

ERC – funding for frontier research

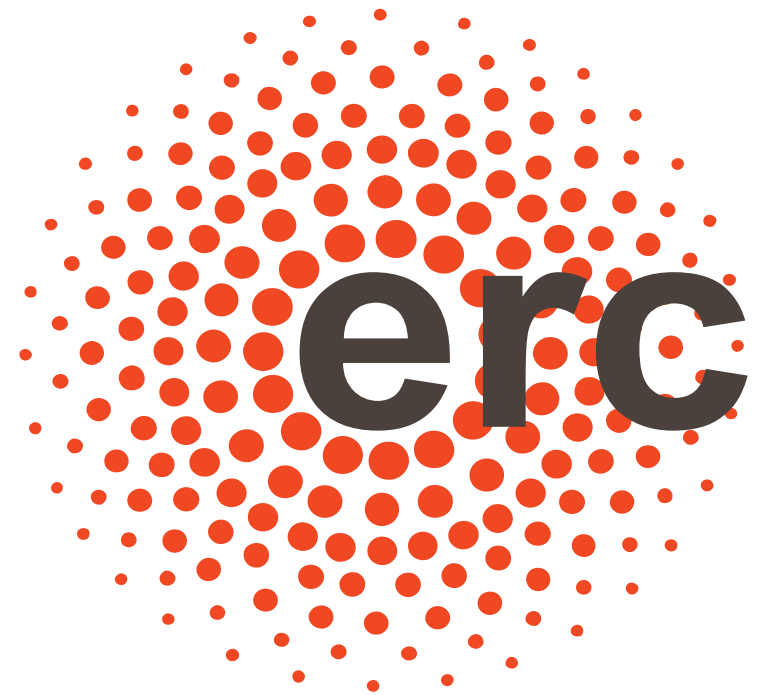
ERC information session
University of Malta Grants Week
Malta, July 7th 2021

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- **What is the ERC**
- **What does ERC offer**
- **How are the proposals evaluated**
- **How to get ready and prepare your proposal**

HORIZON EUROPE

The EU's framework programme for R&I



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Pillar 1 EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



Pillar 2 GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre



Pillar 3 INNOVATIVE EUROPE

European Innovation Council

European innovation ecosystems

European Institute
of Innovation and Technology

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system

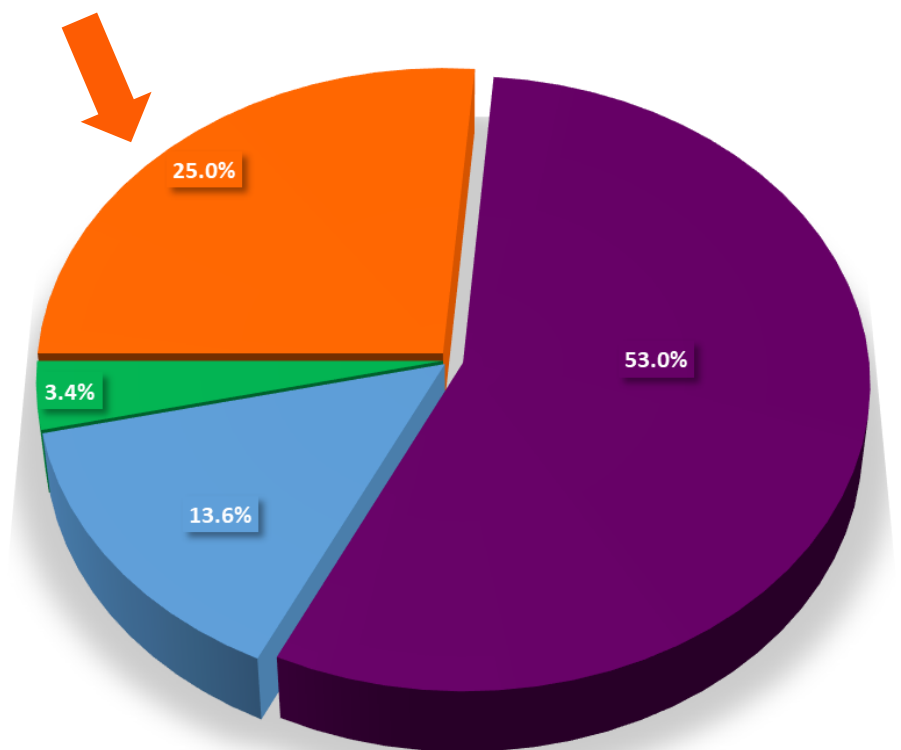
Horizon Europe Budget € 95,5 billion (2021-2027)



