## Content

- Follow the templates... but adapt them if necessary!
- Track record: rationale selection: quality vs quantity. EXPLAIN IT!
- Put every proof of independence you may have
- But avoid too local, not relevant merits

## Most common errors

- Lack of coherence between your track record and your proposal.
- Core competences missing (and you don't give any solution)
- Not structured/selected info

## Section b: Curriculum vitae (max. 2 pages)

*[The template below is provided only for guidance. It may be modified as necessary and appropriate.]*

**PERSONAL INFORMATION**

Family name, First name:

Researcher unique identifier(s) (such as ORCID, Research ID, etc. ...):

Date of birth:

URL for web site:

• **EDUCATION**

199?      PhD  
             Name of Faculty/ Department, Name of University/ Institution, Country  
 199?      Master  
             Name of Faculty/ Department, Name of University/ Institution, Country

• **CURRENT POSITION(S)**

2017 – 2017      Current Position  
                       Name of Faculty/ Department, Name of University/ Institution/ Country  
 2007 –            Current Position (please specify if supervision)  
                       Name of Faculty/ Department, Name of University/ Institution/ Country

• **PREVIOUS POSITIONS**

200? – 200?      Position held (please specify if supervision)  
                       Name of Faculty/ Department, Name of University/ Institution/ Country  
 200? – 200?      Position held (please specify if supervision)  
                       Name of Faculty/ Department, Name of University/ Institution/ Country

• **FELLOWSHIPS AND AWARDS**

200? – 200?      Name of Faculty/ Department/Centre, Name of University/ Institution/ Country  
 200?              Award received from Name of Institution/ Country  
 198? – 199?      Scholarship, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

• **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

200? – 200?      Number of Postdocs/ PhD/ Master Students  
                       Name of Faculty/ Department/ Centre, Name of University/ Institution/ Country

• **TEACHING ACTIVITIES (if applicable)**

200? –            Teaching position – Topic, Name of University/ Institution/ Country  
 200? – 200?      Teaching position – Topic, Name of University/ Institution/ Country

- **Use it** but feel free to adapt it to your needs
- New: ORCID, Research ID
- URL website: introduce all references you think can help you: your group website, HI website, postdoc website, ... (and not only here)

# Curriculum Vitae TEMPLATE

Applicant's last name

Part B1

ACRONYM

*Appendix: All ongoing and submitted grants and funding of the PI (Funding ID)  
Mandatory information. Does not count towards page limits.*

## On-going Grants

| Project Title | Funding source | Amount | Period | Relation to current ERC proposal |
|---------------|----------------|--------|--------|----------------------------------|
|               |                |        |        |                                  |
|               |                |        |        |                                  |
|               |                |        |        |                                  |

## Applications

| Project Title | Funding source | Amount | Period | Relation to current ERC proposal |
|---------------|----------------|--------|--------|----------------------------------|
|               |                |        |        |                                  |
|               |                |        |        |                                  |
|               |                |        |        |                                  |

- Extra 2 pages limit
- **Funding ID:** To avoid double funding, but also to check you leadership.



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## Section b: Curriculum Vitae

### PERSONAL INFORMATION

**Gaita-Ariño, Alejandro** Date of birth: May 26, 1976  
Instituto de Ciencia Molecular, Universidad de Valencia (UV)  
c/ Catedrático José Beltrán, 2, 46980, Paterna, Spain  
Tel: +34 96 354 4421 Fax: +34 96 354 3273

web page: <http://www.uv.es/gaita> e-mail: [alejandro.gaita@uv.es](mailto:alejandro.gaita@uv.es)  
Researcher ID: D-2110-2014



### EDUCATION

|      |                                  |  |                               |
|------|----------------------------------|--|-------------------------------|
| 2004 | PhD in Chemistry<br>supervisors: | (grade: excellent Cum Laude)<br>Prof. E. Coronado and Dr. J.M. Clemente-Juan | University of Valencia, Spain |
| 1999 | Msc in Chemistry                 | (grade: excellent)   | University of Valencia, Spain |

### POSITION

2013 – 2018 Ramón y Cajal Fellow, Group Leader.  
ICMol, UV, Spain

2011 – 2013 Research Associate, ICMol, UV, Spain

2010 – 2011 Marie Curie fellow, ICMol, UV, Spain

2008 – 2010 Marie Curie fellow, PITP, UBC, Canada

2007 – 2008† Postdoctoral fellow, PITP, UBC, Canada

2007†: Postdoctoral fellow, ICMol, UV, Spain

† : until I resigned to accept the next Fellowship

2004 – 2007 Research Associate, ICMol, UV, Spain

2000 – 2004: Early Stage Researcher, Dept. Inorg. Chem, UV, Spain

1998 – 1999 Student Collaborator, Dept. Inorg. Chem, UV, Spain

### FUNDING: GRANTS AND FELLOWSHIPS

**Ramón y Cajal Fellowship**  
(Spanish government)

**Marie Curie Int. Out. Fellowship**  
(CORDIS-FP7)

**Postdoctoral Fellowship**, (Spain)

**Postdoctoral Fellowship**  
(Valencian regional government)

Predocctoral Grant (Valencia)

Collaboration Grant, (Spain)

### RESEARCH INTERESTS

My research interests are in molecular magnetism and quantum computing. I am currently interested in

- (1) the theoretical modeling of molecular nanomagnets (in particular rare-earth single-ion magnets),
- (2) the rational design of molecular spin qubits and of schemes for implementing quantum gates and
- (3) the modeling of the coupling of lattice phonons with molecular excitations.

### SUPERVISION OF GRADUATE STUDENTS (2004-2014) and RESEARCH TEAM

Masters + PhD thesis (past): S. Cardona-Serra, M. A. Abdallah Aldamen

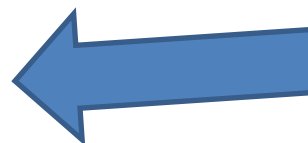
Masters + PhD thesis (ongoing): J. J. Baldovi Jachán, L. Escalera Moreno

I currently lead a small research team formed by S.CS (postdoc), JJB (PhD) and LEM (Master).

### RESEARCH STAYS and MAIN COLLABORATORS

|                             |                   |                                    |    |
|-----------------------------|-------------------|------------------------------------|----|
| ongoing collaborations with | Prof. D. Loss,    | Universität Basel,                 | CH |
|                             | Dr. S. Hill,      | National High Magnetic Field Lab., | US |
|                             | Dr. F. Luis,      | Universidad de Zaragoza,           | ES |
|                             | Dr. L. Bogani,    | Universität Stuttgart,             | DE |
|                             | Dr. M. Schechter, | Ben Gurion University,             | IL |

|             |   |          |
|-------------|---|----------|
| 2013        | 1 short research stays at Institut für Physik (Basel, CH).                      | 3 weeks  |
| 2007-2010   | 1 postdoctoral stay at Pacific Institute of Theoretical Physics (Vancouver, CA) | 3 years  |
| 2006        | 2 research stays at Institut für Physik (Basel, CH).                            | 3 months |
| 1999 – 2005 | 5 short visits to the Institut Laue Langevin (Grenoble, FR)                     | 2 weeks  |
| 2005 – 2006 | 2 research stays at Université Paul Sabatier (Toulouse, FR)                     | 7 months |





## CAREER RECORD

33 scientific publications in high-impact peer-reviewed international journals, including:  
Nature Nanotechnology<sup>1</sup> (1) Phys. Rev. Lett.<sup>2</sup> (2) Chem. Commun.<sup>3</sup> (2) Chem. Sci. (1)  
J. Am. Chem. Soc. (3) Angew. Chem. Int. Ed. (1) Chem. Soc. Rev. (1) Inorg. Chem. (4)  
Chem. Eur. J. (3) J. Mater. Chem. (2) Dalton Trans. (2)  
n° of citations = 1265 (25% in 2013) h-index = 17 citations/article = 38  
Corresponding Author (CA) in 6 publications (+4 submitted).  
2 publications without my PhD supervisors (+2 submitted).  
2 "hot" papers (1 as CA) and 4 "research front" papers (3 as CA),  
with a total of 5 "highly cited" papers (3 as CA).<sup>23</sup>  
<sup>1</sup> highlighted in a News and Views; <sup>2</sup> 1 PRL Editors' Suggestion; <sup>3</sup> 1 "referee-recommended"

