



# GEOHERMAL SPRING SCHOOL 2021

## Course “Boost your career with EU projects/funds”

Fabienne Brutin (Ayming)

MEET Project – Geothermal Winter School – February 2021



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 792037

# Welcome

## Course: Boost your career with EU projects/funds

### Main objectives

- Give an overview on Research funding / Fundraising
- Provide few tips on funds applications
- Help to include such opportunities in your career

# Speaker

Fabienne Brutin

Chemistry & process engineer

20 years experience in EU/French R&D projects applications and management

PMP® certified (Project Management Professional)

<https://fr.linkedin.com/in/fabienne-brutin>

[fbrutin@ayming.com](mailto:fbrutin@ayming.com)



# Agenda

A progressive immersion !

- Overview of European research funding
- Research project construction and tips



# Session 1 - Overview of European research funding

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 792037



# Introduction



The EU funds are available to all categories of researchers

- well-established researcher,
- looking for Post-Doc funding
- or considering starting a PhD,

The EU funds are also available regardless

- Country (member states, associated countries),
- Disciplines or
- Sector.

The EU provides grants to help researchers to

- Carry out research and innovation project,
- Get additional skills,
- Develop cross disciplinary, international and intersectoral experience and
- **Boost international careers**



# Horizon Europe

## Biggest EU R&I programme covering 2021 – 2027

Budget 95,5 Billion €

### Rationale:

- Strengthen the scientific and technological bases of the Union
- Stimulate competitiveness, including that of European industry
- Realize the Union's strategic political priorities
- Contribute to responding to global issues



# Horizon Europe



## Specific objectives of the Programme

Support the creation and diffusion of high-quality knowledge

Strengthen the impact of R&I in supporting EU policies

Foster all forms of innovation and strengthen market deployment

Optimise the Programme's delivery for impact in a strengthened ERA



### Pillar 1 Open Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



### Pillar 2 Global Challenges and Industrial Competitiveness

Clusters

- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources

Joint Research Centre



### Pillar 3 Open Innovation

European Innovation Council

European innovation ecosystems

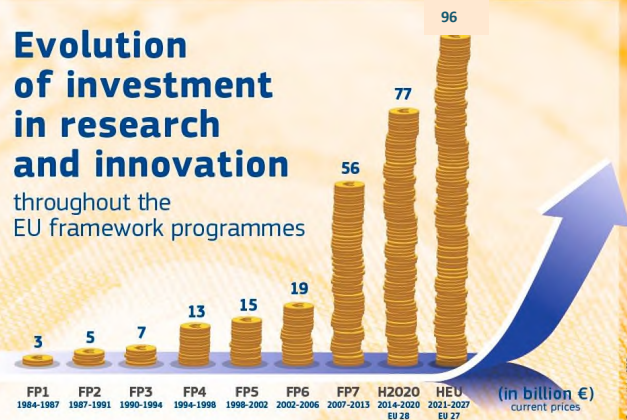
European Institute of Innovation and Technology