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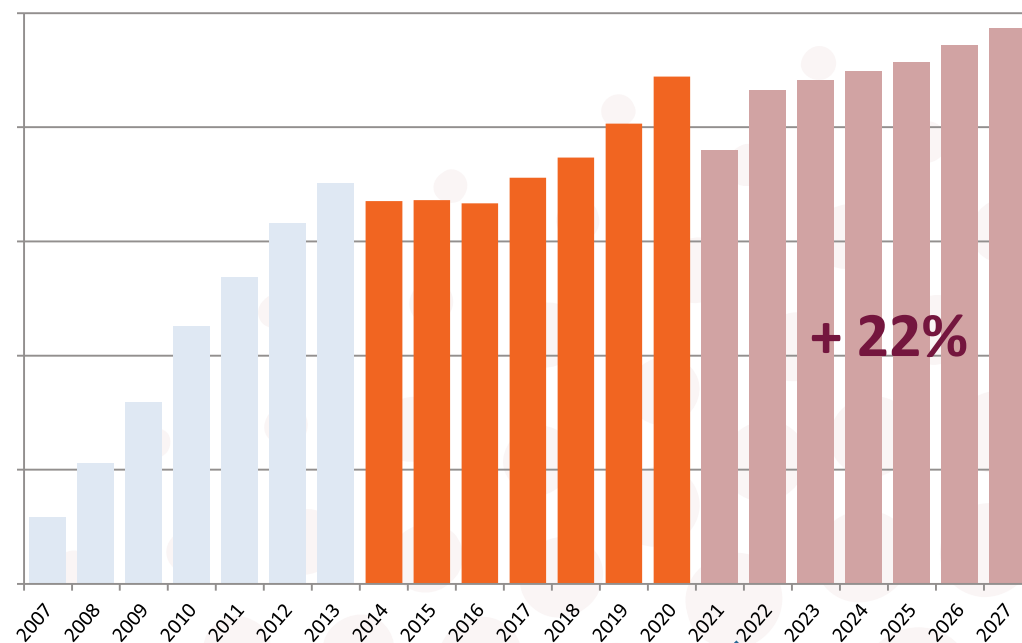
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ERC share: € 16 billion



- Excellent Science
- Global challenges and European industrial competitiveness
- Innovative Europe
- Widening participation and European Research Area

ERC Budget: € 16 billion (2021-2027) – 2.3 billion €/year
€ 13 billion (2014-2020) - 1.9 billion €/year
€ 7.5 billion (2007-2013) - 1.1 billion €/year



+ 22%

No SyG and PoC grants

ERC is....



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An autonomous funding body set up by the EU in 2007 and
led by scientists (Scientific Council)

A promotional poster for ERC Long Term Grants. It features the ERC logo at the top left, followed by the text 'INDIVIDUAL RESEARCHERS FROM ALL OVER THE WORLD' in orange. Below this, 'LONG TERM GRANTS' is written in large, bold letters, with 'LONG TERM' in black and 'GRANTS' in orange. Underneath, it says 'TO HIGH-RISK/HIGH-GAIN PIONEERING PROJECTS IN ANY FIELD OF FRONTIER RESEARCH'. At the bottom, three horizontal bars represent different research fields: 'Life Sciences' (with a cell icon), 'Physical Sciences and Engineering' (with an atom icon), and 'Social Sciences and Humanities' (with a sun icon).



European
Commission

Horizon 2020
European Union funding
for Research & Innovation

What does ERC offer?

