ERC - European Research Council

Platform Wiskunde Nederland
17 September 2012, Delft
Ideas – upcoming calls

- WHO: expected profiles of laureates
- WHAT: rules and expectations for projects
- WHEN: planned deadlines
- Statistics and tips
My background

• Translation Studies UvA

  • From 1998 Marie Curie National Contact Point (Italy)
  • From 2007 Marie Curie & ERC National Contact Point (Italy)

• 2008-July 2012 Marie Curie & ERC National Contact Point (Netherlands)

• Aug 2012 Valorisation Centre TU Delft: European research funding with main focus ERC and Marie Curie
The Seventh Framework Programme

- European Community Framework Programme for Research, Technological Development and Demonstration Activities

- 2007-2013

- 50.5 billion euro

Follow-up:
- Horizon2020
- 2014-2020
- 80 (?) billion euro
FP7

Cooperation

Ideas

People

Capacities
Idea - European Research Council

- frontier research
- centered around a Principal Investigator
- no need for transnational partners
- investigator-driven
- flexible
- focus on research
Ideas- Frontier research

• Any field of research*

• Interdisciplinary, crossing boundaries between different fields
• Pioneering
• New and emerging fields
• Unconventional, innovative approaches and scientific inventions
• High risk – high gain
• Opening new horizons of knowledge
• Impact on SCIENCE

*Except nuclear energy and unacceptable ethical issues
“Individual Research Team” concept

Individual research teams:
- Principal Investigator (PI) - team leader
- any nationality or age
- additional team members

PI’s host institution:
- EU Member State or Associated Country
# ERC - 3 main types of grants

<table>
<thead>
<tr>
<th>Grants Type</th>
<th>Experience After PhD*</th>
<th>Budget (Million Euros)</th>
<th>Extensions Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC Starting grants</td>
<td>2-7</td>
<td>1.5 (+0.5)</td>
<td></td>
</tr>
<tr>
<td>ERC Consolidator grants</td>
<td>7-12</td>
<td>2 (+0.75)</td>
<td></td>
</tr>
<tr>
<td>ERC Advanced grants</td>
<td>Internationally recognised research leaders</td>
<td>2.5 (+1)</td>
<td></td>
</tr>
<tr>
<td>ERC Synergy: 2-4 PI’s</td>
<td></td>
<td>15 (+6)</td>
<td></td>
</tr>
<tr>
<td>ERC Proof of Concept</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Extensions possible
Eligibility window

- For StG and CoG only
- Measured at publication date of call

Extensions to eligibility window:

- Maternity leave: 18 months per child;
- Paternity leave: accumulation of actual time taken off
- Long-term illness, clinical qualification, obligatory national service

Extensions possible only up to 4.5 yrs
StG / CoG - Profile of PI

• Promising track record of early achievements, including:

  Significant publications as main author in:

  • major international peer-reviewed multidisciplinary journals
  or
  • the leading international peer-reviewed journals of their respective field

• Important publications without PhD supervisor

  **StG**: at least 1; **CoG**: several

• Invited presentations, awards, granted patents
AdG – Profile of PI

• Active researcher

• Track-record of significant achievements in the last 10* years
  - Contribution to research field
  - Abundant evidence of creative independent thinking
  - International recognition
  - Inspire younger researchers
  - Leadership in industrial innovation

* Same extensions to period for which track record is presented as for StG-CoG
AdG – 10-year track-record

Normally at least:

- **10 publications** as senior author in major international peer-reviewed multidisciplinary journals and/or in the leading international peer-reviewed journals of their respective field.

  *and/or*, according to the field

- **3 major research monographs**, of which at least 1 translated into another language
AdG – 10-year track-record

Alternative benchmarks – if relevant for the field

• 5 patents

• 10 invited presentations in well-established internationally organised conferences and advanced schools

• 3 research expeditions led by the applicant

• 3 well-established international conferences: involved in organisation as a member of the steering/organising committee

• International recognition through scientific prizes/awards or membership in well-regarded Academies

• Major contribution to launching careers of outstanding researchers
What is allowed?