## Strengthening the European Research Area

Sharing excellence

Reforming and Enhancing the European R&I system

## Evolution of investment in research and innovation throughout the EU framework programmes



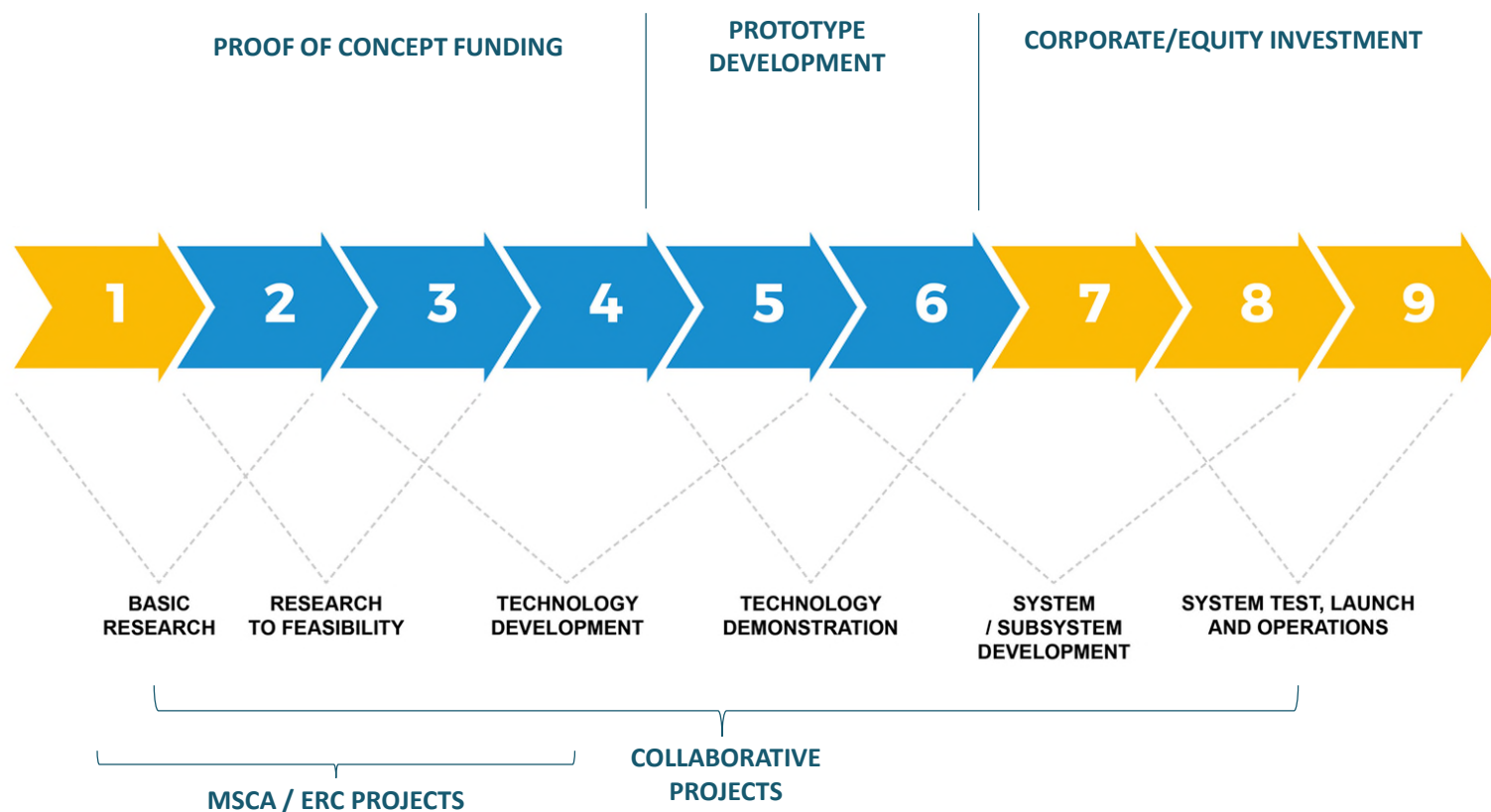
#HorizonEU #InvestEUresearch #EUBudget



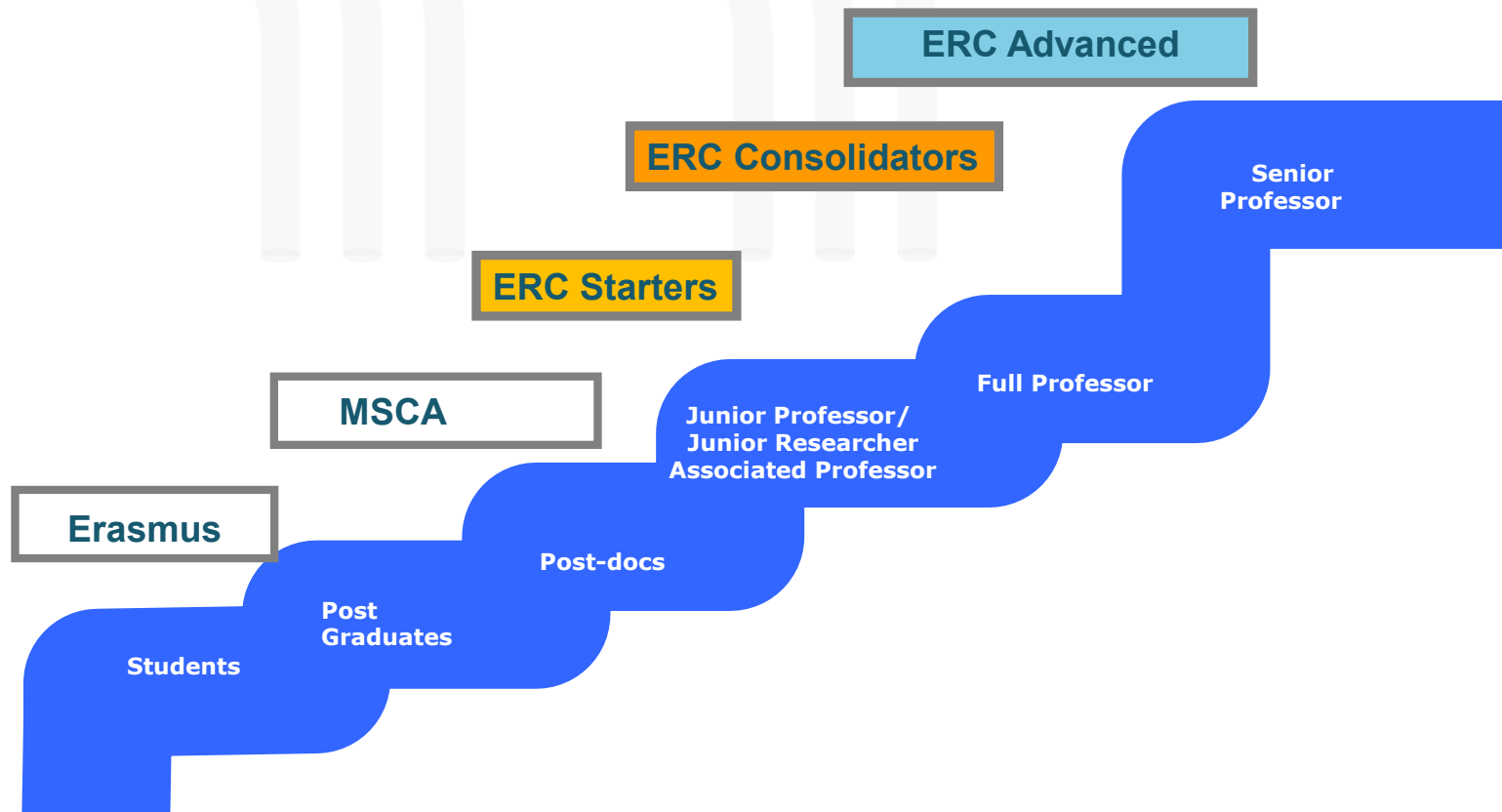


# Rationale of EU funds

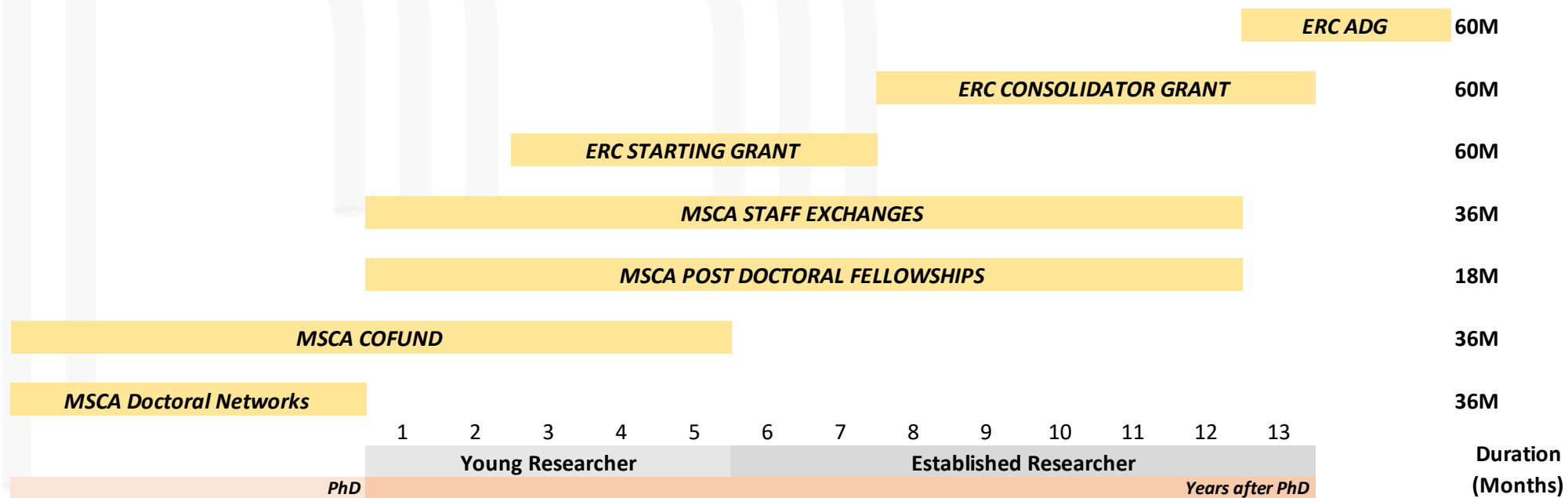
Cover a wide range of Research and innovation activities all along the **Technology Readiness Level (TRL)** scale



# EU fundraising all along your career



# EU fundraising all along your career



## ERASMUS ACTIONS



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# ERASMUS+

The EU's programme to support **education**, training youth and sport

Funding for programmes, projects and scholarships

Fosters EU-EU and EU-international cooperation

Available for Programme countries (EU) and Partner countries (worldwide)

Two main actions:

- Mobility of individuals

- Cooperation for innovation and the exchange of good practices



## MSCA ACTIONS



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# MSCA actions

## What are the Marie Skłodowska-Curie actions?

A European Union programme dedicated for

- **Structuring** researcher career
- Train a **new generation of researchers**
- **Enhance creative and innovative** potential of researchers
- **Foster excellence**

MSCA keywords

- **Attractivity** to research
- **Intersectoral** mobility and societal needs addressing
- Societal and innovation **impacts**
- Cross cutting issues addressing such as **Open science and Responsible Research and Innovation**
- Strong emphasis to the implementation and adoption of the **Charter & code for researchers and Principles for Innovative Doctorate Training**.