Creative freedom of individual researchers



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ERC offers independence, recognition & visibility

- Work on a research topic of **own choice**, with a team of **own choice**
- Gain **financial autonomy** for 5 years
- Negotiate the **best work conditions** with the host institution
- Attract **top team members** (EU and non-EU) and **collaborators**
- **Portability of grants**
- Attract **additional funding** and gain **recognition**;



Why ERC?



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- *Driver for scientific creativity*
- *Tolerates failure*
- *Rewards long-term success*
- *Gives its appointees great freedom to experiment;*
- *Investigators produce high- impact papers at a much higher rate*
- *Investigators gain significant international recognition and visibility*
- *Gives opportunities to explore new directions of research*

ERC funding schemes



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Starting Grant

starters
(2-7 years after PhD)
Min. 50% time commitment

up to M€ 1.5
for 5 years

Consolidator Grant

consolidators
(7-12 years after PhD)
Min. 40% time commitment

up to M€ 2
for 5 years

Advanced Grant

Senior researchers
(> 12 years after PhD)
Min. 30% time commitment

up to M€ 2.5
for 5 years

- Minimum 50% of PI's working time in an EU Member State or Associated Country

Career stage

Eligibility window can be extended in case of career breaks
(maternity, parental leave, long-term illness, national service etc)

Special case for medical doctors without PhD

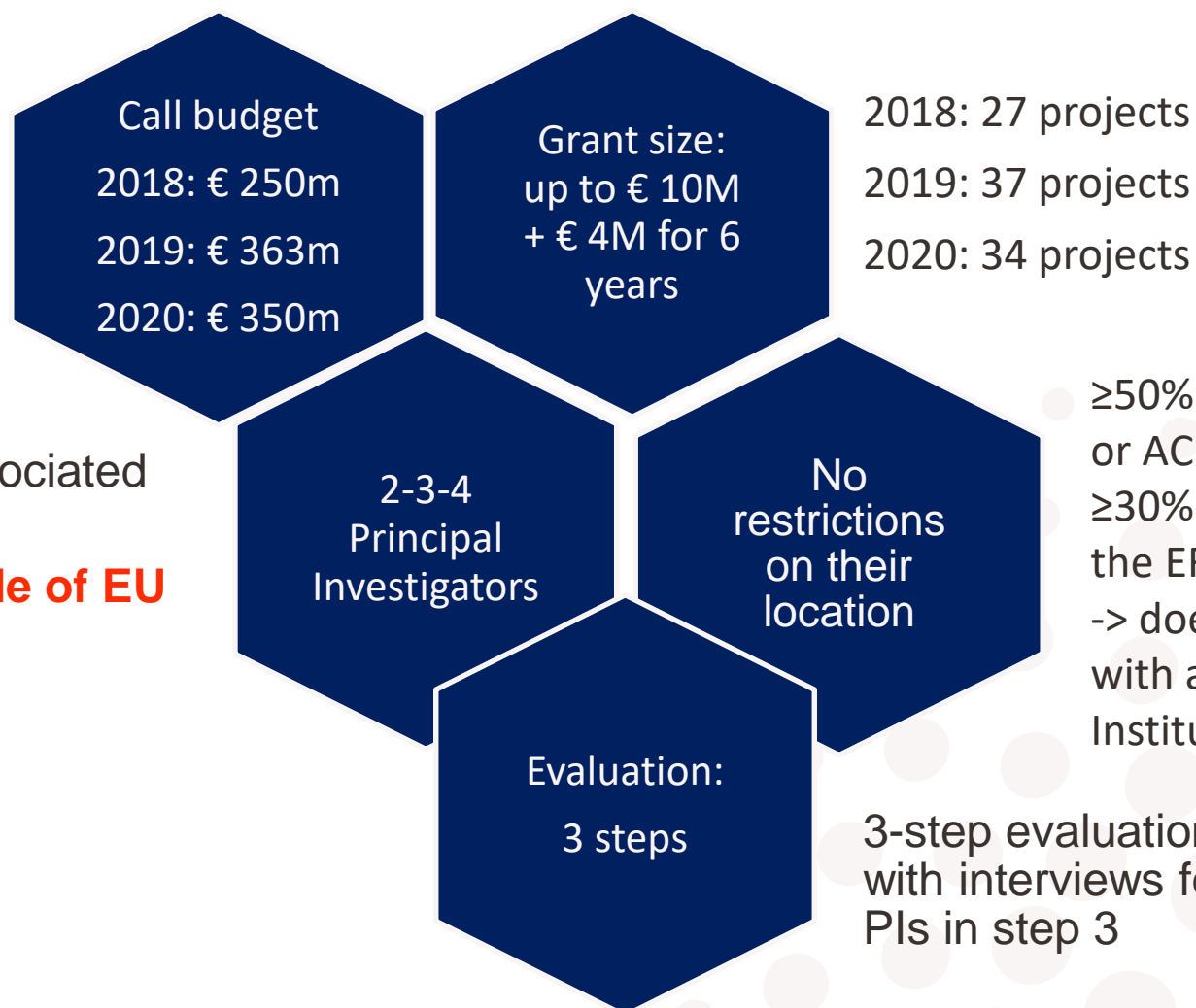
Documents must be included in the submission