## FUNDING: PROJECTS

I participated in 20 R+D+I projects funded in competitive tenders by public or private bodies.

| Highlighted projects in the past 5 years (budget for the UV node):   | coordinator                |         |                    |
|--|----------------------------|---------|--------------------|
| STREP Project no. 211284 "Molecular Spin Clusters for Quantum Information Processes", ICT-2007.8.0   | M. Affronte                | 240 k€  | 2008 – 2011        |
| Consolider-Ingenio CSD2007-00010 "Molecular Nanoscience"   | E. Coronado                | 2200 k€ | 2007 – 2013        |
| Collaborative project FP7-270369, "Electric Field Control Over Spin Molecules"   | H. van der Zant            | 450 k€  | 2011 – 2013        |
| ERC Advanced Grant FP7-ERC-247384<br>"Magnetic Molecules and Hybrid Materials for Molecular Spintronics"   | E. Coronado                | 1679 k€ | 2010 – 2015        |
| COST Action CM1203<br>"Polyoxometalate Chemistry for Molecular Nanoscience"  | J. Errington               | 100 k€  | 2012 – 2016        |
| MAT2011-22785<br>"Del magnetismo molecular a la espintrónica molecular"  | E. Coronado                | 600 k€  | 2012 – 2014        |
| MAT2007-61584 "Materiales moleculares para el magnetismo y la electrónica molecular: del diseño, estudio y procesamiento de nuevos materiales al desarrollo de aplicaciones" | E. Coronado                | 1244 k€ | 2007 – 2014        |
| Nanomagnetismo Molecular: del diseño de moléculas magnéticas a la fabricación de dispositivos espintrónicos PROMETEOII/ 2013/006   | E. Coronado                | 500 k€  | 2013 – 2016        |
| PIOF-GA-2008-219514 "Decoherence in magnetic molecules as qubits"  | A. Gaita                   | 220 k€  | 2008 – 2011        |
| Ramón y Cajal project RYC-2012-11908   | A. Gaita                   | 210 k€  | 2013 – 2018        |
| Marie Curie Network SEP-210163218 "Anisotropy in Molecular Compounds of Rare Earths and Uranium"   | R. Winpenny                | 400 k€  | (evaluation stage) |
|  | node coordinator: A. Gaita |         |                    |

## CONTRIBUTIONS TO CONFERENCES

40 contributions to conferences, including 6 contributed oral talks and 7 invited talks:  
2014: "10th International Workshop on Nanomagnetism and Superconductivity at the Nanoscale"  
2013: American Physical Society March Meeting  
2012: 62<sup>nd</sup> Fujiwara Seminar "Frontiers and Perspectives in Molecule-Based Quantum Magnets"  
2012: Symposium "Frontiers in Metal-Oxide Cluster Science"  
2011: Israel Physical Society Conference  
2010: International Chemical Congress of Pacific Basin Societies  
2008: European Materials Research Society Spring Meeting

## JOURNAL REFEREEING

I am presently reviewer for the American Chemical Society (*Inorganic Chemistry*), the Royal Society of Chemistry (*Physical Chemistry Chemical Physics*) and Elsevier (*Chemical Physics Letters*).

## OTHERS: LANGUAGE PROFICIENCY + OUTREACH

U.F.5: Spanish U.F.4: English U.F.3: Catalan U.F.2: German, French, Japanese

**for completing 'Part B' of** s track-Record (max. 2 pages)**HIGHLIGHTED PUBLICATIONS**

CV section. I select five representative publications that I consider  
ing those I contributed as corresponding author.

1. Espinosa G, López-Montero I, Moray F, Langevin D. Shear rheology of lipid monolayers and insights on membrane fluidity. 2011. *Proc Natl Acad Sci U S A*. 108: 6608-13. (11 citations)
2. Rodríguez-García R, Arriaga LR, Mell M, Moleiro LH, López-Montero I, Moray F. Bimodal spectrum for the curvature fluctuations of bilayer vesicles: pure bending plus hybrid curvature-dilatation modes. 2009. *Phys Rev Lett*. 102: 128101. (22 citations)
3. López-Montero I\*, Moray F, Vilez M, Devaux PF. Ceramides: from lateral segregation to mechanical stress. 2010. *Biochim Biophys Acta*. 1798: 1348-56. Invited Review (11 citations)
4. Catapano ER, Arriaga LR, Espinosa G, Moray F, Langevin D, López-Montero I\*. Solid character of membrane ceramides: a surface rheology study of their mixtures with zphingomyelin. 2011. *Biophys J*. 101: 2721-30. (2 citations)
5. López-Montero I\*, Rodríguez-García R, Moray F. Artificial Spectrin Shells Reconstituted on Giant Vesicles. 2012. *J Phys. Chem. Lett*. 3: 1583-88.

**INVITED PRESENTATIONS****Peer reviewed international conferences**

- 2012. I. López-Montero, L.R. Arriaga and F. Moray. Lipid domains as membrane stabilizers under mechanical stress. Dijon Domains 2012. Dijon, France.
- 2012. I. López-Montero, R. Rodríguez-García and F. Moray. Artificial spectrin shells reconstituted on giant vesicles from deconstructed. International Congress of the Spanish Biophysical Society. Barcelona, Spain
- 2010. I. López-Montero, R. Rodríguez-García, L.R. Arriaga, M. Mell and F. Moray. Fluctuation dynamics of polymer membranes. International Soft Matter Conference 2010. Granada, Spain
- 2009. I. López-Montero, P. Miteos, P. López-Nirvajos, F. Moray, M. Vilez, G. Rivas, J. Mingorance and M. Vicente. Exploring intrinsic disorder of unstructured membrane proteins by surface polymer physics. 7th European Biophysics Congress. Genoa, Italy
- 2005. I. López-Montero, Richard Callaghan and P.F. Devaux. Testing lipid translocation with Giant Unilamellar Vesicles. Annual Meeting RTN Network "Flippases". Berlin - Germany

**International Advanced Schools**

- 2011. I. López-Montero. Reconstructing Spectrin Skeletons on Model Biomembranes. 4th European School on Molecular Nanoscience. Peñíscola, Spain

**PARTICIPATION IN RESEARCH PROJECTS AS PRINCIPAL INVESTIGATOR**

- 2008. SC3084 Bending and compression elasticity of lamellar phases of phospholipids from European Union - European Synchrotron Radiation Facility, EU
- 2009. 16-02-73 BM16 Bending and compression elasticity of lamellar phases containing ceramides from European Synchrotron Radiation Facility, EU.

**MENTORING**

# Style #1

# Clean, to the point.



Section c: Early achievements track-record (max. 2 pages)

My two current main research interests, which serve as basis for this project, are spin qubits and rare-earth single-ion magnets. In each one of these two fields I have made seminal contributions (see below) which have strongly impacted in the molecular magnetism community. The first one concerns the proposal of using molecular systems for the coupling of two spin qubits in order to develop a quantum gate (published in Nature Nanotechnology, 2007); this theoretical work had a strong impact in the nascent field of molecular spintronics since it proposed the way of controlling the spin state of a molecular system through an electrical current. The second was the discovery that lanthanoid mononuclear complexes based on polyoxometalates behave as single-molecule magnets (published in JACS, 2008). This work showed to the chemists working in molecular magnetism the key role played by the crystal field around the lanthanide in the magnetic properties exhibited by these mononuclear complexes, which represent the ultimate step towards the miniaturisation of the single-molecule magnets, as a single metal ion, rather than a magnetic cluster, is enough to behave as a tiny magnet.