Geothermal Winter  
School 2021



Almost all MSCA require cross-border mobility. Basically, no researcher can stay at a host organisation in a country in which he or she has resided or carried out his or her main activity (works, studies) for more than twelve months in the last three years.



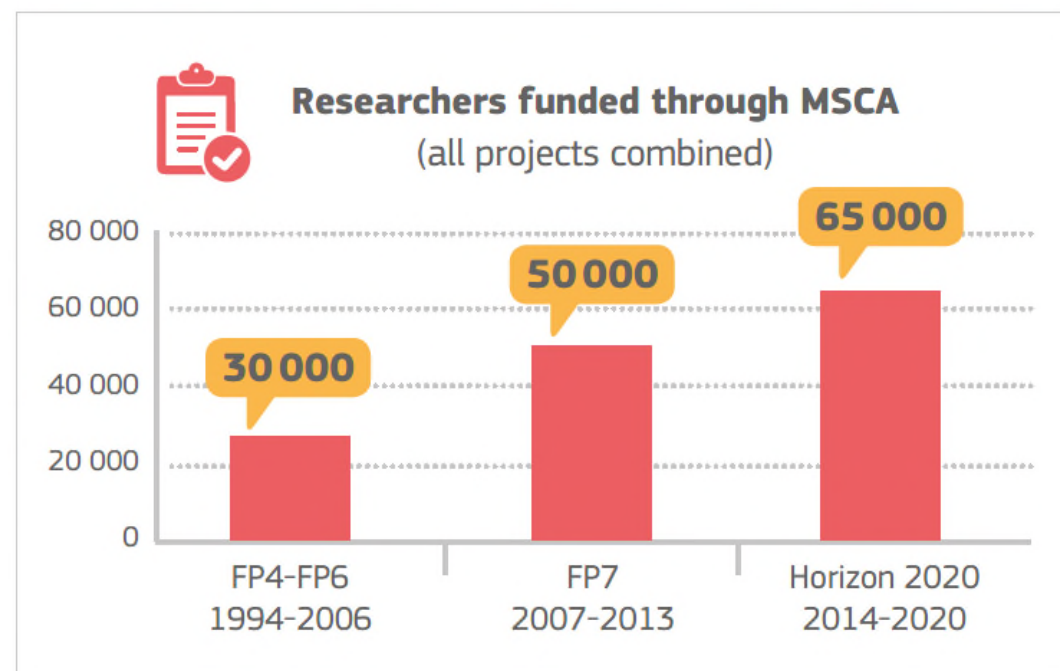
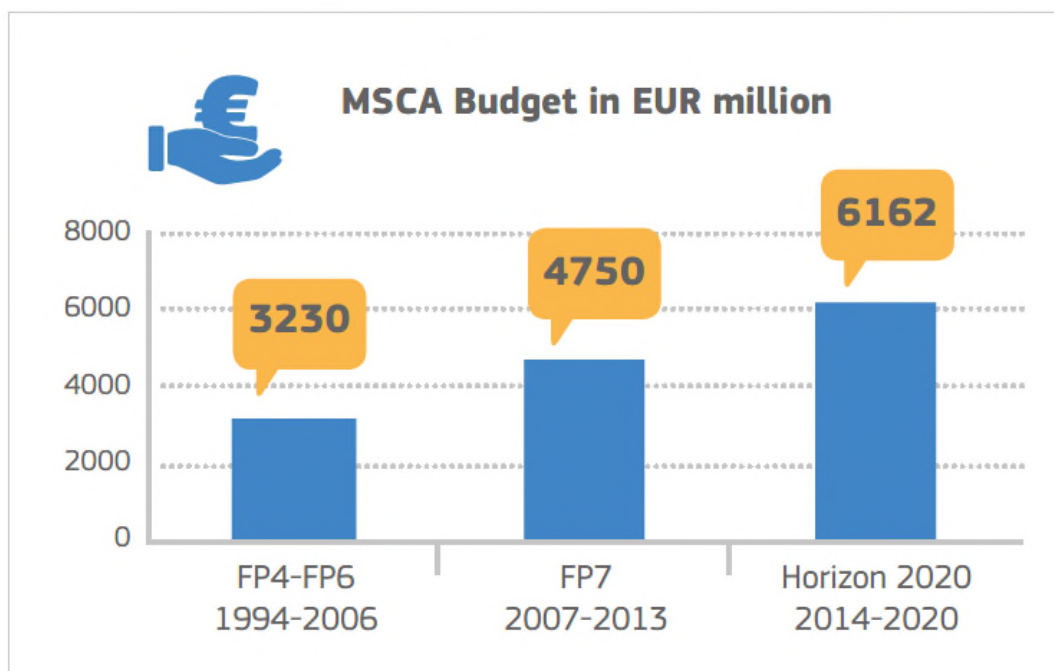
# MSCA actions

## What do MSCA projects offer ?

- **Excellent working conditions:** employment contracts, social security, environment
- Opportunities to **work and being trained with the best researchers** in Europe (and worldwide)
- **Complementary skills development**
- **Prestigious career opportunities!**



## 20 YEARS OF MARIE SKŁODOWSKA-CURIE ACTIONS IN NUMBERS: FUNDING AND PARTICIPANTS



+30%

EU commission data (MSCA factsheet)

# H2020 interim assessment data



**40% of MSCA supported researchers are women**

140 nationalities have received MSCA funding

**100% of MSCA researchers experience international mobility**

High competition confirms the interest for those instruments

**60% of MSCA fellows believe MSCA support accelerated their career**

MSCA fellows are twice as likely as the average researcher to have publications that belong to Top 1%, Top 5% and Top 10% of cited publications



# Marie Skłodowska-Curie Actions



## Doctoral Networks

High quality research training through international, interdisciplinary and intersectoral actions

International networks of research organisations from the academic and non-academic sectors

Researchers at doctoral level (less than 4 years of full-time research experience and no doctoral degree)

## COFUND

(Co-Funding of Regional, National and International Programme)

Regional, national or international programmes to foster excellence in researcher training, mobility and career development

Organisations funding or managing doctoral or fellowship programmes

Researchers at doctoral and post doctoral level

## Post-Doctoral Fellowships

Opportunities to work on personal research programs by moving between countries and possibly sectors to acquire new skills

Individual researchers together with the host organisation

Postdoctoral researchers

## Staff Exchanges

The exchange of staff members to develop sustainable collaborative projects and transfer of knowledge

International networks of research organisations from the academic and non-academic sectors

Researchers, technical, administrative and managerial staff of any nationality and at all career levels



ayming

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# MSCA – Doctoral Networks



## Objectives:

- To train a **new generation** of **creative, entrepreneurial** and **innovative** early-stage researchers,
- To **raise excellence and structure** research and doctoral training,
- To provide **enhanced career perspectives**.