Synergy Grants (2022 ->)



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HI to be in EU or Associated
Country
**One PI can be outside of EU
or AC**

Proof of Concept grants (2022 ->)

Proof of
Concept
Grants

Synergy
Grants

Advanced
Grants

Consolidator
Grants

Starting
Grants



- **Who can apply:** Holders of an ERC grant with an idea substantially drawn from an ERC-funded project
- **What for:** establish the innovation potential of the idea: technical validation, market research, clarifying IPR strategy, investigating business opportunities
- **Amount:** €150,000 per grant (18 months)
Total budget in 2020: € 25million (~167 projects)
- **Evaluation:** Experts in technology transfer check the innovation potential and that the plan is reasonable

Who can apply?



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- **Excellent Researchers**
- Any **nationality**, any **age** or any **current place of work**
- **In conjunction with a Host Institution**
 - based in EU or associated countries (28 MS and 16 AC)
 - At least 50% of the time spent in EU or AC
- Additional “start-up” funding for scientists moving to Europe and countries associated to HE
- Grantee can keep affiliation with home institute outside Europe

PART A – administrative online forms

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

Annexes – submitted as .pdf

- Statement of support of HI
 - copy of PhD or equiv. (StG & CoG)
- If applicable:*
- document for extension of eligibility window (StG & CoG)
 - explanatory information on ethical issues

PART B1 – submitted as .pdf

- Abstract and Cross-domain explanation 1 p.
- Extended Synopsis 5 p.
- (Recommended Model) CV 2 p.
- Funding ID 1 p.
- Track Record 2 p.

PART B2 – submitted as .pdf

- Scientific Proposal 15 p.



Evaluation process (2 Steps)

(StG, CoG, AdG)



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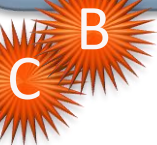
STEP 1

Remote assessment by Panel members
(*generalists*) of **Part B1**

Panel meeting

Proposals retained
for step 2

Feedback to
applicants

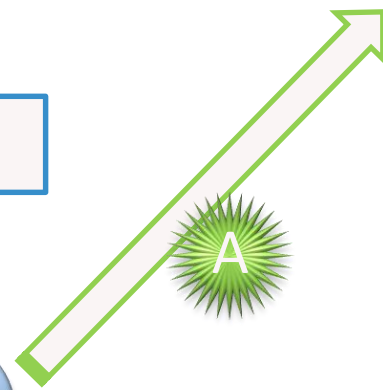
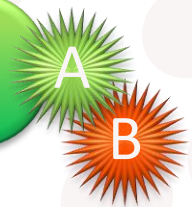


STEP 2

Remote assessment by Panel members
and Remote Reviewers (*specialists*) of
full proposal (**Part B1+B2**)