For both fields, these contributions were the first published papers about these topics at the ICMol, hence, they served to open two new lines of research. Most of my publications after my PhD period, including all my major contributions to date (see below for a selection) stem from the two fields mentioned above. Nowadays a total of around 30 researchers and technicians are working at the ICMol in these two lines. Four PhD students have been working in these lines of research under my supervision since then: M. A. AlDamen, S. Cardona-Serra, J. J. Baldoví and L. Escalera (M.A.A. is now Distinguished Researcher in the U. of Jordan, he has obtained funding and supervises a PhD working in the same topic). Moreover, my theoretical team is a reference for molecular spin qubits in Spain, being the only chemistry team participating in the First Workshop on Quantum Information in Spain (2012). A Consolidator Grant will launch my career as group leader, which has recently been officially kickstarted by the extremely competitive Ramón y Cajal program, with 175 grants for 2196 applications (start: Nov. 2013). I include here 10 highlighted publications, divided by career period, plus 2 works currently under review. The star \* indicates I am corresponding author (or first author in a publication with no starred author).

PhD period

*"Magnetic polyoxometalates: Anisotropic exchange interactions in the Co<sub>4</sub>(II) moiety of [(NaOH)<sub>3</sub>Co<sub>4</sub>(H<sub>2</sub>O)(PW<sub>12</sub>O<sub>40</sub>)<sub>3</sub>]<sup>13-</sup>",  
J. M. Clemente-Juan *et al.*, *Inorg. Chem.* 2005, 44, 3389 [cites: 54]*

This work, representative of my PhD, focused on the use of Inelastic Neutron Scattering to characterize the exchange in transition metal ions.

Intraeuropean postdoctoral period

In this period I produced my first scientific breakthrough, on the topic of using magnetic molecules as quantum bits and quantum gates:

*"Spin qubits with electrically gated polyoxometalate molecules",  
J. Lehmann *et al.*, Nature Nano. 2007, 2, 312 [cites: 164]*

J.L. and I equally contributed to the main ideas of the paper. This proposal built upon the theoretical work



Style #2



## Section c: Ten years track-record (max. 2 pages)

Over the past ten years, my research has focused on three main areas. First, I have continued to work on fundamental aspects of interaction, in particular on the performance of basic interaction tasks such as target acquisition and I developed advanced techniques that optimize performance in a variety of settings [1, 4, 9, 10]. Second, I have started to work on interaction in large interactive rooms that feature a variety of display and interaction devices and that support co-located as well as remote collaboration [2, 3, 6]. I have introduced *multisurface interaction*, which generalizes my instrumental interaction model to such environments. I anticipate that interactive rooms will become prevalent in the next ten to twenty years if we can create interfaces that are as easy to use and powerful as those created for desktop computers. Finally, I have maintained a strong interest in the design and engineering aspects of interactive systems [5, 7, 8], as they challenge many assumptions and practices of traditional software engineering.

From 2005 to 2009, I served a second term as director of the laboratory for computer science (LRI – <http://www.lri.fr>) at Université Paris-Sud, joint with CNRS. During my 8-year tenure, the lab grew from 160 to 280 members and we created nine joint research groups with Inria, which was establishing a new research center on the Saclay campus. I was also heavily involved in the creation of PCRI and Digiteo, two research networks linking all the computer science labs of the area, which contributed to the establishment of the new Université Paris-Saclay. Despite this heavy administrative load and a substantial teaching load (3 courses a year), I continued a sustained research activity and was inducted in the ACM SIGCHI Academy in 2006.

I then spent two years as a visiting professor at Stanford University, during which I successfully applied for a 5-year fellowship with the prestigious Institut Universitaire de France. I also coordinated a successful project proposal to the French government call for Equipments of Excellence, called Digiscope (<http://digiscope.fr>). This 22M€ project received 6.7M€ funding from the French government, the rest being provided by the ten research partners. By the end of 2015, we will have created the ten interactive rooms planned in the project and interconnected them with a telepresence network enabling remote collaboration across the rooms. Each room features large wall-sized displays from 8 to 140Mpixels, including two immersive CAVEs and four rooms with 3D capability, and rich input capabilities such as full-room motion-tracking systems and multi-touch displays. The rooms are used for research in human-computer interaction and virtual reality as well as visualization of complex simulations and natural phenomena, advanced computer graphics, and more.

Since my return from Stanford, I manage Digiscope and I am the head of the newly formed Human-Centered Computing research group (8 faculty, 25 members). I have created and am chairing two international Masters

- Gjerulfsen, T., Klokmoose, C., Eagan, J., Pillias, C. & Beaudouin-Lafon, M. (2011) **Shared Substance: Developing Flexible Multi-Surface Applications**. In *CHI '11: Proc. Human Factors in Computing Systems*. ACM, pages 3383-3392. 40 citations.
- Appert, C. & Beaudouin-Lafon, M. (2008) **SwingStates: Adding State Machines to Java and the Swing Toolkit**. *Software: Practice and Experience*, 38(11):1149-1182. 48 citations.
- Beaudouin-Lafon, M. & Mackay, W. (2007) **Prototyping Tools and Techniques**. In *Human Computer Interaction Handbook: Fundamentals*. CRC Press. 104 citations.
- Ramos, G., Cockburn, A., Balakrishnan, R. & Beaudouin-Lafon, M. (2007) **Pointing lenses: facilitating stylus input through visual- and motor-space magnification**. In *CHI '07: Proc. Human Factors in Computing Systems*. ACM, pages 757-766. 50 citations.
- Guiard, Y. & Beaudouin-Lafon, M. (2004) **Target acquisition in multiscale electronic worlds**. *International Journal of Human Computer Studies (IJHCS)*. Special Issue *Fits' law: fifty years later: Applications and contributions from human-computer interaction*, 61(6):875-905. 66 citations.

## Invited presentations

In my field, only keynote speakers are invited at international conferences. I was a keynote speaker at the AVI Conference in 2004, and at two international workshops (FITG 2012, CHI 2013).

I have given about 40 invited seminars around the world over the past ten years, including a Google Tech Talk and distinguished lectures at MIT, Stanford, UC San Diego, UC Irvine, Columbia, UCL, London, Univ. Glasgow, LMU Munich, Univ. Aarhus, AIT Bangkok. I have also been invited to two Dagstuhl seminars. In 2015, I was nominated an ACM Distinguished Speaker (<http://dsp.acm.org>) for three years.

## Organisation of international conferences

In 2013, the flagship conference in HCI, the ACM Conference on Human Factors in Computing Systems (CHI 2013 – <http://chi2013.acm.org>), came to Paris for the first time. As Technical Program co-chair, I coordinated the entire program of the conference, with 1000 presentations selected from 3600 submissions (including 400 full papers out of 2000 submissions). Together with the conference chair and my co-chair, we coordinated the 110 members of the organizing committee and organized the in-person meeting of the 210 program committee members to select full papers. We used our WILD interactive room to create the conference program, using for the first time a constraint-based system to avoid conflicts and crowd-sourced information from authors to create the sessions. The conference started with 31 workshops over the first two days, followed by four conference days with 16 parallel sessions, plus ongoing events such as Interactivity, a set of 77 interactive exhibits. CHI 2013 attracted a record-breaking 3500 participants from 54 countries.

Over the past ten years, I also chaired the ECSCW conference (250 participants), and I was Program Chair of

## Top ten publications in the last ten years

**Note:** In my field, the top conferences are ACM CHI and ACM UIST. Publication in these conferences is considered as prestigious as in the top journals in the field (ACM TOCHI, IJHCS). I work collaboratively with students and colleagues. As the most senior researcher, my name is usually last in the list of authors. However I only co-sign papers for which I have substantially contributed to both the work and the writing.

However I only co-sign papers for which I have substantially contributed to both the work and the writing.

