

# European Research Council



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# Outline

- **European Commission & ERC**
- **Grants available**
- **Grants for single PI: StG, CoG, AdG**
- **Submission and Evaluation Process**
- **Synergy grants (up to 4 PIs) – open to non-EU partners**
- **ERC projects in “Photonics”: some examples**
- **Useful links**

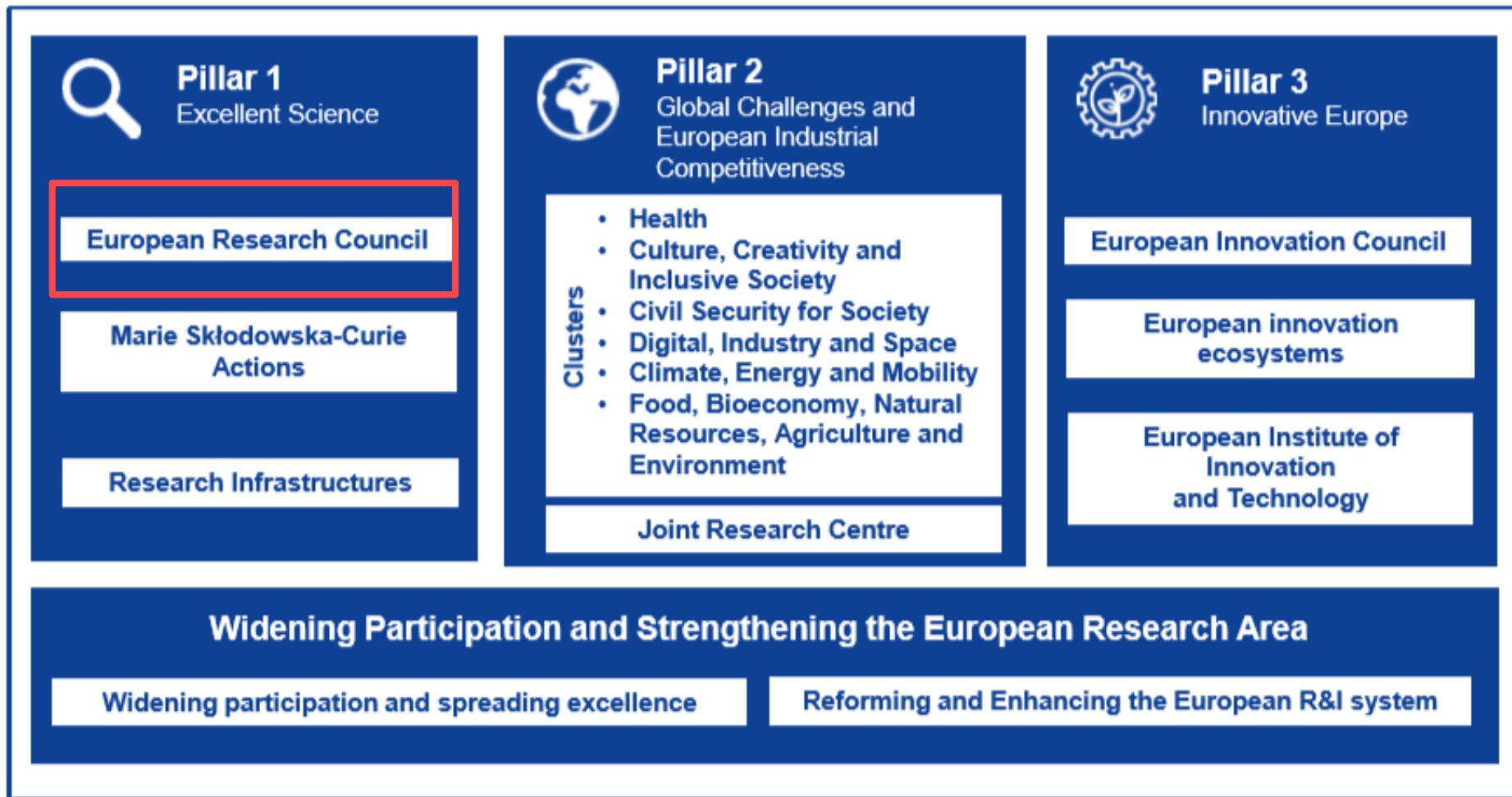
# Horizon Europe – 95.5 B€ – 2021-27

EU funding programme for research and innovation



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# The ERC in a Nutshell

Set up in 2007 by the EU, the ERC funds ambitious projects in frontier research, curiosity-driven