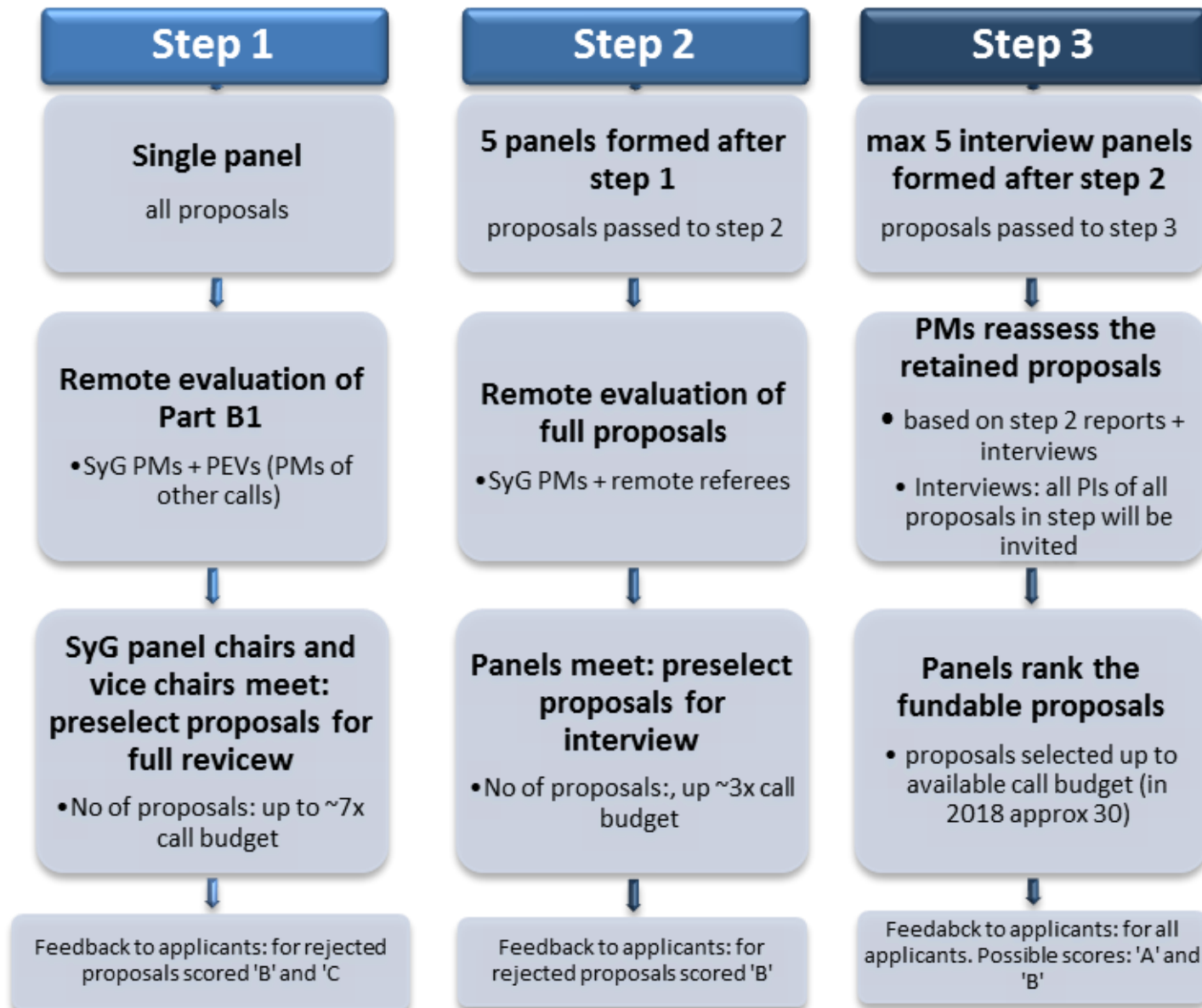
Panel meeting
(with interview)