## Projects:

- International networks of organisations (public / private)
- All domains in a bottom-up & multidisciplinary approach
- Meaningful exposure to international and intersectoral dimensions of research
- Fellowships of 3 to 36 months





# MSCA – COFUND



## Objectives

- **The COFUND scheme aims to stimulate regional, national or international programmes** to foster excellence in researchers' training, mobility and career development.
- Focus on **international, intersectoral and interdisciplinary research training** as well as transnational and cross-sectoral mobility of researchers at all stages of their career.
- Development and broadening of the research competencies of researchers.

## Projects

- **One beneficiary that will fund and manage** Doctoral Programme or Fellowship Programme: recruiting, supervising, hosting, training researchers
- Partnering organisations will support the beneficiary in the various actions especially secondments.
- Duration of the programme: from 3 to 5 years
- Vacancies internationally advertised, specific mobility rules apply



# MSCA – Postdoctoral Fellowships



## Objectives

- Enhance the creative and innovative potential of experienced researchers through advanced training as well as international & intersectoral mobility
- Focus notably on:
  - The return and (re)integration of European researchers from outside Europe and those who have previously worked in Europe
  - The promotion of career restart

## Projects

- Individual researcher with PhD degree with a research institution out of the country where the researcher carried out his/her main activities
- General mobility rule
- No pre-defined research topics



# MSCA –Staff Exchanges



## Objectives

- Collaboration between academic and non academic institutions, from Europe / outside Europe
- Organisation of staff exchanges (secondments from 1 to 12 months)
- Enhancement of knowledge transfer (international and intersectoral) and sharing of ideas and R&I culture

## Projects

- At least 3 independent participants in 3 different countries, of which min 2 from MS/AC
- Preferably at least 1 academic & 1 non academic (mandatory if all partners from MS/AC)
- Staff concerned: ER/ESR, managerial staff, administrative and technical staff





## EUROPEAN RESEARCH COUNCIL

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# What is ERC?



An autonomous funding body **led by** scientists.

Funding **excellent researchers of any nationality**, to carry out **frontier research**, via annual competitions.

In all fields of science and humanities, with bottom-up approach.

**Substantial grants** (2.0 Mio Euro-3.5 Mio E).

Recognised label of excellence.

International, top level peer-review process - 25 panels distributed in 3 scientific domains (10 Physical Sciences, 9 Life sciences and 6 Social Sciences and Humanities).

Individual projects: 1 researcher (no pre-established networks), 1 Host Institution, 1 project, 1 selection criterion (**EXCELLENCE**).



# ERC funding schemes

## Starting Grants (StG)

starters  
(2-7 years after PhD)  
up to € 2.0 Mio  
for 5 years

## Consolidator Grants (CoG)

consolidators  
(7-12 years after PhD)  
up to € 2.75 Mio  
for 5 years

## Advanced Grants (AdG)

track-record of  
significant research  
achievements in the  
last 10 years  
up to € 3.5 Mio  
for 5 years

## Synergy Grants (SyG)

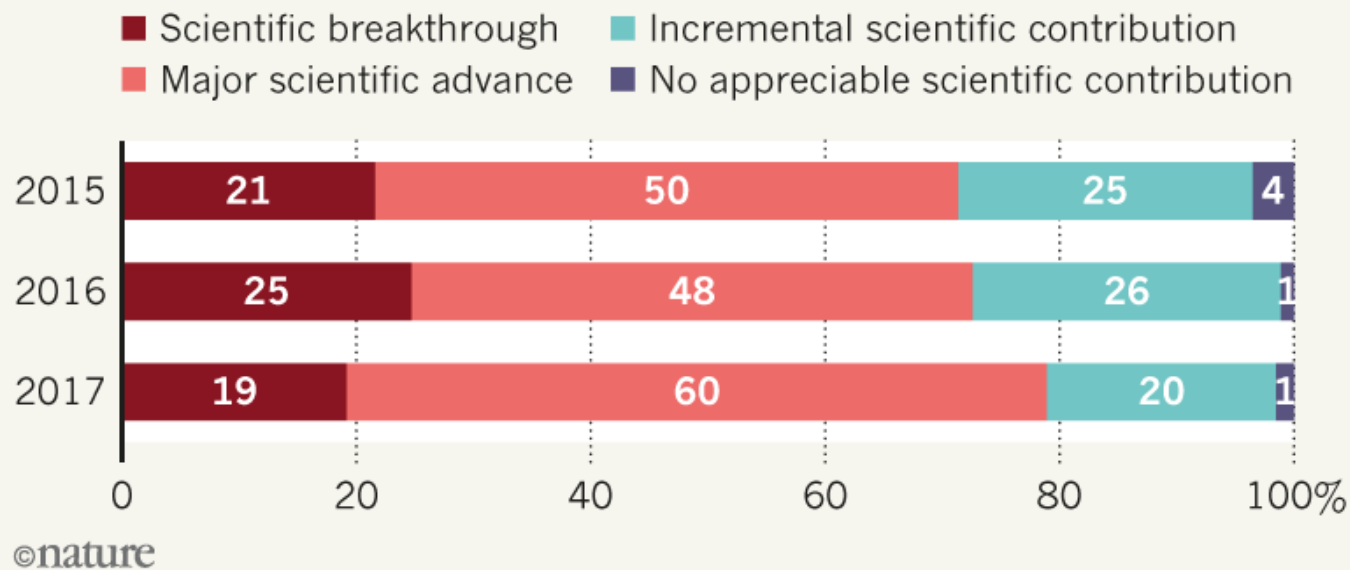
2 – 4 Principal Investigators  
up to € 15.0 Mio for 6 years

## Proof of Concept (PoC)

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

## EUROPE'S TOP RESEARCH GRANTS

About one-fifth of projects funded by prestigious European Research Council grants make scientific breakthroughs, according to its qualitative self-assessments.