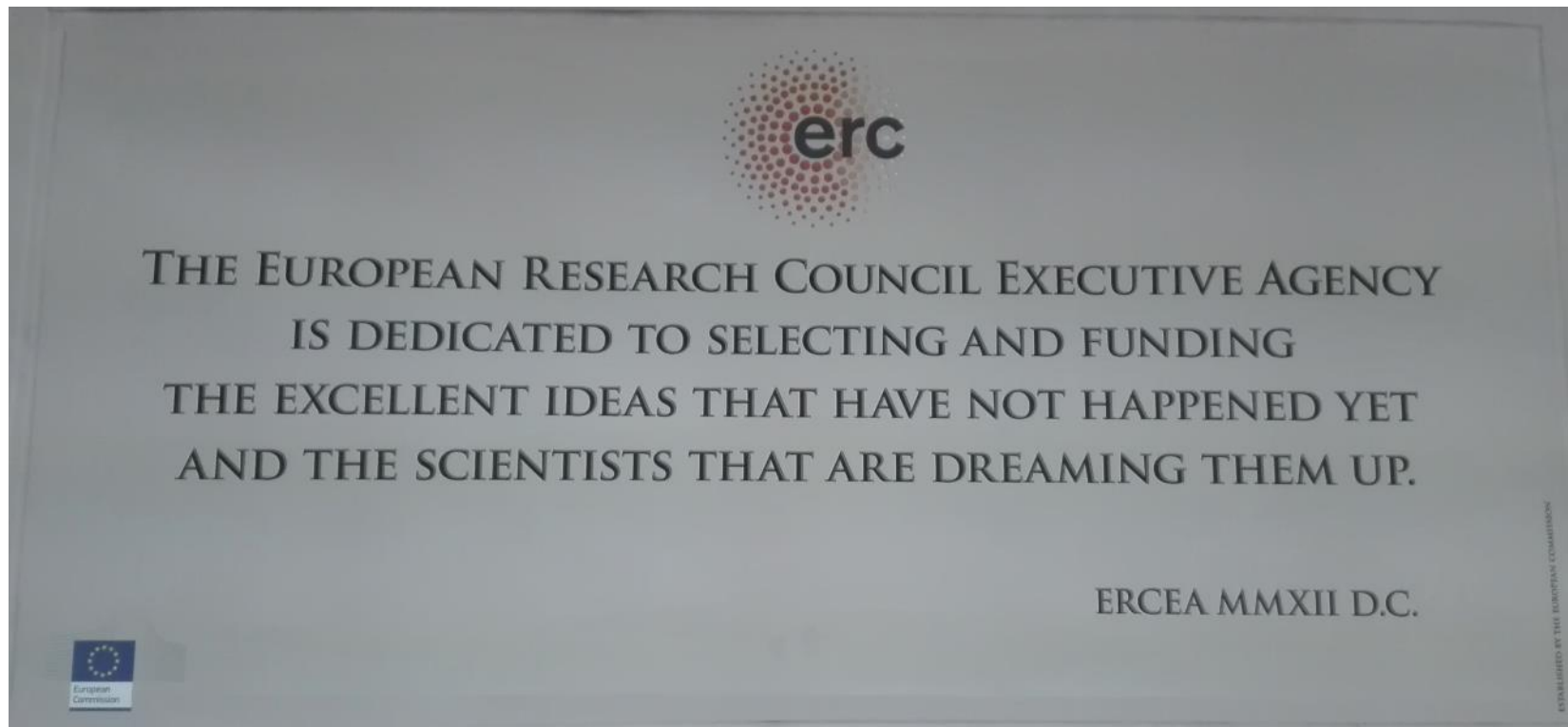
- Supporting excellent frontier research throughout Europe in all scientific domains: Life Sciences (LS), Physical Sciences and Engineering (PE), and Social Sciences and Humanities (SH)
- Retaining and attracting the best scientific talents to Europe, by offering very substantial grants for up to 5 years
- **Funding Science by Scientists for Scientists**