| ERC Starting grants | Project size up to | - Research equipment  
|                     | 1,5 M€            | - Access to facilities  
|                     | + up to 0,5 M€    | - PI coming from outside Europe  
|                     |                   | Call budget  
|                     |                   | 398 M€  
|                     |                   | Min % of time dedicated to project  
|                     |                   | 50%  
| ERC Consolidator grants | 2 M€                  | + up to 0,75 M€            
| ERC Advanced grants | 2,5 M€                  | + up to 1 M€            
|                   |                   | Call budget  
|                   |                   | 523 M€  
|                   |                   | Min % of time dedicated to project  
|                   |                   | 50%  
|                   |                   | 30%  

Expected to fund ~270 proposals for each scheme

Expected success rate for each scheme  ~10%
## Ideas - deadlines

<table>
<thead>
<tr>
<th>ERC Starting grants</th>
<th>Call open</th>
<th>Deadline (17.00 h!!)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 July 2012</td>
<td>17 October 2012</td>
</tr>
<tr>
<td>ERC Consolidator grants</td>
<td>7 November 2012</td>
<td>21 February 2013</td>
</tr>
<tr>
<td>ERC Advanced grants</td>
<td>10 July 2012</td>
<td>22 November 2012</td>
</tr>
</tbody>
</table>
## The proposal

<table>
<thead>
<tr>
<th>PART A web forms A1-A3 forms</th>
<th>ANNEXES – as .pdf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Letter of support</strong> by host institution <strong>For StG - CoG: PhD certificate</strong> (supporting documents – extension)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART B1 – as .pdf</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 1 PI &amp; Synopsis</strong></td>
</tr>
<tr>
<td>a. CV (including “funding ID”) 2p.</td>
</tr>
<tr>
<td>b. Early achievements track record 2p.</td>
</tr>
<tr>
<td>c. Extended synopsis 5p.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART B2 – as .pdf</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 2 Scientific proposal 15p.</strong></td>
</tr>
<tr>
<td>a. State of the art &amp; objectives</td>
</tr>
<tr>
<td>b. Methodology</td>
</tr>
<tr>
<td>c. Resources</td>
</tr>
<tr>
<td>d. Ethical issues table and description <em>(outside page limit)</em></td>
</tr>
</tbody>
</table>

---

**Eligibility check**

- step 1
- step 2 (interview)

---

**TU Delft**

Challenge the future
3 domains - 25 panels

<table>
<thead>
<tr>
<th>Domain</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Sciences and Engineering</td>
<td>44%</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>39%</td>
</tr>
<tr>
<td>Social Sciences and Humanities</td>
<td>17%</td>
</tr>
</tbody>
</table>

Budget division over panels based on nr. of applications received per panel within domain
Panel PE1 Mathematics

Logic and foundations       Mathematical physics
Algebra                       Probability
Number theory                  Statistics
Algebraic and complex geometry  Discrete mathematics and combinatorics
Geometry                      Mathematical aspects of computer science
Topology                      Numerical analysis
Lie groups, Lie algebras       Scientific computing and data processing
Analysis                       Control theory and optimization
Operator algebras and functional analysis
ODE and dynamical systems      Application of mathematics in sciences
Theoretical aspects of partial differential equations
Application of mathematics in industry and society
Evaluation panel structure

- ERC
- Panel chair
- Panel members (12-15)
- External evaluators (if needed)

step 1

step 2
On which criteria are you evaluated?

Excellence of the PI
- Intellectual capacity and creativity (are achievements & publications groundbreaking and show capacity to go significantly beyond the state of the art?)
- Commitment, willingness to devote at least 50% of time

Excellence of the project
- Ground-breaking nature and potential impact
- Methodology (step 1: feasible / step 2: appropriate)
- High risk/High gain balance
- If relevant: justification of team members at other organisations
How are you evaluated?