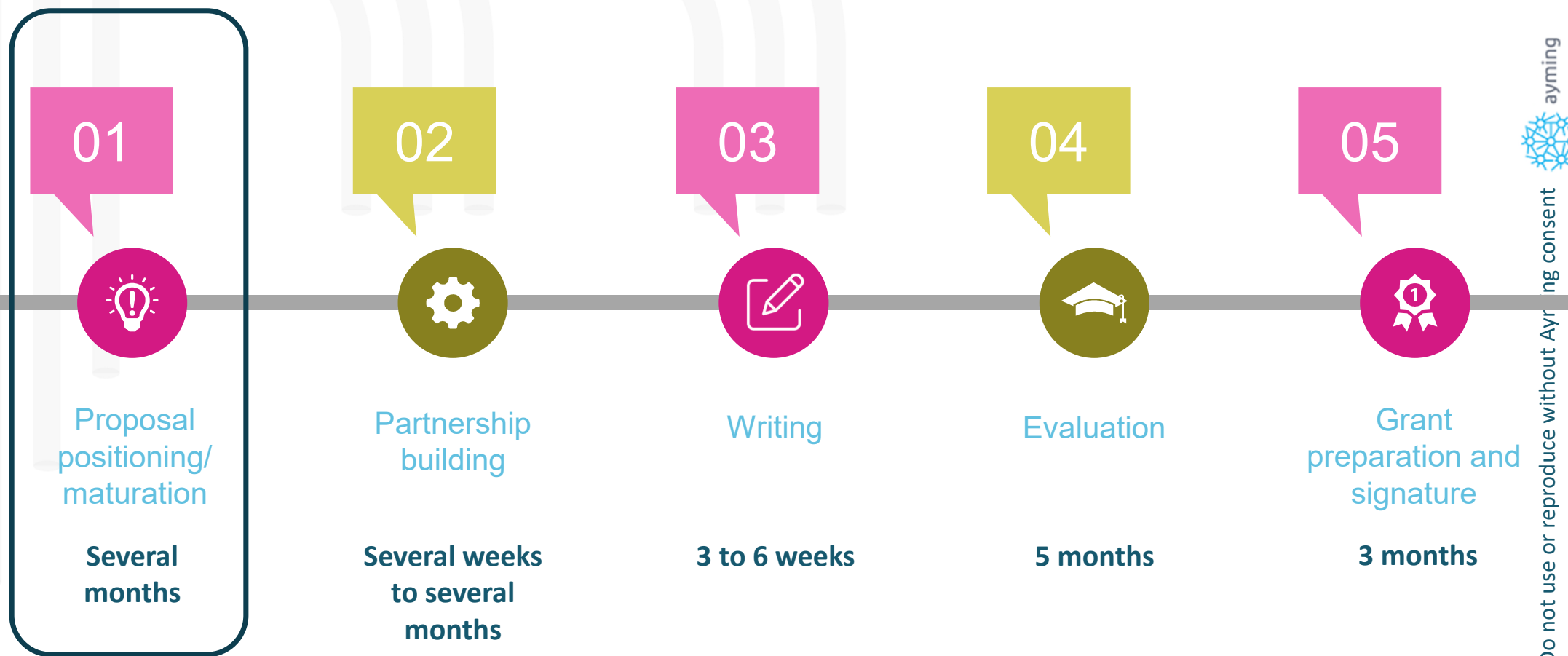




## Session 2 – Research project application

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# Project application life cycle



# Proposal positioning:

## 2 steps

### 1) Analysis of the context

- Key documents and call information
- Instrument/Funding scheme
- Topic description
- External factors

=> **Strategic positioning**

### 2) Definition of the project concept, structuration of project:

- Innovations & objectives
- Impacts (science, technologies, products & markets, societal challenges, dissemination & exploitation)
- Consortium (expertise & value chain)

=> **Elaborating your roadmap for the application preparation**



# Proposal positioning:

For most of projects, a balance between 3 main criteria

**WARNING**

Respective weight  
of each criteria is  
not the same for all  
the instruments

## IMPACTS

Sustained impacts from project  
results

Exploitation for further research

Commercial exploitation (economy,  
jobs & competitiveness creation)

Dissemination & communication of  
results

## Excellence

## EXCELLENCE

Innovation “potential” vs SOA  
Competitive results generation  
Methodology  
Ambition & objectives

## Impacts

## Implemen- tation

## IMPLEMENTATION

Quality of the implementation  
Innovation management  
Risks  
Operational capacity



# Proposal positioning:

In ERC projects, “excellent science” is the criterion to obtain funding

## Excellence of the Research Project

- ✓ Ground breaking nature
- ✓ Potential impact
- ✓ Scientific Approach Feasibility

## Excellence of the Principal Investigator

- ✓ Intellectual capacity
- ✓ Creativity
- ✓ Commitment

# Proposal positioning:

## Key criteria for success

### Relevance of the project idea/concept

- In particular regarding the topic listed in the Work Programme
- Complementary to the projects already funded in the past
- Importance of project positioning before writing the proposal

### Quality/ excellence (not only scientific!)/ ambition of the project proposal

- Importance of first impression : abstract and first pages, concept in a “nutshell”
- Importance of presentation (writing, clarity, demonstration: don’t just give affirmations without proofs)
- Specificity, relevance and clarity

### Quality/ excellence and experience of the consortium

- Clear knowledge/experience of state of the art
- Reputation/ pertinence/ complementarity of the actors in a given field, past participations in projects
- “Operational capacity” (from the work plan and CVs of key persons)

# Proposal positioning: key criteria of success



## Impact of the project in different levels

Strengthen the EU S&T leadership (scientific community)

New technologies to solve societal challenges (political and social)

Contribution to EU roadmaps (ETPs) and new products to market to strengthen the EU economy (industry)

## Networking/ lobbying/ clarification

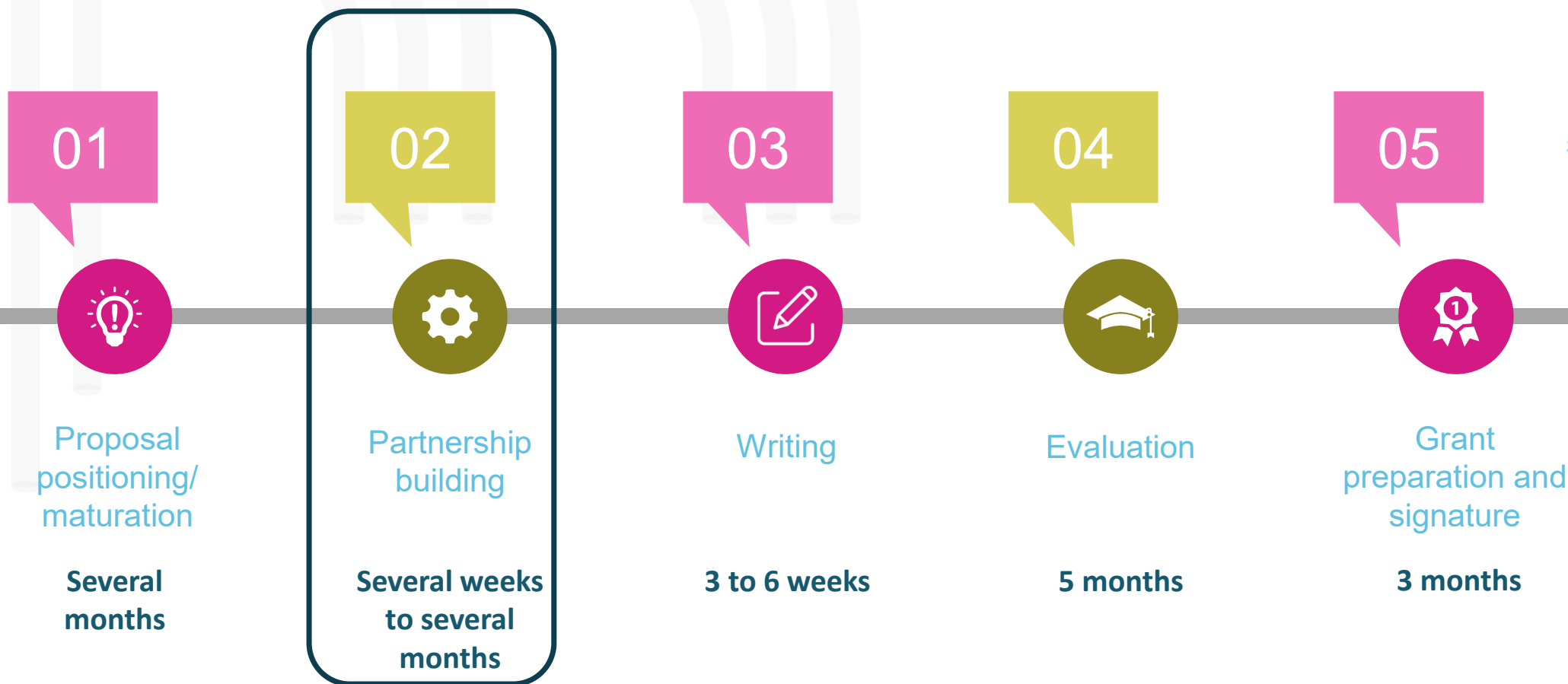
Early interaction with EU at the strategic level of Work Programme writing, networking,..