# Funding Science by Scientists for Scientists



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# ERC Governance

## The European Commission

- Provides financing through the EU framework programmes
- Guarantees autonomy of the ERC
- Assures the integrity and accountability of the ERC
- Adopts annual work programmes as established by the Scientific Council

## The ERC Scientific Council

- President appointed following recommendation of an independent search committee
- 21 prominent researchers proposed by an independent identification committee
- Establishes overall scientific strategy; annual work programmes, peer review methodology, selection and accreditation of experts
- Controls quality of operations and management
- Ensures communication with the scientific community

## The ERC Executive Agency

- Executes annual work programme as established by the Scientific Council
- Implements calls for proposals and provides information and support to applicants
- Organises peer review evaluations
- Establishes and manages grant agreements
- Administers scientific and financial aspects and follow-up of grant agreements
- Carries out communications activities and ensures information dissemination to ERC stakeholders

# ERC Grant Schemes

## Starting Grants (StG)

- 1 PI
- 2-7 years after PhD
- Up to 1.5 (2.5\*) M€
- Up to 5 years

## Consolidator Grants (CoG)

- 1 PI
- 7-12 years after PhD
- Up to 2.0 (3.0\*) M€
- Up to 5 years

## Advanced Grants (AdG)

- 1 PI
- 10-year track-record of significant achievements
- Up to 2.5 (3.5\*) M€
- Up to 5 years

## Proof-of-Concept (PoC)

Earliest stage of marketable innovation  
€150,000 for ERC grant holders

## Synergy Grants (SyG)

Jointly for 2-4 PIs  
Up to 10 (14\*) M€, 6 years

# Eligibility of the Principal Investigator



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- Eligibility window can be extended in case of career breaks: maternity, parental leave, long-term illness, national service etc. – See the work programme for details
- Documents must be included in the submission

# Additional funding

Additional funding can be requested to cover the costs below:

- Up to € 1.0M for Starting / Consolidator / Advanced grants
  - Up to € 4.0M for Synergy grants
- 
- (a) *"start-up" costs for Principal Investigators moving to the EU or an Associated Country from elsewhere as a consequence of receiving the ERC grant and/or*
  - (b) *the purchase of major equipment and/or*
  - (c) *access to large facilities and/or*
  - (d) *other major experimental and field work costs, excluding personnel costs*

# Starting / Consolidator / Advanced Grants



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- Funding for a single research group led by the Principal Investigator (PI)
- The PI can manage the project and its budget independently
  - Eligible costs: salaries (PI, postdocs, students, technical staff), equipment, consumables, travels, publication costs etc. +25% overheads
  - The PI can move the grant to another Host Institution during the project
  - If necessary, other Institutions can participate as second beneficiaries
- The PI can be of any nationality
- The Host Institution must be in a EU member state or an associated country
- **SOLE SELECTION CRITERION: scientific excellence of the PI and the project**  
**No priorities, No quotas - the Host Institution is NOT an evaluation criterion**

# Excellence

## is the sole evaluation criterion



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- **Research Project**
  - Ground-breaking nature
  - Potential scientific impact
  - Scientific approach
- **Principal Investigator**
  - Intellectual capacity
  - Creativity
  - Commitment



**submission of a complete proposal  
followed by a two-step evaluation**

# ERC Starting and Consolidator Grants

## The applicant's profile



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- Potential for research **independence**
- Able to develop ground-breaking idea ..... think out of the box
- Evidence of **scientific maturity** and **creativity**
- *Promising track-record of early achievements*
  - Significant publications contributing to the field (up to 5 publications for StG, up to 10 for CoG)
  - At least one (StG) /several (CoG) publications without participation of PhD supervisor
- Invited presentations to conferences
- Awards, prizes, academy membership
- Granted patents

**50% of the PI's time in EU / AC**  
**50% StG - 40% CoG in the project**



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# ERC Advanced Grants

## The applicant's profile

- Track-record of significant research achievements **in the last 10 years**
- Exceptional **leaders** and **mentors**
- 10 publications as senior author in major scientific journals
- Monographs
- Invited presentations to international conferences
- International conferences where Principal Investigator was an organiser – Research expeditions
- International prizes/awards, academy membership
- Granted patents