- Nancel, M., Chapuis, O., Pietriga, E. & Beaudouin-Lafon, M. (2015) **Mid-Air Pointing on Ultra-High-Resolution Wall Displays**. *Trans. Computer-Human Interaction (TOCHI)*. ACM, in print, 50 pages.
- Liu, C., Chapuis, O., Beaudouin-Lafon, M., Lecolinet, E. & Mackay, W. (2014) **Effects of Display Size and Navigation Type on a Classification Task**. In *CHI '14: Proc. Human Factors in Computing Systems*. ACM, pages 4147-4156. (*Best Paper Award*). 6 citations.
- Beaudouin-Lafon, M., Chapuis, O., Eagan, J., Gjerulfsen, T., Huot, S., Klokmoose, C., Mackay, W., Nancel, M., Pietriga, E., Pillias, C., Prinet, R. & Wagner, J. (2012) **Multi-surface Interaction in the WILD Room**. *IEEE Computer*, 45(4):48-56. 22 citations.
- Ghomi, E., Faure, G., Huot, S., Chapuis, O. & Beaudouin-Lafon, M. (2012) **Using Rhythmic Patterns as an Input Method**. In *CHI '12: Proc. Human Factors in Computing Systems*. ACM, pages 1253-1262. (*Best Paper Award*). 12 citations.
- Eagan, J., Mackay, W. & Beaudouin-Lafon, M. (2011) **Cracking the Cocoa Nut: User Interface Programming at Runtime**. In *UIST 2011: Proc. User Interface Software and Technology*. ACM, pages

I received two "Best of CHI award" (top 1% of submissions) at ACM CHI [2, 4], an "Honorable mention award" (top 5% of submissions) at ACM CHI 2012, and a "Notable mention award" at ACM UIST [5].

## Major contributions to the early careers of excellent researchers

Ten Ph.D. students graduated under my supervision over the past ten years. Two of them are now assistant professors, another is a tenured researcher with CNRS. Ten of my former Ph.D. students hold or have held academic positions in Universities and research organizations. Two of them, who were assistant professors, were recruited as tenured senior research scientists by Inria in 2006 and 2009, which is quite rare: Jean-Daniel Fekete is a prominent researcher in Information Visualization and heads the Inria AVIZ group; Nicolas Reussel is scientific director of the Inria-Lille research center and heads the Inria MUIO-NR group.

CE

# THE SCIENTIFIC PROPOSAL



GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE ECONOMÍA  
Y COMPETITIVIDAD

oficina  
europea



# B2: Full proposal

## Structure

- Objectives and state of the art
- Methodology
- Resources (including budget table)

Commitment of PI

## Content

- More detailed info on state of the art and methodology (3-9-3)
- To be read by external referees

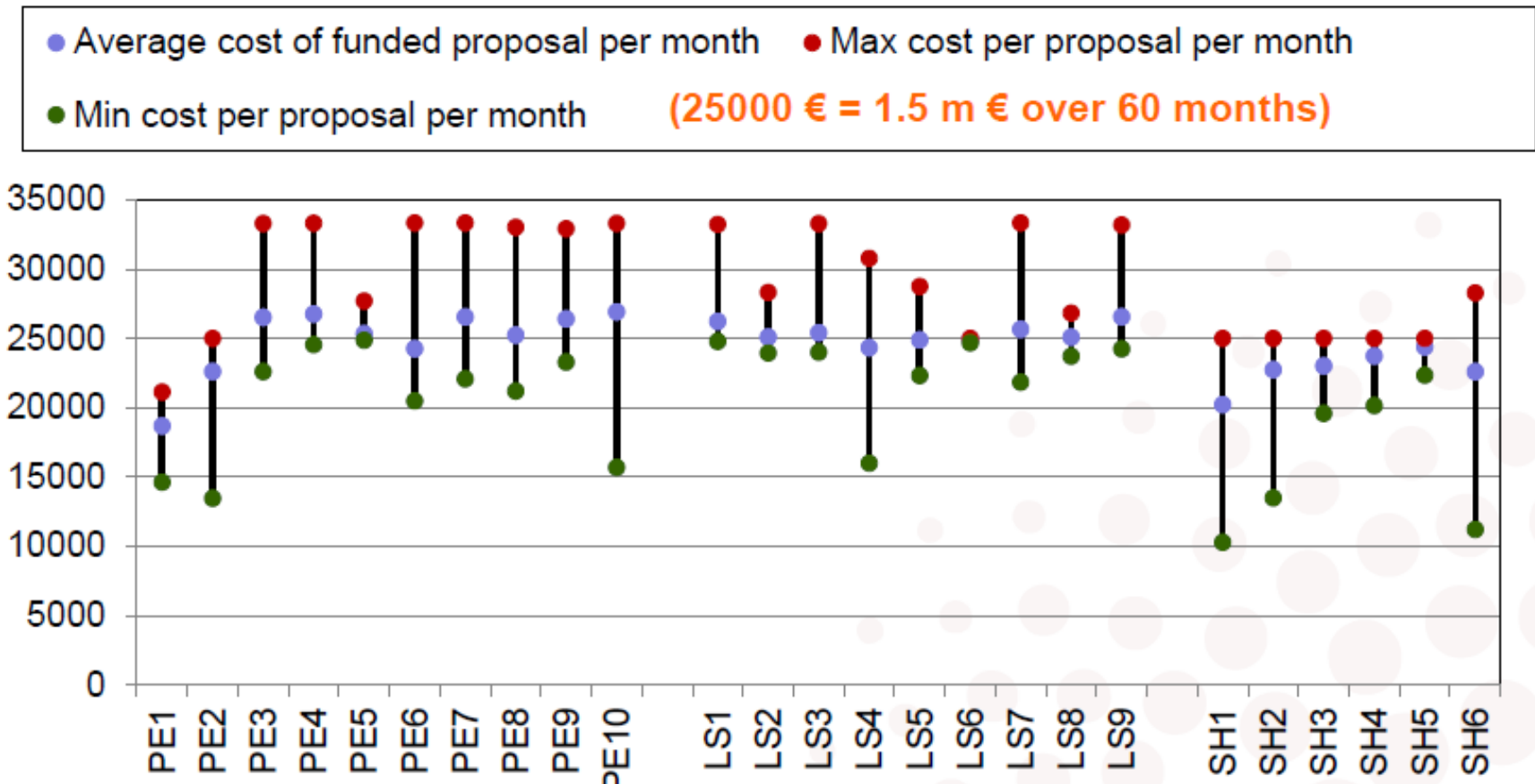
# B2 (C) Resources

| Cost Category   |   |   | Total in Euro |
|---|---|---|---------------|
| Direct Costs <sup>1</sup>   | Personnel                                     | PI <sup>2</sup>                                 |               |
|   |   | Senior Staff                                    |               |
|   |   | Postdocs  |               |
|   |   | Students  |               |
|   |   | Other   |               |
|   | i. Total Direct Costs for Personnel (in Euro) |   |               |
|   | Travel  |   |               |
|   | Equipment                                     |   |               |
|   | Other goods and services                      | Consumables                                     |               |
|   |   | Publications (including Open Access fees), etc. |               |
|   |   | Other (please specify)                          |               |
| ii. Total Other Direct Costs (in Euro)                                    |   |   |               |
| A – Total Direct Costs (i + ii) (in Euro)                                 |   |   |               |
| B – Indirect Costs (overheads) 25% of Direct Costs <sup>3</sup> (in Euro) |   |   |               |
| C1 – Subcontracting Costs (no overheads) (in Euro)                        |   |   |               |
| C2 – Other Direct Costs with no overheads <sup>4</sup> (in Euro)          |   |   |               |
| Total Estimated Eligible Costs (A + B + C) (in Euro) <sup>5</sup>         |   |   |               |
| Total Requested EU Contribution (in Euro) <sup>6</sup>                    |   |   |               |

Besides the table, justification of profiles, equipment needed, and use of other EXISTING resources

|   |   |
|---|---|
| For the above cost table, please indicate the duration of the project in months:  |   |
| For the above cost table, please indicate the % of working time the PI dedicates to the project over the period of the grant: | % |

# StG2014: Average budget of funded projects



¡4 ojos ven más que 2!

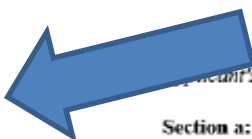
# PROOF READING



# The writing process

- Use the first and last paragraphs to convey the core ideas
- Key figures: before/after, b&w, self-explanatory (striking if possible). Not too many
- Use of I, we
- Active voice, choose the right verb
- Cut the clutter: many, very, it has been shown that...