Any clarification regarding call/ topic description, if possible validation of the approach: Project officer in charge of the call, National Contact Points (NCP): <http://www.horizon2020.gouv.fr/cid74103/le-reseau-des-pcn.html>

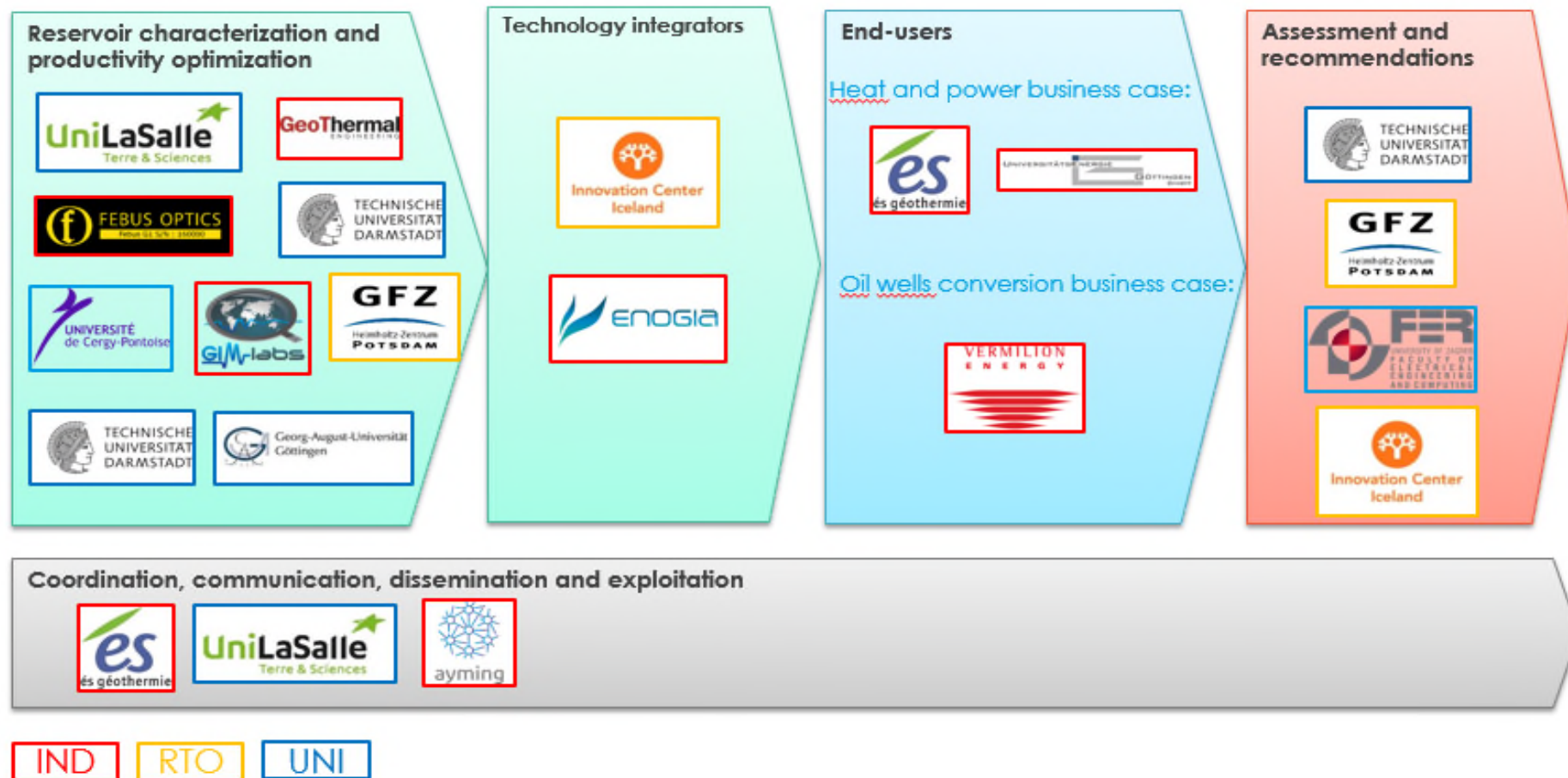
Information and “push” after submission/ ranking : NCP, contacts of partners..



# Project application life cycle



# Partnership building: value chain principle





# Partnership building: practical

## Details you should pay attention to:

- Organization already participated in collaborative projects (reputation, capacities,...)?
- Capabilities of the contact person to speak/write/work in English?
- Contact person motivated to build a project?
- Contact person/organization ready to work in collaboration?
- Companies: financial capacity to conduct a project

# Project application life cycle



# Proposal content in 2 parts



## Proposal (technical annex) template (R&I, I actions):

### Section 1: Excellence

- Objectives, relation to the work-programme (challenge&topic), concept & methodology, positioning of the project (TRL), ambition (SoA, innovation potential)

### Section 2: Impact

- Expected impacts (technological, economical, environmental, societal)
- Dissemination, exploitation, communication

### Section 3: Implementation

- Work-plan/activities, deliverables, milestones
- Consortium and project/innovation management, risks, resources