Ranked list of
proposals



Evaluation of Proposals

Synergy Grants



Evaluation of Proposals

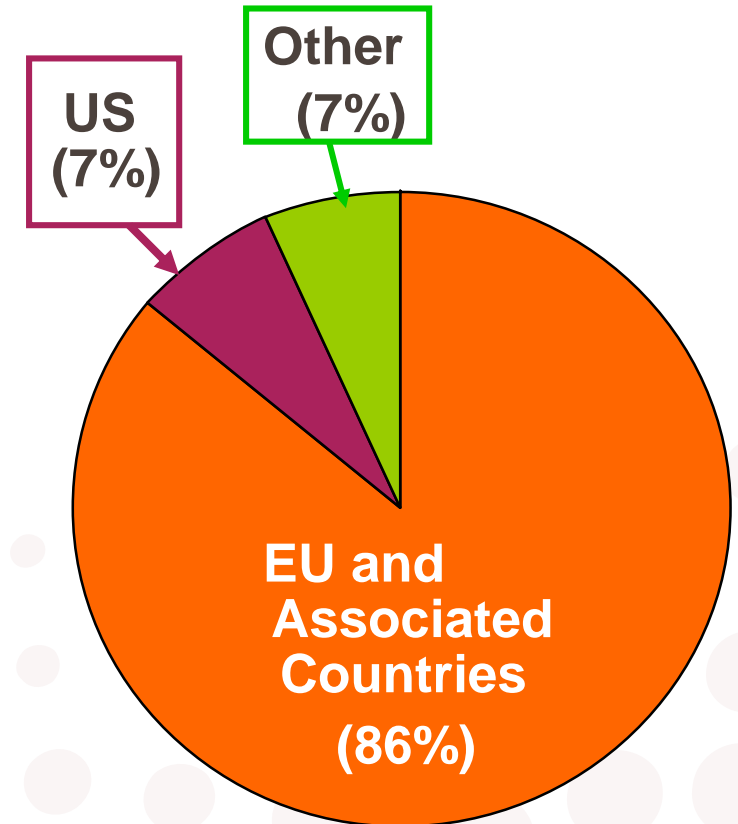
Who evaluates your proposal?



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- **Panel members: typically 600 PMs involved per call**
 - High-level scientists
 - Nominated by the Scientific Council worldwide
 - About 11-17 members
 - Steps 1 and 2
- **Remote Referees: typically 2000 / call**
 - Step 2



Evaluation of proposals

What is evaluated?



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- **Excellence of the Research Proposal**

- ✓ Ground breaking nature
- ✓ Ambition
- ✓ Feasibility
- ✓ *Synergy Grants*: goes beyond what PIs could do alone?
Combination of scientific elements crucial to address scope and complexity of problem?

- **Excellence of the Principal Investigator**

- ✓ Intellectual capacity
- ✓ Creativity
- ✓ *Synergy Grants*: Group brings together necessary elements?

Evaluation of proposals

What is not evaluated?



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- **NOT criterion of evaluation:**

- ✓ Host Institution
- ✓ Societal impact
- ✓ Specific thematics targeted currently by EU (i.e. climate change)
- ✓ Applicability of the hypothesis
- ✓ Inter/multi/cross disciplinarity
- ✓ *PI's age, nationality, gender*

What are the panel members looking for?

In your proposal



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Fund frontier research projects:

- Does the project go substantially **beyond the state of the art**?
- **Why** is the proposed project important?
- Is it **timely**? (Why wasn't it done in the past? Is it feasible now?)
- What's the **risk**? Is it justified by a substantial potential **gain**? Is there **a plan** for managing the risk?
- Is it **feasible**? What approach is followed? How the work will be carried out?

Fund the future leaders in the field:

- **Why** is the PI the best person to carry it out?
- Is the PI internationally competitive as a researcher **at his/her career stage** and in his/her discipline?
- Is there **evidence** that the PI is able to work independently, and to manage a 5-year project with a substantial budget?