# Structured



Student's last name

Part B1

ACRONYM

LOPEZ-MONTERO

Part B1

mitochondrion

## Section a: Extended Synopsis of the scientific proposal (max. 5 pages)

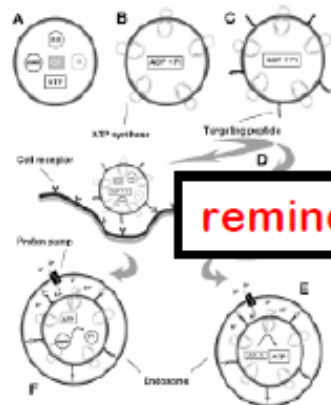
[The Extended Synopsis should give a concise presentation of the scientific proposal, with particular attention to the ground-breaking nature of the research project, which will allow evaluation panels to assess, in Step 1 of the evaluation, the feasibility of the outlined scientific approach. Describe the proposed work in the context of the state of the art of the field. References to literature should also be included.]

Please respect the following formatting constraints: Times New Roman, Arial or similar, at least font size 11, margins (2.0 cm side and 1.5cm top and bottom), single line spacing.

### A. Extended Synopsis of the scientific proposal

Taking advantage of self-assembling properties of lipids in aqueous solutions<sup>1</sup>, biological cells have developed the basic structural element of biomembranes. Thanks to biological membranes, cells are segregated from the outside environment and exhibit a modular design, by which each specialized organelle performs specific functions. Energetic requirements are supplied by mitochondria. Mitochondria are responsible for creating more than 90% of the energy (ATP for Adenosine Triphosphate) needed by the body to sustain life and support growth. Primary disorders of mitochondrial ATP synthesis, the proteins that catalyze ATP synthesis inside cells, belong to the most severe mitochondrial diseases (MD)<sup>2</sup>. When mitochondria fail, less and less energy is generated within the cell. If this process is repeated throughout the body, whole systems begin to fail, and the life of the patient is severely compromised. Mitochondrial diseases affect approximately 10 million people in the EU, causing 15 % of deaths during the first year of life of newborns. One over 4,000 of newborn children is affected by MD. ATP was proposed in various medical applications as a possible bioenergetic substrate. Unfortunately, ATP is very difficult to use at a therapeutic level because of its high reactivity to enzymatic hydrolysis, making this molecule unstable in biological fluids<sup>3</sup>. ATP is also a highly hydrophilic molecule that is unable to cross biological membranes<sup>4</sup>. Other pharmacological treatments based on stimulation of ATP production are implanted with moderate success<sup>5</sup>.

Here I propose to engineer artificial mitochondria (AM), based on model lipid vesicles and fabricated by means of microfluidics methods (Figure 1). Using cell-free approaches, the synthetic vesicles will be able to self-replicate the ATP synthase in the luminal side of vesicles and to embed the proteins within the model lipid bilayer. The system will be targeted to cultured cells and internalized by means of endocytic pathways. Triggered by the acidic medium of endosomes, ATP will be fabricated inside cells and delivered in their cytosol. This concept is easily adaptable to other genetic disorders by using AM as platforms to express *in vivo* the genes encoding for a variety of proteins.



remind B&W !!

Figure 1. Schematic diagram of Artificial Mitochondria (AM) fabrication and application. (A) Microfluidics setup for encapsulating ATP synthase and targeting proteins. (B) Schematic of AM fabrication. (C) AM targeting to cells. (D) AM internalization by cells. (E) AM internalization by cells. (F) AM internalization by cells.

<sup>1</sup> Israelachvili IM. *Intermolecular and Surface Forces* (Academic Press, San Diego, 1991).

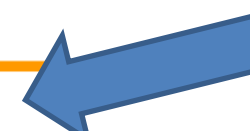
<sup>2</sup> DiMauro S. 2004. *Biochim et Biophys Acta* 1658: 16–38.

<sup>3</sup> Lehman AW, DiMauro M, Isidoros BE. 2012. *Cardiovascular Research* 93: 269–280.

<sup>4</sup> Chien S. *Methods Mol Biol*. 605:377–91.

<sup>5</sup> Murphy MP, Smith RA. 2007. *Annu. Rev. Pharmacol. Toxicol.* 47: 629–656.

## First page



Objectives : State of the art, concerns and your answers. Plan B. Parallel experiments

Member Team and Host Institution: Expertises and Facilities

Chronogram

Anticipate to evaluator!



GOBIERNO DE ESPAÑA

MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD

Unión europea

# Trying to avoid...

- Vague:
  - In the present proposal, the applicant puts forward an ambitious but feasible program to tackle a number of significant issues
- Wrong tone:
  - He does so in a manner that combines, on one hand, the strength of clearly-defined hypotheses and well-established tools for results towards clinical translation, with high-risk high-reward projects that hold the potential to yield ground-breaking discoveries...
- Acronyms:
  - SPG11, SPG15 and SPG48 , which are clinically and biochemically related, since the proteins encoded by these genes (spatacsin, spastizin and KIAA0415) are all present in a multiprotein complex important for ER function (*ajustado al panel*)
- Clutter:
  - Academic research has consistently studied conflict but there is very little engagement with actually existing tolerance mechanisms and this project studies tolerance by explicitly engaging with both empirical detail and theoretical structions in the predominantly Muslim text of Pakistan.

# Proof reading

- Final draft: 8-6 weeks before the deadline
- Give your draft to colleagues from other disciplines
- Format & tone reviews
- English!

# EVALUATION REPORTS



GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE ECONOMÍA  
Y COMPETITIVIDAD

oficina  
europea

# Final score at each step

## 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

## 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

# ESR structure

| Evaluation Report Cover Sheet   |  |
|---|--|
| ERC-2013-StG_20121017   |  |
| Date: 16/07/2013 12:30:04   |  |
| Data taken from the submitted proposal  |  |
| <b>1. Proposal</b><br>Number: 326420<br>Acronym: SYNAPSIS<br>Title: Social and neurobiological determinants of psychosis in immigrants to Europe  |  |
| <b>2. Principal Investigator</b><br>Name, First Name: Pepe Perez<br>Nationality: Netherlands<br>Gender: M<br>Country of Residence: Netherlands  |  |
| <b>3. Host Institution</b><br>Name: Erasmus MC<br>Country: Netherlands  |  |
| <b>4. EC Contribution</b><br>Requested: 1498446<br>Recommended: 1498446   |  |
| <b>5. Duration of Project:</b> 60   |  |
| <b>6. Abstract</b><br><p>The increased prevalence of schizophrenia in immigrants to a major public health research. Europe has about 70 million immigrants and there is a hypothesis with cutting-edge methodologies and new techniques. The interdisciplinarity of the approach proposed makes this proposal unique. This projects intend to break new grounds on a certain field by exploring a new hypothesis with cutting-edge methodologies and new techniques. The interdisciplinarity of the approach proposed makes this proposal unique.</p> |  |

| Step 1 Evaluation Report |  |
|--------------------------|--|
| CONFIDENTIAL             |  |
| Call reference           | ERC-2013-StG                             |
| Activity                 | ERC Starting Grant                       |
| Funding scheme           | ERC Starting Grant                       |
| Panel name               | SH4: The Human Mind and Its Complexity   |
| Proposal No.             | 326420                                   |
| Acronym                  | SYNAPSIS                                 |
| Applicant Name           | Pepe Perez                               |
| Title                    | Social studies on ERC granting processes |

| EVALUATION CRITERIA  |  |
|--|--|
| <b>1. Research Project</b><br>Ground-breaking nature and potential impact of the research project:<br>To what extent does the proposed research address important challenges? To what extent are the objectives ambitious and beyond the state of the art (e.g. novel concepts and approaches or development across disciplines)? How much is the proposed research high risk/high gain?   |  |
| Scientific Approach:<br>To what extent is the outlined scientific approach feasible (based on Extended Synopsis)?  |  |
| <b>2. Principal Investigator</b><br>Intellectual capacity, creativity and commitment:<br>For each of the three statements below, reviewers were asked to choose one of the following four responses: <i>Not agree/strongly agree/Disagree partially/Strongly disagree</i> .<br>The PI has demonstrated the ability to propose and conduct ground-breaking research and higher achievements have typically gone beyond the state of the art.<br>The PI provides abundant evidence of creative independent thinking.<br>The ERC Grant would contribute significantly to the establishment and/or further consolidation of the PI's independence. |  |

| PANEL SCORE AND RANKING RANGE  |                           |
|--|---------------------------|
| Final panel score: B (is of high quality but not sufficient to pass to Step 2 of the evaluation) | Ranking range: 1: 60%-70% |

\* Ranking range of your proposal out of the proposals evaluated by the panel, in percent, from 1% for the highest ranked proposals to 100% for the lowest ranked.