### Section 4: Members of the consortium incl. third parties

### Section 5: Ethics and Security

Page limits: 15, 30, 50 or 70 pages for cover page + Sections 1-3 incl. tables



# Proposal content in 2 parts



## Proposal (technical annex) template (ERC):

### Research proposal (Part B1)

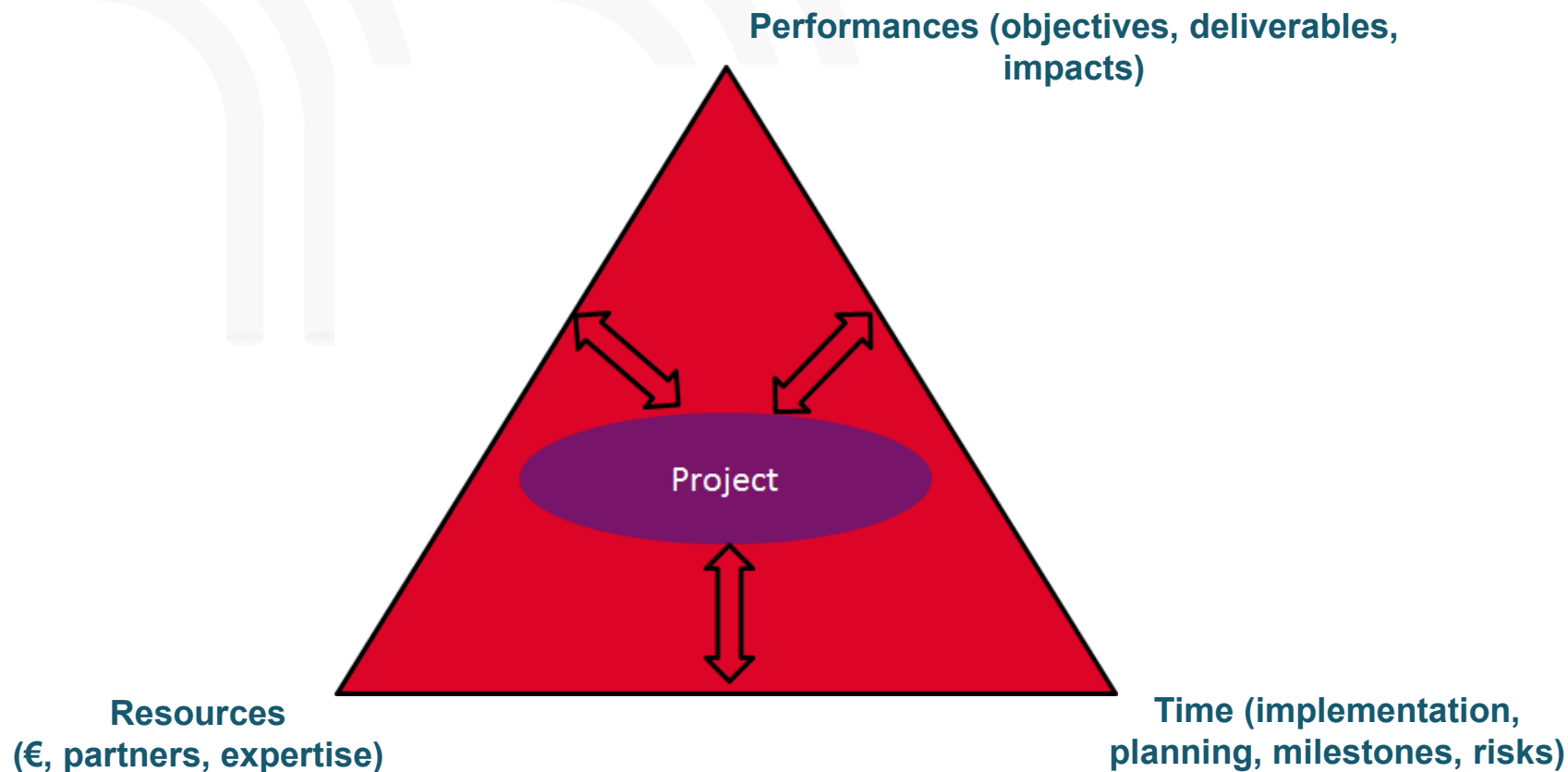
- a – Extended synopsis 5p
- b – Curriculum vitae (with funding ID) 2p
- c – Track-record 2p

### Research proposal (Part B2) - not evaluated in Step 1

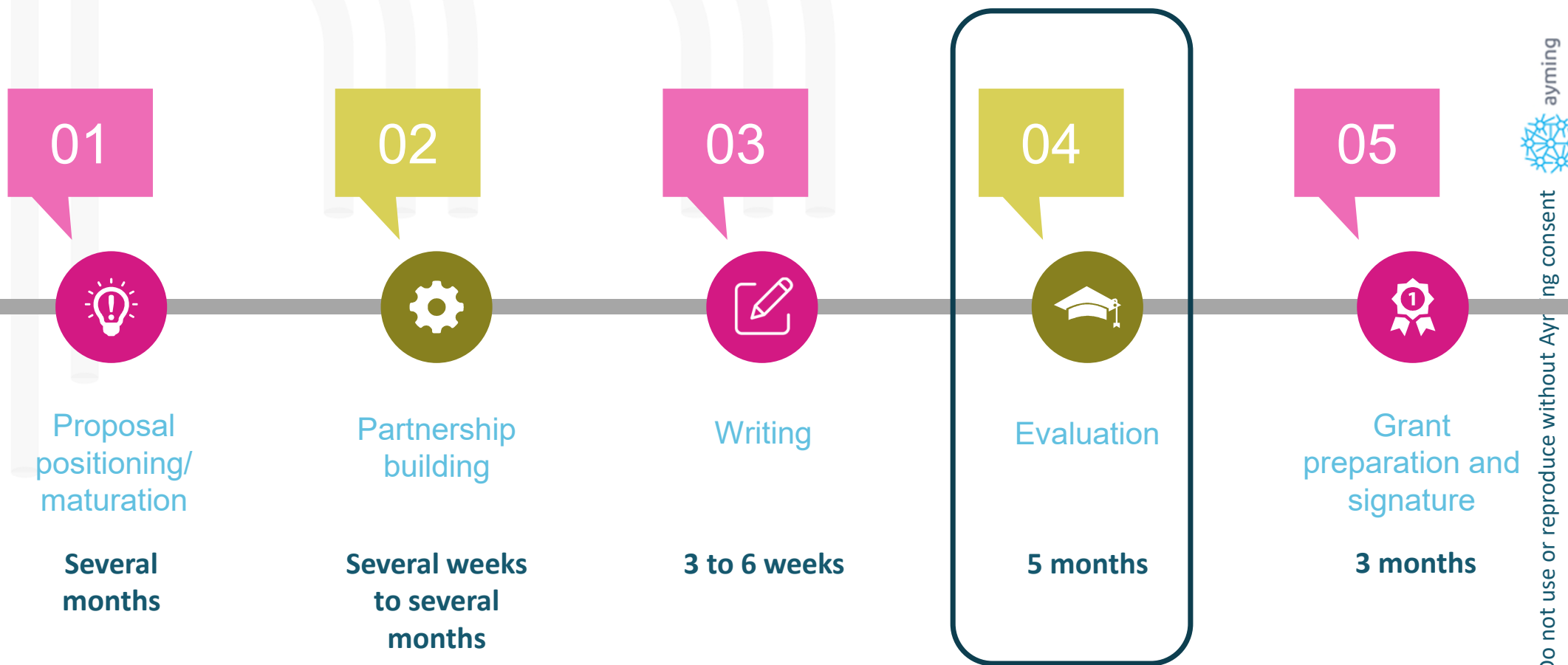
- Scientific proposal 15p
- a – State-of-the-art and objectives
- b – Methodology
- c – Resources