**50% of the PI's time in EU / AC**  
**30% in the project**

## Life Sciences

- LS1 Molecular Biology, Biochemistry, Structural Biology and Molecular Biophysics
- LS2 Genetics, 'Omics', Bioinformatics and Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology and Endocrinology
- LS5 Neurosciences and Neural Disorders
- LS6 Immunity and Infection
- LS7 Applied Medical Technologies, Diagnostics, Therapies and Public Health
- LS8 Ecology, Evolution and Environmental Biology
- LS9 Applied Life Sciences, Biotechnology, and Molecular and Biosystems Engineering

## Physical Sciences & Engineering

- PE1 Mathematics
- PE2 Fundamental Constituents of Matter
- PE3 Condensed Matter Physics
- PE4 Physical and Analytical Chemical Sciences
- PE5 Synthetic Chemistry and Materials
- PE6 Computer Science and Informatics
- PE7 Systems and Communication Engineering
- PE8 Products and Process Engineering
- PE9 Universe Sciences
- PE10 Earth System Science
- PE11 Materials Engineering

## Social Sciences and 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
- SH6 The Study of the Human Past
- SH7 Human Mobility, Environment and Space

# Two-step evaluation – StG, CoG, AdG



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**Step 1: Part B1 only**

**Step 2: Part B1 + Part B2 + Budget**

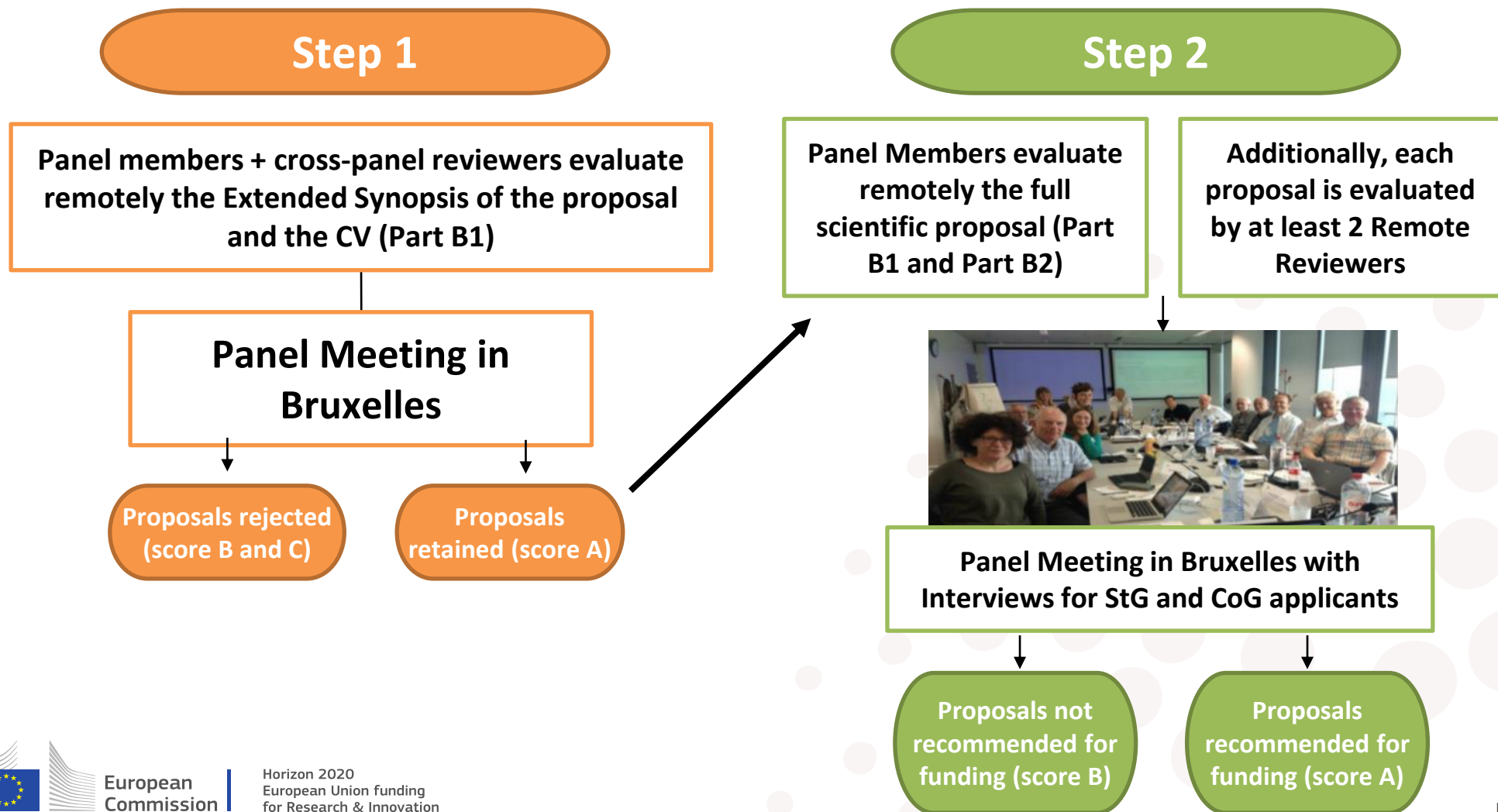
**Part A: administrative**



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# Evaluation Process – StG, CoG, AdG



# Some typical reasons for rejection

## Principal investigator

- Insufficient achievements
- Insufficient leadership profile / lack of independence

## Proposed project

- Lack of knowledge of the state of the art
- Scope: Too narrow  $\leftrightarrow$  too broad / unfocussed
- The proposal does not acknowledge / mitigate risks
- Incremental research / continuation of previous work

# ERC Synergy Grants – key features



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## Ambition

- Substantial advances at the frontiers of knowledge
- Cross-fertilize scientific fields
- Unconventional approaches at the interface between different disciplines
- Transformative research

## Synergetic aspect

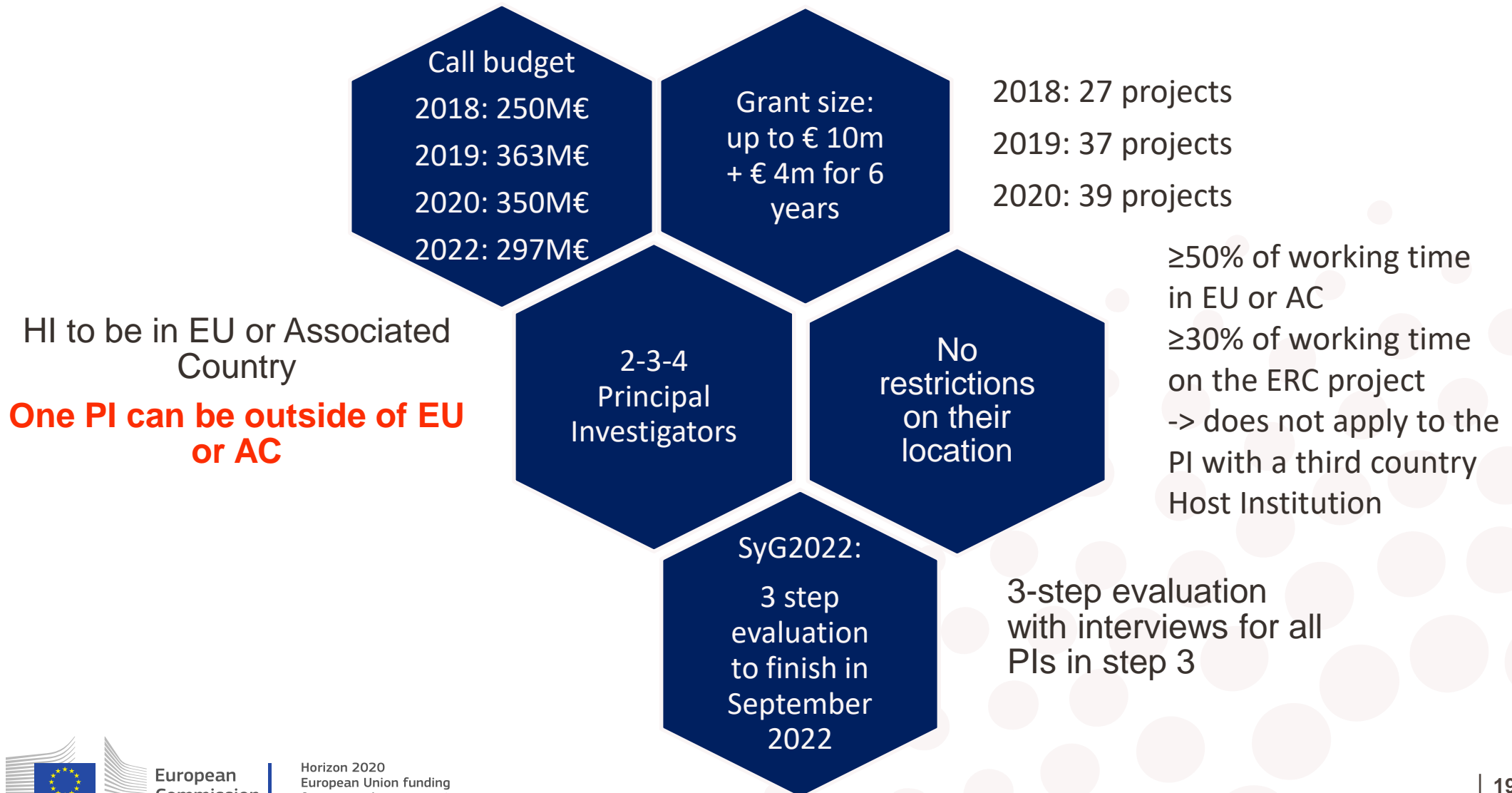
- PIs must demonstrate the synergies, complementarities and added value that could lead to breakthrough that would not be possible by individual PI working alone