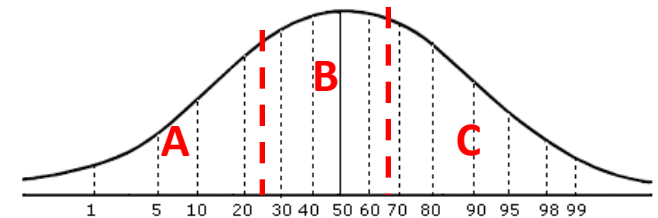
| PANEL COMMENT  |  |
|--|--|
| This evaluation report contains the final score awarded by the ERC review panel during the first step of the ERC Starting Grant review and the ranking range. The discussion of the panel was conducted within the content of the individual reviews submitted by ERC panel members.<br>The panel closely examined all the individual review reports and, while not necessarily subscribing to each and every opinion expressed, found that they provide a fair overall assessment. The comments of the individual reviewers were the basis for the discussion and the final recommendation of the panel, and are included in this report.<br>The panel thought that the longitudinal design as well as the focus on interactions between social influences and neurobiological mechanisms of psychosis are the strengths of the project. However, the reviewers raised clear concerns about the following aspects of the project: generalisability (e.g., whether the results would be generalizable beyond the targeted immigrant group); feasibility (e.g., which specific aspects of psychosis will be the focus, how will the longitudinal study be organized, the site for the PET experiment); and weak theoretical rationales (how social and neurobiological factors may interact is not sufficiently motivated).<br>Overall the panel considers this proposal to be of reasonably good quality. However based on the combined set of criteria used in the assessment it was not ranked highly enough to be retained for Step 2. The panel therefore recommends that the proposal should not be retained for Step 2 and consideration of funding. |  |

| REVIEWER COMMENTS  |  |
|--|--|
| The following individual reviews have been carried out independently prior to the panel meeting and do not necessarily reflect the panel's recommendation.   |  |
| <b>Reviewer 1</b><br><b>Research Project</b><br>Ground-breaking nature and potential impact of the research project:<br>The project aims at conducting a large scale prospective longitudinal study (with three yearly longitudinal assessments) in testing social, behavioral, as well as brain correlates of the occurrence of psychosis in immigrant populations. The focus of the study on investigating the social and environmental antecedents of psychosis in immigrant populations is consistent. The scope of the project is ambitious including PET receptor imaging studies as well as genomic imaging.<br>Scientific Approach:<br>Whereas general ideas are sketched out for a five-year research projects, with longitudinal follow-ups, it is not clear which aspect of psychosis would be the focus of the project. The subjects will be immigrants recruited in Rotterdam, but the PET receptor imaging collaborators will be London. It is not clear as to how the study will be actually implemented. |  |

Cover sheet: basic info about the proposal (PI, Title, HI), including the abstract

