Excellent Researchers & Ground-breaking Research

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Physical Sciences & Engineering
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The European Research Council

✓ What is the ERC? & What does ERC offer?
✓ How to prepare & submit a proposal
✓ Some advice on preparing an ERC proposal
✓ Sources of further information
The ERC supports excellence in frontier research through a bottom-up, individual-based, pan-European competition.

**Budget:** € 13 billion (2014-2020) - 1.9 billion €/year  
€ 7.5 billion (2007-2013) - 1.1 billion €/year

### Strategy
- Support for the individual scientist – **no networks**!  
- Global peer-review  
- No predetermined subjects (bottom-up)  
- Support of frontier research in all fields of science and humanities

### Legislation
- Scientific governance: independent Scientific Council with 22 members including the ERC President; full authority over funding strategy  
- Support by the ERC Executive Agency (autonomous)  
- Excellence as the only criterion
The ERC Scientific Council

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VEUGELERS Reinhilde

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ZWIRNER Fabio
What is the ERC?

Horizon 2020 Budget € 77 billion
ERC Budget € 13 billion
What do ERC grants offer?

Creative Freedom of the Individual Grantee

ERC offers independence, recognition & visibility

- to work on a research topic of own choice, with a team of own choice
- to gain true financial autonomy for 5 years
- to negotiate with the host institution the best conditions of work
- to attract top team members (EU and non-EU) and collaborators
- to move with the grant to any place in Europe if necessary (portability of grants)
- to attract additional funding and gain recognition; ERC is a quality label
What does ERC offer?

ERC Grant Schemes

**Starting Grants**

- *starters*
  - 2-7 years after PhD
  - (≥ 50% commitment)
  - up to €1.5 Million
  - for 5 years

**Consolidator Grants**

- *consolidators*
  - 7-12 years after PhD
  - (≥ 40% commitment)
  - up to €2 Million
  - for 5 years

**Advanced Grants**

- track-record of significant research achievements in the last 10 years
- (≥ 30% commitment)
- up to €2.5 Million
- for 5 years

**Proof-of-Concept**

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

- Start-Up costs for scientists moving to EU / Associated Countries
- Purchase of major equipment
- Access to large facilities

✓ Up to €500 000 for Starting
✓ Up to €750 000 for Consolidator
✓ Up to €1 Million for Advanced grantees
✓ Up to €4 Million for SyG PIs
**Objective:** support excellent PIs at the stage at which they are starting their own independent research team or programme

**Grant size:** €1.5M (possibility of additional €0.5M)

**PI Profile:**

- Potential for research independence
- At least one publication as main author or without PhD supervisor
- Invited presentations in conferences
- Funding, patents, awards, prizes
- 50% of PI's time in the project + 50% in the EU or AC
ERC Consolidator Grants (7-12 y past PhD)

- **Objective:** support excellent PIs at the stage at which they may still be consolidating their own independent research team or programme

- **Grant size:** €2.0M (possibility of additional €0.75M)

- **PI Profile**
  - Has achieved a certain degree of research independence
  - Several publications as main author or without PhD supervisor
  - Invited presentations in conferences
  - Funding, patents, awards, prizes, mentoring
  - 40% of PI's time in the project + 50% in the EU or AC
Extensions of eligibility window possible for StG and CoG for documented cases of:

- Maternity – 18 months per child \((\text{before or after PhD})\)
- Paternity – actual time taken off
- Military service
- Medical speciality training
- Caring for seriously ill family members

No limit to the total extension
**ERC Advanced Grants**

- **Objective:** established research leaders with a recognised track-record of research achievements in the last 10 years

- **Grant size:** €2.5M (possibility of additional €1.0M)

- **PI Profile**
  - Active researchers with a significant track record in the last 10 years
  - 10 top publications/3 research monographs as main author
  - Invited presentations, organisation of major conferences
  - Funding, patents, awards, prizes, mentoring
  - 30% of PI's time in the project + 50% in the EU or AC
ERC Synergy Grants

- **Objective:** breakthroughs that would not be possible by the individual PIs working alone

- **Grant size:** Up to €10M over 6 years (possibility of additional €4M)

- **Synergy Details**
  - 2-4 PIs of any nationality at any career stage
  - One PI designated as corresponding PI (cPI)
  - Ambitious research projects - new methods, approaches, techniques, research at the interface between disciplines, unconventional approaches, cross-fertilising scientific fields etc
  - 30% of PI's time in the project + 50% in the EU or AC
The European Research Council

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✓ How to prepare & submit a proposal
✓ Some advice on preparing an ERC proposal
✓ Sources of further information
Who can apply?