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# Synergy grants in a nutshell



# Tentative schedule 2023



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## 2023 Calls Calendar

	Starting Grant	Consolidator Grant	Advanced Grant	Synergy Grant
Call identifier	ERC-2023-StG	ERC-2023-CoG	ERC-2023-AdG	ERC-2023-SyG
Call opens	12/07/2022	28/09/2022	08/12/2022	13/07/2022
Call deadline	25/10/2022	02/02/2023	23/05/2023	08/11/2022

# ERC: useful links of the website

- Datahub of funded projects
  - <https://erc.europa.eu/projects-figures/project-database>
- Info Starting grants
  - <https://erc.europa.eu/funding/starting-grants>
  - [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/information-for-applicants\\_he-erc-stg-cog\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/information-for-applicants_he-erc-stg-cog_en.pdf)
- Info Consolidator grants
  - <https://erc.europa.eu/funding/consolidator-grants>
- Info Advanced grants
  - <https://erc.europa.eu/funding/advanced-grants>
- Info Synergy grants
  - <https://erc.europa.eu/funding/synergy-grants>
- Guide for peer-reviewers 2022
  - StG and CoG: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/guide-for-peer-reviewers\\_he-erc-stg-cog\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/guide-for-peer-reviewers_he-erc-stg-cog_en.pdf)
  - AdG: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/guide-for-peer-reviewers\\_he-erc-adg\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/experts/guide-for-peer-reviewers_he-erc-adg_en.pdf)
- Panel structure and descriptors
  - [https://erc.europa.eu/sites/default/files/document/file/ERC\\_Panel\\_structure\\_2021\\_2022.pdf](https://erc.europa.eu/sites/default/files/document/file/ERC_Panel_structure_2021_2022.pdf)

# ERC Classes



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<https://www.youtube.com/playlist?list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy>

## Instructional videos clearly explaining what you need to know about the application and evaluation process

- Step by step to the ERC application process
  - ➔ <https://www.youtube.com/watch?v=xbFbzkVWgCU&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=1>
- How to get started with your ERC proposal
  - ➔ <https://www.youtube.com/watch?v=O7mOFL2tIQ8&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=2>
- How to write part 1 of your ERC proposal
  - ➔ <https://www.youtube.com/watch?v=HsmQRM88yyM&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=3>
- How to write part 2 of your ERC proposal
  - ➔ <https://www.youtube.com/watch?v=4fpHkhitwA0&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=4>
- How do we evaluate your ERC proposal
  - ➔ <https://www.youtube.com/watch?v=FFhZX00AUV4&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=5>
- How to prepare for your ERC interview
  - ➔ <https://www.youtube.com/watch?v=F4qXVGcdH5w&list=PLtv6FnsXqnXAYRk6HCErwMxwML0ZKoMcy&index=6>