Final score + ranking range



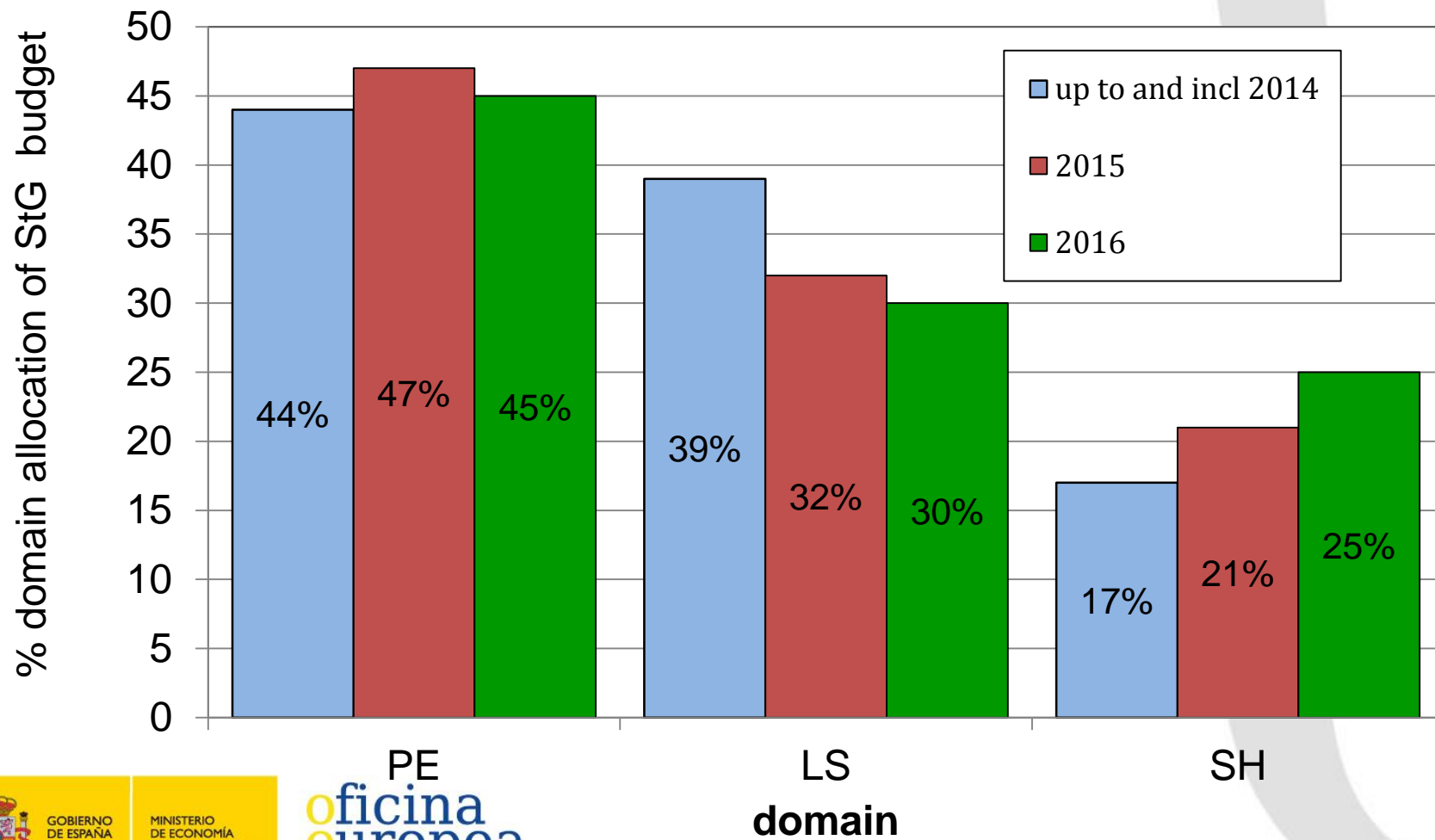
Panel Comment

Individual reviews: different roles

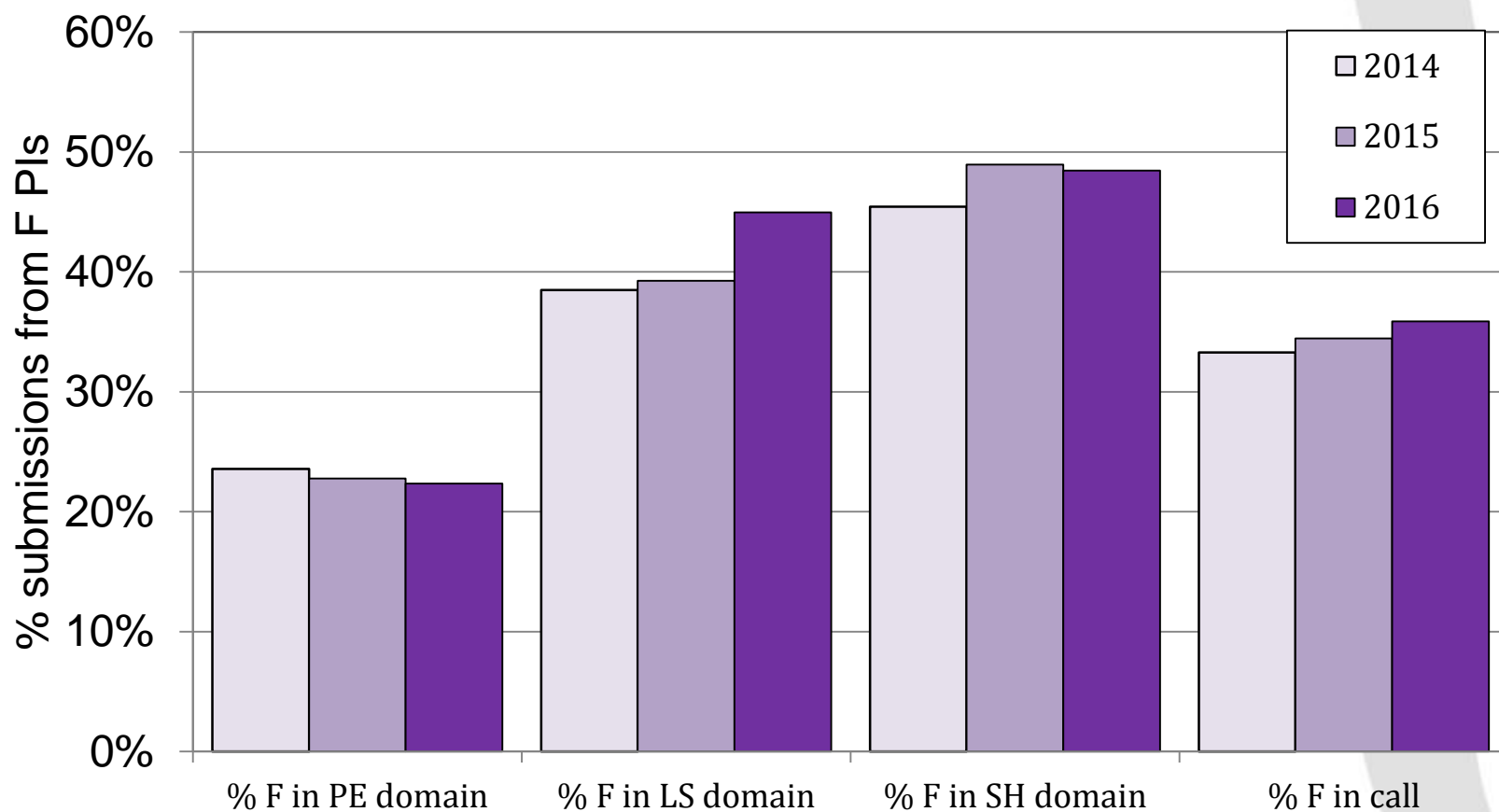
# DATA & STATS



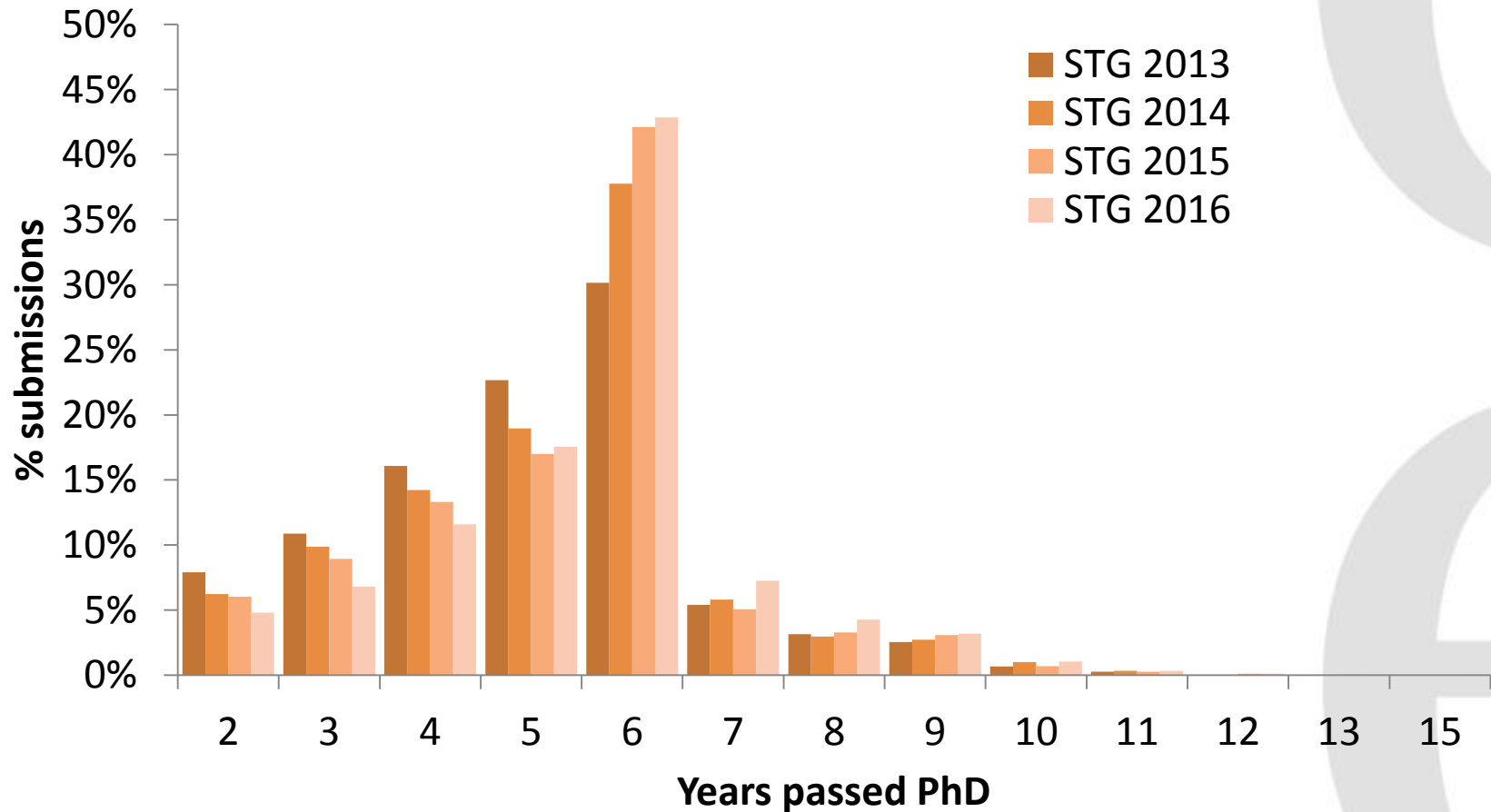
# StG 2015-2016 – Budget distribution by domain