ERC evaluation

Profile of Principal Investigator



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- Any current place of work but working or moving to work in Europe (EU member state or H2020/HE Associated Country)
- Any nationality or age

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

Starting Grant

- Potential for scientific independence and maturity
- Good track record for the career stage

Consolidator Grant

- Evidence of scientific independence and maturity
- Good track record for the career stage

Advanced Grant

- Strong leadership
- Significant track-record in the last 10 years
- New research direction

- **Publications**
- **Invited presentations to conferences**
- **Awards, prizes, academy membership**
- **Granted patents**

- + **Supervision of Students**
- **Other grants**

- **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 moving to EU/AC from abroad
- b) Purchase of large equipment
- c) Access to large facilities
- d) other major experimental and field work costs (no personnel cost)

- **Eligible costs:** Salaries (PI, postdocs, students, technical staff)

Equipment (minor, major)

Consumables

Travel (including visiting fellows)

Publication costs

25% overheads

Subcontracting

- **100% as requested; but can cut by the panels if unjustified**



Preparing your proposal



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- Check the "**novelty/excellence**" of your idea
- Be ambitious and "daring" – panels are instructed to look for high risk/high gain research
- Grab the interest and attention of the readers/reviewers
- Write for the panel
- Do not include **unnecessary partners and collaborators** – not a consortium
- Download and **proof-read the proposal** before submitting
- A submitted proposal can be **revised until the call deadline** by submitting a new version and overwriting the previous one



Preparing your proposal

1: Get information!



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- **ERC website** for latest funding opportunities and statistics on last calls, past panel members and current panel chairs:
- Use the help tools and **call documents** ([Information for Applicants](#), Work Programme, Frequently Asked Questions) to prepare your proposal
 - 💡 Read the guidelines carefully!
 - 💡 Find out about the formatting rules and page limits to respect!
 - 💡 Register early, get familiar with the system and templates and start filling in the forms
- Be sure you are **eligible**: see application restrictions



Preparing your proposal # 2: Host Institution



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- You **can change** it during the project's life
- Ask their support for the preparation of the ERC grant
- Make sure to have the HI letter ready in time for the submission deadline



Preparing your proposal

3: Choose panel



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- The ERC evaluations are performed per thematic panel (27 panels)
 - No thematic priorities or budget quotas
 - Panel structure is purely operational
 - Right level of expertise
 - Roughly similar in size
 - Budget is allocated proportionally to demand
- Each panel covers a given breath of research topics, further detailed with its descriptors
- When you submit, you need to indicate
 - ➔ **The submission panel** – which will in principle evaluate the proposal + possibly a secondary panel
 - ➔ **1-4 descriptors**
 - The first descriptor should be in the submission panel
 - The other descriptors can be from any panel
 - ➔ Free keywords (optional)

Preparing your proposal:

PANEL structure

<https://erc.europa.eu/news/new-erc-panel-structure-2021-and-2022>



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Life Sciences (LS)

- LS1 Molecules of Life: Biological Mechanisms, Structures and Functions
- LS2 Integrative Biology: from Genes and Genomes to Systems
- LS3 Cellular, Developmental and Regenerative Biology
- LS4 Physiology in Health, Disease and Aging
- LS5 Neuroscience and Disorders of the Nervous System
- LS6 Immunity, Infection and Immunotherapy
- LS7 Prevention, Diagnosis and Treatment of Human Diseases
- LS8 Environmental Biology, Ecology and Evolution
- LS9 Biotechnology and Biosystems Engineering

LS: revision and adjustment of panel contours

PE: additional panel (PE11) + revision

SH: additional panel (SH7) + revision

Social Sciences and Humanities (SSH)

- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Governance and Legal Systems
- SH3 The Social World and Its Diversity
- 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**

Physical Sciences & Engineering (PSE)

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

Preparing your proposal:

Tips - Part B1 vs Part B2



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In Step 1: Panel members see only **Part B1** of the proposal (prepare it accordingly!)

- Pay particular attention to the **ground-breaking nature** of the research project – no incremental research. State-of-the-art is not enough. Think big!
- Know your competitors – what is the **state of play** and why is your idea and scientific approach outstanding?
- Part B1: **concise and clear presentation** is crucial
- Outline of the **methodological approach is recommended** (feasibility assessment)
- Show your **scientific independence** in your CV (model CV provided)
- Select the '**right**' **Panel** –ID explanation for secondary panel
- Include references

Preparing your proposal

Tips - Part B1 vs Part B2



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In Step 2 : both part B1 and B2 are read by Panel Members and specialists around the world (specialised external referees) so in Part B2:

- **DO NOT** repeat the synopsis, go into details on your methodology and work plan
- Make sure you give full **references** - excluded from page limits
- Explain hypothesis or provide **preliminary data** (if exists)
- Provide alternative strategies to **mitigate risks**
- Justify requested resources
 - Explain involvement of team members (ERC proposals are NOT collaborative ones)
 - show the need of collaborators (if any)

Preparing your proposal

Tips - Part B2: Proposal budget considerations



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- Budget analysis carried out in **Step 2** evaluation (meeting)
- Panels have responsibility to ensure that resources requested are reasonable and well justified
- **Not explained costs are often cut!** - on a proposal by proposal basis (no across-the-board cuts)
- Panels to recommend a final maximum budget based on the resources allocated/ removed

- **Ask for funding for Open Access – this is obligatory in Horizon Europe!**

THE INTERVIEW



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Show **SCIENTIFIC CURIOSITY** and be **PROUD** of that!

DO Stress the main new concepts early on

DO Stick to the time

BE PREPARED for questions (Lead Reviewer, Panel Chair, Panel Members)

- **Demonstrate you know what you propose:**
 - you know the risks
 - You have a plan to mitigate
 - You have the ability to explore novel routes
 - Need collaborators? How you manage them?
 - ID? How you cover missing expertise?



Convince that is YOUR proposal:

- Caught in the system?
 - Independent even in a big group
 - How the grant will give the independency
- If you have your group – consolidate?
- You have the knowledge in the field
- Do not change the original objectives

What if someone else published similar work in the meantime?? **BE AWARE!!!**

COME PREPARED TO :

- **Justify** how similar/different the works are
- What would you change to make it novel and original again?
- Where do you go from here?



Typical reasons for rejection

Research Project

- **Scope:** Too narrow \leftrightarrow too broad/unfocussed
- Incremental research
- Collaborative project, **several PIs**
- **Work plan** not detailed enough/unclear
- Insufficient **risk** analysis
- Part B2 similar with part B1

Principle Investigator (PI)

- Insufficient **track-record**
- Insufficient (potential for) **independence**

Interview

- Vaguely addressed questions
- Not convincing is their own idea/project
- Lack of preliminary results
- Similar work published in the meantime – unaddressed issue

Before Redressing: see what you could you have done/explained/ presented better before blaming the process!

- **Diverting scientific opinion is not a motivation for redress**
- **An obvious mistake however might result in a re-evaluation**

Last but not least.....

- If rejected, **KEEP TRYING!!!!!!**
- Reapplications have a much higher success rate
- Benefit of using feedback from evaluation reports

ERC 2021-2022 Call Calendar



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ERC calls	Call Opening	Submission Deadline(s)
Advanced Grants ERC-2021-AdG	20 May 2021	31 August 2021
Synergy Grants ERC-2022-SyG	15 July 2021	10 November 2021
Starting Grants* ERC-2022-StG	23 September 2021	13 January 2022
Consolidator Grants* ERC-2019-StG	19 October 2021	17 March 2022
Advanced Grants * ERC-2019-StG	20 January 2022	28 April 2022

*2022 dates are indicative: subject to adoption of the work programme by the European Commission



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Where can you find more information?



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Videos - ERC Classes

- What to consider before applying
- How to fill in the application
(Part B1 and B2)
- The interview
- How the evaluation works

<https://www.youtube.com/watch?v=xbFbzKvWgCU&list=PLtv6FnsXqnXAYRk6HCErwMxwMLOZKoMcy>

More opportunities to develop your scientific career through public funding linked to ERC projects, even if you do not receive an ERC Grant.

<https://erc.europa.eu/funding/additional-opportunities>



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Where can you find more information?

Our website:

erc.europa.eu

Our social media channels:



National Contact Point (NCP):

<http://mcst.gov.mt/horizon-europe/>

Malta Council for Science & Technology (MCST): Lili Vasilieva

Funding & Tender Opportunities:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

<https://erc.europa.eu/projects-figures/erc-funded-projects>



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THANK YOU!

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QUESTIONS?



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