**Step 1**
- a: of sufficient quality to pass to step 2
- b: of high quality but not sufficient for step 2
- c: not of sufficient quality for step 2, submission restrictions (may) apply

**Step 2**
- a: excellent, will be fundable if sufficient funds are available
- b: meets some but not all of the excellence criteria
# Ideas - two new types of grants

| ERC Synergy grants | • 2-4 Principal Investigators  
• Bring together complementary expertise in new ways – intense collaboration  
• Up to 6 years, up to 15 million  
• Attn: very limited call budget! (150 mEuro) | Call open 10 October 2012  
Deadline 10 January 2013 |
| --- | --- | --- |
| ERC Proof of Concept grants | • For Principal Investigators in running ERC projects  
• For assessment of commercialisation of research results | Deadlines:  
3 October 2012  
24 April 2013  
3 October 2013 |
(Re) submission

Single submission - two-step evaluation
- Electronic submission only
- Strictly enforced deadlines, 17.00 of the day the call closes
- http://ec.europa.eu/research/participants/portal/page/ideas

Resubmission rules (retroactive)
- Resubmit previous proposal if it met the quality threshold (a or b) at step 1 of evaluation
- Only one proposal to *any* call of the 2013 work programme
- Only one project at any time (except Proof of Concept)
Dutch participation

- results Starting Grants 2010-2011
- results Advanced Grants 2010-2011
- Lessons learned from evaluation summary reports
ERC StG Submissions by years past PhD

![Bar chart showing ERC StG Submissions by years past PhD. The x-axis represents the number of complete years passed since PhD completion, ranging from 2 to 15. The y-axis represents the percentage of submissions in each category. The chart is color-coded for different years: blue for 2009, orange for 2010, and green for 2011. The number of submissions increases with the number of years past PhD.]
ERC StG Success rate by years past PhD

ERC STG 2009-2011 Success rates by Years passed PhD with eligibility limits

- Success rate 2009
- Success rate 2010
- Success rate 2011

Success rate by Category

# Complete years passed PhD
ERC STG 2011 Results Of Call
Success rates by Domain
Call success rate ~ 11.9 %

Starters vs Consolidators (2011)
Starters vs Consolidators (2011)

<table>
<thead>
<tr>
<th></th>
<th>Starters</th>
<th>Consolidators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EU</td>
<td>NL</td>
</tr>
<tr>
<td>Physical Sciences and Engineering</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>Social Sciences and Humanities</td>
<td>9%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Consolidators higher success rates compared to Starters!!
## Results Starting Grants

### Success rates

<table>
<thead>
<tr>
<th></th>
<th>Life Sciences</th>
<th>Physical sciences and engineering</th>
<th>Social Sciences and Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EU</td>
<td>NL</td>
<td>EU</td>
</tr>
<tr>
<td>StG 2010</td>
<td>14%</td>
<td>8%</td>
<td>15%</td>
</tr>
<tr>
<td>StG 2011</td>
<td>12%</td>
<td>14%</td>
<td>12%</td>
</tr>
</tbody>
</table>
Lessons learned (StG)

• Show your impact on research field
• Show your independence
• Show high risk-high gain element
• Provide information on experimental approach/methodology, also in B1!
• Interview very important
Age statistics Advanced Grants

Age of grantees

Number of grantees

AdG
StG
## Results Advanced Grants

### Success rates

<table>
<thead>
<tr>
<th></th>
<th>Life Sciences</th>
<th>Physical sciences and engineering</th>
<th>Social Sciences and Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EU</td>
<td>NL</td>
<td>EU</td>
</tr>
<tr>
<td>AdG 2010</td>
<td>15%</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>AdG 2011</td>
<td>13%</td>
<td>17%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Lessons learned (AdG)

PE frequent comments of evaluation panel

- Scientific criticism
- Absence of project planning
- Not enough information on used methodology
Tips

- show the high risk
- show the feasibility (detailed methodology, pilot data, proof of concept)
- show the high gain
- show added value (not ‘more money for the same’, show a stand-alone project that goes beyond regular work)
- write a project proposal, not a scientific article
More information

http://erc.europa.eu

- Calls
- Panels
- News alerts
- Funded projects
Other opportunities

- Marie Curie fellowships -> focus on skills diversification and knowledge transfer
  - Individual transnational post-doc fellowships (in/out)
  - Marie Curie Career Integration Grant
  - Initial Training Networks (including European Industrial Doctorates and Innovative Doctoral Schools)
  - Industry-Academia Partnerships
  - International Research Staff Exchange
Need support?

• Your local EU support office
  e.g. TU Delft Valorisation Centre:
  Daphne van de Sande (advice & support)
  Veronique van der Varst (procedures & workshops)

• ERC National Contact Point NL: kp7.erc@agentschapnl.nl
  Esther Verhoeven 088 602 5648