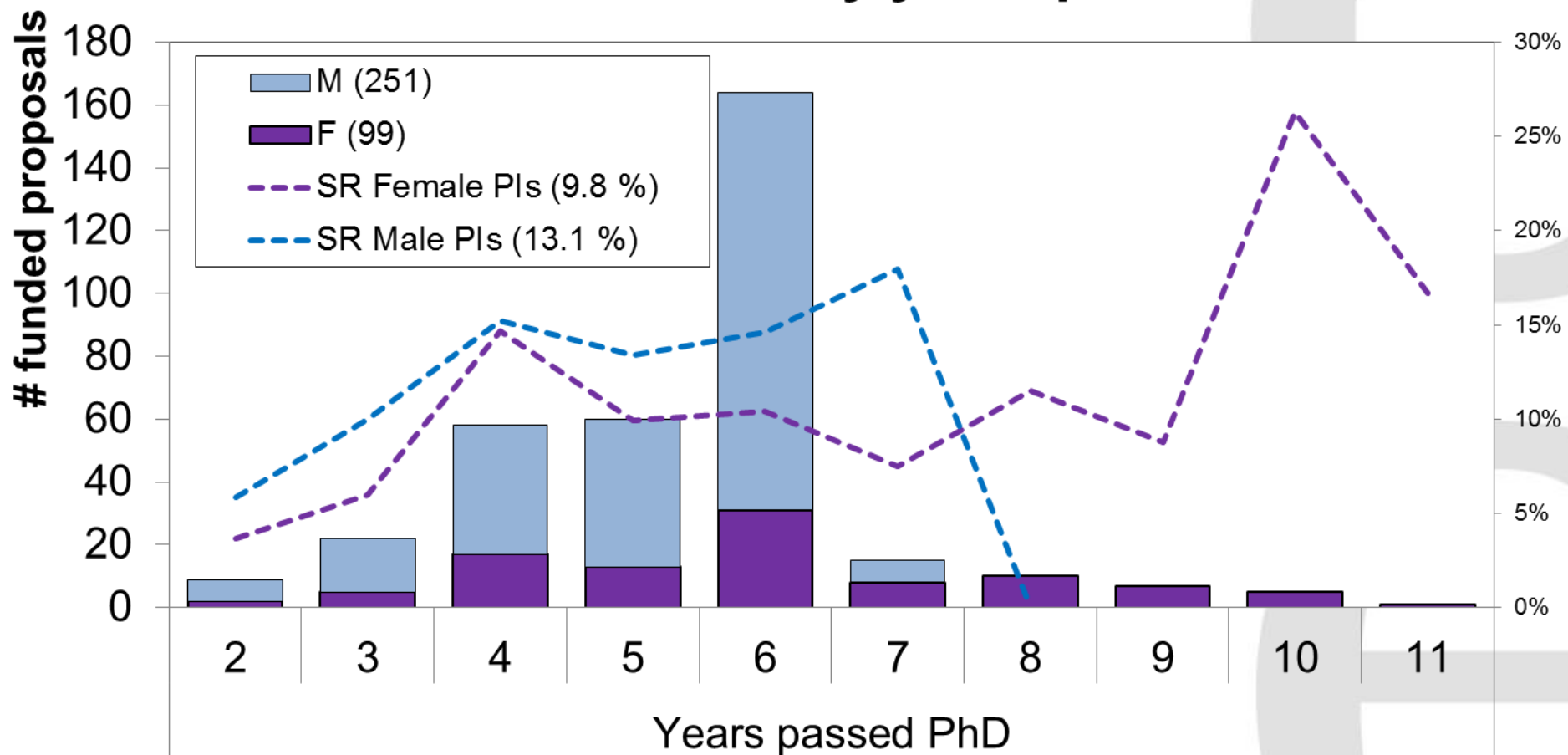
# StG 2014-2016 Submissions from Female applicants by domain



## STG 2013-2016 submissions by years passed PhD

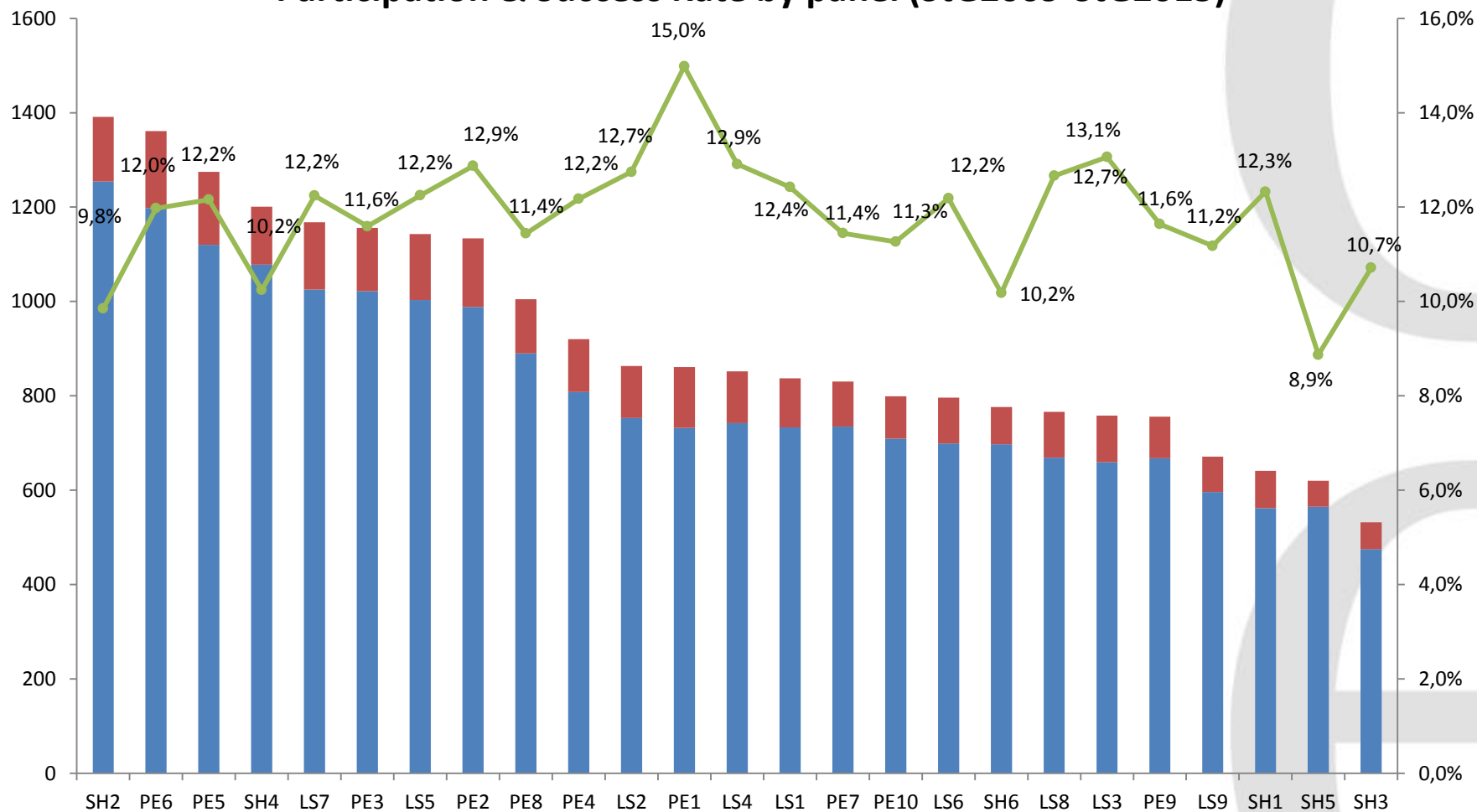


# STG 2015 funded PIs by years passed PhD



- 536 reapplications (22% of submissions): SR higher
  - 190 passed to step 2: Step 1 Success rate 37 % - vs 29 % for the call
- Overall drop of 14.6% in the number of applications (expected success rate of ~14%)
- Proportion of female applicants increased (17%) compared with StG 2014 (14%)

## Participation & Success Rate by panel (StG2009-StG2015)



Work hard on your written proposal,  
keeping in mind the evaluation  
questions but do use the freedom ERC  
enables to do your dream proposal.  
And **follow your own criteria.**  
**¡Mucha suerte!**  
[esther.rodriguez@oficinaeuropea.es](mailto:esther.rodriguez@oficinaeuropea.es)

# NOTE

- This presentation shows the experiences shared by many panel members and successful grantees
- It gathers also most common features seen in succesful (and not successful) proposals
- All the proposal information given in this presentation is public and available at different internet sites (ERC, CORDIS, [eshorizonte2020.es](http://eshorizonte2020.es))