Excellent Researchers of

- any nationality,
- any age
- any current working place in the world
- any topic (bottom-up)
- Only requirement - letter of support from a Host Institution (HI) based in EU or associated countries
How to prepare & submit an ERC research proposal

- Have a **bright, original** and **exciting idea**
- Design a **research project** to implement the idea
- Get a letter of support from a **Host Institution** where the project is to be carried out (the HI must be located in EU or any of the H2020 associated countries)
- Write your **research proposal** and submit before the deadline!
- Fully **electronic/web based submission system**
- **Two step** evaluation: proposal parts B1 and B2
How to prepare & submit an ERC research proposal

Proposal structure

**PART A – online forms**
- **A1** Proposal info
- **A2** Host Institution and PI info
- **A3** Budget
- **A4** Ethics Issues
- **A5** Call Specific Info (doctoral training, extensions, excluded reviewers etc.)

**PART B1 – submitted as .pdf**
- Extended Synopsis 5 p.
- CV 2 p.
- Early Achievements Record 2 p. (incl. up to 5 publications)

**PART B2 – submitted as .pdf**
- Scientific Proposal 15 p.
  - State of the Art & Objectives
  - Methodology
  - Resources

**Annexes – submitted as .pdf**
- HI support letter
- Copy of PhD title
- Documents for extension of eligibility window

Read the Information to Applicants
How to prepare & submit an ERC research proposal

ERC Panel structure

Each panel:
Panel Chair and 10-16 Panel Members

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

Life Sciences
- **LS1** Molecular and Structural Biology and Biochemistry
- **LS2** Genetics, Genomics, Bioinformatics and Systems Biology
- **LS3** Cellular and Developmental Biology
- **LS4** Physiology, Pathophysiology and Endocrinology
- **LS5** Neurosciences and Neural Disorders
- **LS6** Immunity and Infection
- **LS7** Diagnostic Tools, Therapies & Public Health
- **LS8** Evolutionary, Population and Environmental Biology
- **LS9** Applied Life Sciences and Biotechnology

Physical Sciences & Engineering
- **PE1** Mathematics
- **PE2** Fundamental Constituents of Matter
- **PE3** Condensed Matter Physics
- **PE4** Physical & Analytical Chemical Sciences
- **PE5** Synthetic Chemistry and Materials
- **PE6** Computer Science & Informatics
- **PE7** Systems & Communication Engineering
- **PE8** Products & Process Engineering
- **PE9** Universe Sciences
- **PE10** Earth System Science
Evaluation of proposals:
Who evaluates the proposals?

ERC StG CoG AdG panel members 2007-2014
by host institution country

# panel members/panel chairs

M (71 %)
F (29 %)

EU
Associate
countries
International
Evaluation of proposals: Review procedure for StG, CoG and AdG

**STEP 1**
Remote assessment by Panel members of section 1 – PI and synopsis (part B1)

Panel meeting

Score: B or C

Proposals retained for step 2: Score A

**STEP 2**
Remote assessment by Panel members and reviewers of full proposal (B1+B2)

Panel meeting + interview (StG and CoG)

Ranked list of proposals: Score A

Score: B

Feedback to applicants
How ERC research proposals are evaluated

*Excellence* is the sole evaluation criterion

Evaluation of **excellence** at two levels:

- **Excellence of the Research Project**
  - Ground breaking nature
  - Potential impact
  - Scientific Approach

- **Excellence of the Principal Investigator**
  - Intellectual capacity
  - Creativity
  - Commitment
What is the ERC? & What does ERC offer?

How to prepare & submit a proposal

Some advice on preparing an ERC proposal

Sources of further information
Contrary to what you may think.....