# Proposal Writing vs. Building a project



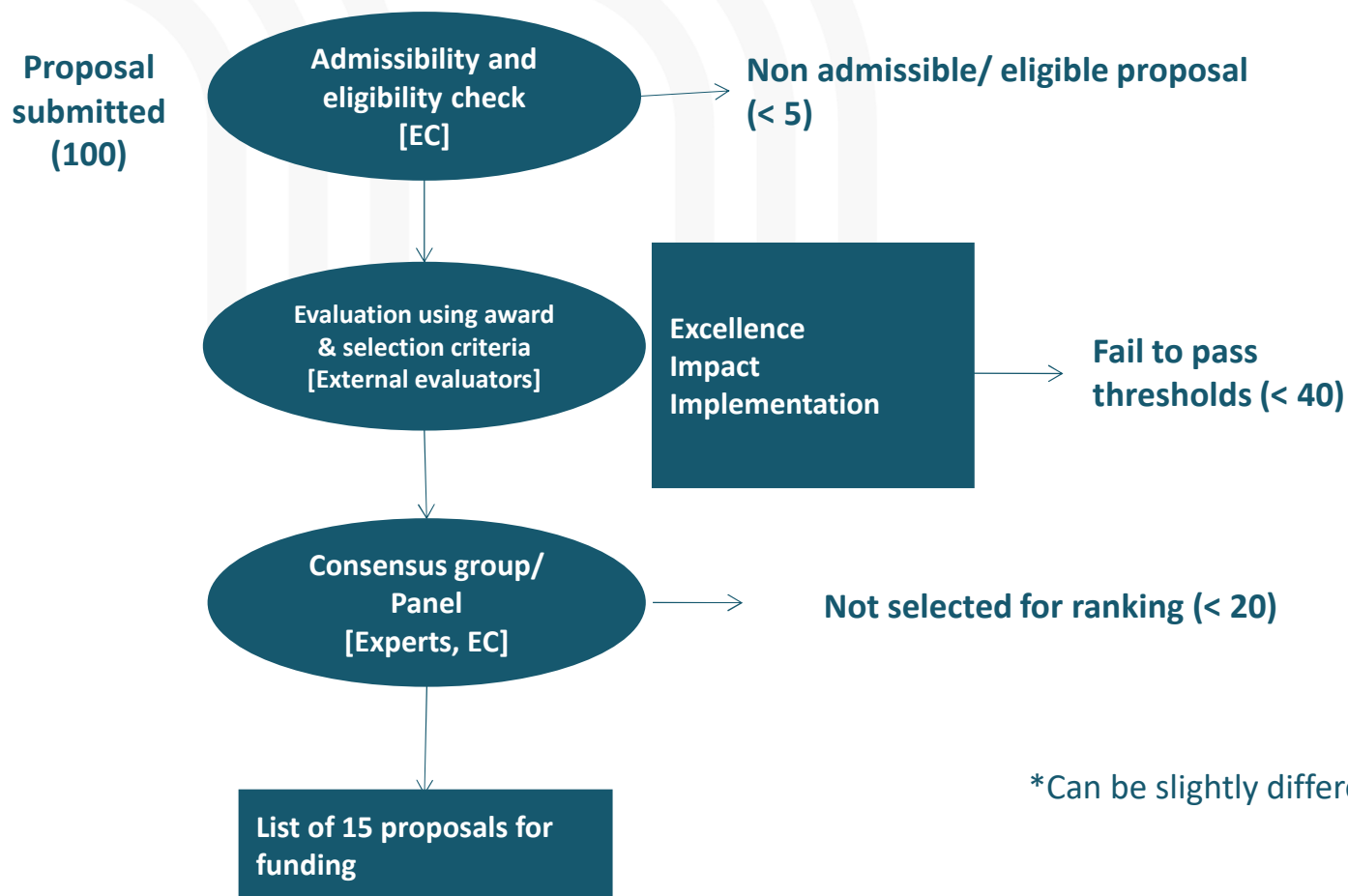
# Project application life cycle





# Evaluation and Selection Process\*

Horizon 2020  
typical process



\*Can be slightly different for some calls



# Evaluation and Selection Process (ERC)

Proposal (technical annex) template (ERC):

Research proposal (Part B1)

- a – Extended synopsis
- b – Curriculum vitae (with funding ID)
- c – Track-record

5p

2p

2p

Research proposal (Part B2) - not evaluated in Step 1

- Scientific proposal
- a – State-of-the-art and objectives
- b – Methodology
- c – Resources

15p

Horizon 2020 ERC  
typical process



2 steps evaluation process

Step 1

Panel members (generalists and with multidisciplinary approaches) **see only Part B1** of proposal

Step 2: Both **Part B1 and B2** are sent to specialists around the world (**specialized external referees**)



# Project application life cycle



01



Proposal  
positioning/  
maturation

Several  
months

02



Partnership  
building

Several weeks  
to several  
months

03



Writing

3 to 6 weeks

04



Evaluation

5 months

05



Grant  
preparation  
and signature

3 months



## CONCLUSION



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 792037

# Conclusion

Be aware of opportunities offered by funded projects



naturejobs.com

ResearchGate

LinkedIn

Euro★ScienceJobs.com  
RESEARCH AND POSTDOC JOBS IN EUROPE

Ac Global  
Academy  
Jobs.com

Academic  
Positions

And do not hesitate to candidate!



# Conclusion



Get informed

Apply

Boost your CV





# Conclusion

General recommendations regarding your starting career:

Be open

Get involved

Be Mobile

Collaborate

Network

Apply for  
funding

# Conclusion

If you are preparing an application, please remind



# Be inspired!



Stefan W. Hell (Max Planck Institute for Biophysical Chemistry in Göttingen and German Cancer Research Centre in Heidelberg), German Physician

- **Marie Skłodowska-Curie Actions Individual fellow (previous Post Doctoral Fellowship name)** at the University of Turku in 1996-1997
- **Coordinator for three Marie Skłodowska-Curie Actions fellowships.**
- He **received his Nobel Prize in Chemistry in 2014** «for the development of super-resolved fluorescence microscopy».

*Hell emphasises the role that the Marie Curie Actions played in his success, saying "If I hadn't gotten that, I would probably have dropped out"*





Thanks !



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# Thank you very much for your attention



*This work was performed in the framework of the H2020 MEET EU project which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 792037*