- ERC funds 'frontier research', including applied research
- The budget is distributed among the scientific panels as a function of demand.
- The panel descriptors do not represent ERC scientific priorities.
- The success rate is virtually flat across the eligibility window (StG, CoG).
- Publication record is not decisive in selection decisions.
- The Host Institution is not an evaluation criterion.
Preparing your proposal: Questions to ask yourself as an applicant

- Does it promise to go substantially **beyond the state of the art**?
- 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? Do I have a plan for managing the risk?
- Why is my proposed project important?

- Why am I the best/only person to carry it out?
- Am I internationally competitive as a researcher at my career stage and in my discipline?
- Am I able to work independently, and to manage a 5-year project with a substantial budget?
Preparing your proposal: Hints and tips (Generalities)

- Check the 'novelty/excellence' of your idea (see previous ERC grants on the topic)
- Register early, get familiar with the system and templates and start filling in the forms
- Use the help tools and call documents (Information for Applicants, Work Programme, Frequently asked questions) to prepare your proposal
- Talk to your Institution's grant office and other ERC grantees
- 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:
Tips - Differences between Parts B1 and B2

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 (not all evaluators are experts in your field)
- Outline of the **methodological approach is recommended** (feasibility assessment)
- Show your **scientific independence** in your CV (model CV provided in the part B1 template)
- Select the 'right' Panel – very IMPORTANT!, ID explanation for 2nd panel
Preparation of your proposal: Tips - Differences between Parts B1 and B2

In Step 2: Both Part B1 and B2 are read by Panel Members & Remote Referees.

- Do not just repeat the synopsis, go into details.
  - Provide **sufficient details** on methodology, work plan, selection of case studies etc. (15 pages)
  - Explain hypothesis or provide preliminary data (if exists)
  - Make sure you give full references (excluded from page limits)
  - Provide alternative strategies to **mitigate risks**
  - Check coherency of figures
  - Justify requested resources
    - Explain involvement of team members (ERC proposals are NOT collaborative ones)
    - Show the need of collaborators (if any)
Budget analysis carried out in Step 2 evaluation (meeting)

Panels have responsibility to ensure that resources requested are reasonable and well justified

Panels do not 'micro-manage' project finances

Budget cuts need to be justified on a proposal by proposal basis (no across-the-board cuts)

But not explained costs are often cut!

Panels to recommend a final maximum budget based on the resources allocated/removed

Ask for funding for Open Access – this is obligatory in Horizon 2020!
Preparing your interview: Some tips and advice

If invited to Step 2 (for StG and CoG):

- Get Panel Members interested in you and what you are doing
- Practice thoroughly, several (many?) times; typically a 10 minute presentation followed by 10-15 minutes of questions
- Panels want to see that these are your ideas, not those of your supervisor
- It is normal to be nervous...
Summary

• Be ambitious and 'daring'; panels instructed to seek out high-risk research
• Grab interest and attention of readers/reviewers
• Remember that Part B1 will be seen by 'generalists' (panel members)
• If you make it to Step 2, reviewers see both B1 and B2, so do not repeat/duplicate part B1 in part B2
• Do not include unnecessary partners and collaborators; it is not supposed to be a 'consortium'
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<th>ERC Calls</th>
<th>Call date</th>
<th>Submission Deadline</th>
<th>Budget € M (est. grants)</th>
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<td><strong>Starting Grants</strong></td>
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<td>ERC-2018-StG</td>
<td>3 August 2017</td>
<td>17 October 2017</td>
<td>581 (391)</td>
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<td><strong>Consolidator Grants</strong></td>
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<td>ERC-2018-CoG</td>
<td>24 October 2017</td>
<td>15 February 2018</td>
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<td><strong>Advanced Grants</strong></td>
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<td>30 August 2018</td>
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<td><strong>Synergy Grants</strong></td>
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<td>14 November 2017</td>
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Some useful tools and links

- Read **Information for Applicants** and Work Programme
- Contact your **NCP**
- View the **step-by-step video** Introduction to application process, including tips & tricks for the interview [https://vimeo.com/94179654](https://vimeo.com/94179654)
- Consult **ERC website** for latest funding opportunities, view ERC funded projects
More information:  erc.europa.eu
or watch:  https://player.vimeo.com/video/154715819

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