Opening new horizons

The Challenges of Peer Review in a Small Region

29 June 2017
Belgian Science and Innovation Policy

Primary responsibility of Communities/Regions

Communities: Education and basic research

Regions: Economy and applied research

Federal: Thematic programs including marine, space, and polar research (e.g. Station on Antarctica), federal scientific institutions
Main Research Performing Centers

World-Class Universities:

- Ghent University
- Vrije Universiteit Brussel (VUB)
- KU Leuven
- Universiteit Antwerpen
- Universiteit Hasselt

Leading (Strategic) Research Centers:

- VIB
- iMinds
- imec
- Vercic Business School
- Institute of Tropical Medicine Antwerp
- Vito
- Hogere Zeevaartschool Antwerpen
- Antwerp Management School
Facts about Flanders

- Population: ca. 6.478.00 (2016)
- R&D-investments: ± 2,69 % GDP (Flemish Region - 2015) ± 2,74 % GDP (Flemish Community – 2015)
- Number of R&D personnel: ± 44.000 (or 0,69% population – 1,48% working force) (2014)
- Number of scientific papers: ± 1% world (2013), or 24,3/10.000 inhabitants (2014)
- Number of EPO-patent applications (2012): 225,3/million inhabitants

STI in Flanders, Policy & Key Figures – EWI 2016, p70, 90-91, 100, 104.
3% Norm

GERD AS % GDP (2015)

OECD, Main Science and Technology Indicators, 2017/2.
Publication - EPO Patent Output

Figure 30: International comparison of the publication output per 10,000 inhabitants (2014)

Figure 34: International comparison of EPO patent applications per million of population by origin, inventor and/or applicant (2012)

STI in Flanders, Policy & Key Figures – EWI 2016, p100, 104.
1. Research mainly at universities
2. Bottom-up funding in all disciplines
3. Scientific excellence - Interuniversity competition
4. Transparent and equal opportunities
5. International cooperation

Research Foundation – Flanders (FWO)
www.fwo.be
FWO: Main Mission

• To select the most excellent researchers performing research at a Flemish host institution
• To do this in a researcher friendly way
• Based on transparent and efficient processes and procedures
• Based on international best practices.
• Optimizing the growing pressure of the number of applications
FWO Budget

Budget 2016: 321.6 million EUR
Budget 2017: 340.7 million EUR (overhead 3.4%: 64 FTE => 12 PhD)
Number of applications: > 6.000/year

2005-2015
(in thousand EUR)

Federal Government
Flemish Government
Total

Research Foundation – Flanders
Main FWO Funding Schemes

<table>
<thead>
<tr>
<th>Master</th>
<th>PhD</th>
<th>Postdoc</th>
<th>Established researcher</th>
</tr>
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<tbody>
<tr>
<td>Fellowships</td>
<td>International Mobility</td>
<td>Research Grants</td>
<td>Research Projects</td>
</tr>
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Research Foundation – Flanders
Increasing Number of Applications

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2009</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td>PhD-mandates</td>
<td>535</td>
<td>826</td>
<td>983</td>
</tr>
<tr>
<td></td>
<td>∆</td>
<td>+54%</td>
<td>+84%</td>
</tr>
<tr>
<td>PostDoc-mandates</td>
<td>427</td>
<td>599</td>
<td>672</td>
</tr>
<tr>
<td></td>
<td>∆</td>
<td>+40%</td>
<td>+57%</td>
</tr>
<tr>
<td>Projects</td>
<td>681</td>
<td>750</td>
<td>1,305</td>
</tr>
<tr>
<td></td>
<td>∆</td>
<td>+10%</td>
<td>+92%</td>
</tr>
</tbody>
</table>

- PhD applications: **+84%** since 2005
- PostDoc applications: **+57%** since 2005
- Project applications: **+92%** since 2005
The Application/Evaluation Process

FWO E-Portal (www.fwo.be)

Call

External referees (online)

Submission/eligibility check

Expert Panels (30+1)

Board of Trustees

1 February
1 April

April/May
September/October

2 meetings/year in Brussels

Duration workflow fellowships: < 5 months
Duration workflow projects: < 7 months
How to deal with the large number of applications?

- Adapted to the program:
  - PhD-fellowships: only evaluated by evaluation panels
  - Postdoctoral fellows: remote referees + evaluation panels
  - Research projects: remote referees + evaluation panels

- Limitation of the influx of new applications:
  - Max. 2 attempts for a pre-doctoral/postdoctoral fellowships (across all programs)
  - Strict limitation of the years after master/PhD and years of seniority to be eligible
  - Max. 2 ongoing projects
  - Strict regulations concerning eligibility of applicants for projects
How to deal with the large number of applications?

• Reorganisation of the evaluation process:
  • 2-step procedure for fellowships
  • Online discussion forum to select proposals for step 2
  • Same deadline for different programs
  • Split of the existing expert panels

• More focused programs:
  • Junior/senior projects
  • Junior/senior postdoctoral fellowships
External Peer Review at FWO (Current Situation)

- Small region/small council
  - CoI is everywhere:
    - Remote referees: only outside Belgium
  - Not enough staff capacity to look for remote referees by the council:
    - Applicants need to suggest at least 10 possible referees
    - Strict CoI-rules (no co-authors in last 3 years, no joint projects in last 3 years, no other collaboration, etc.)

- Check by FWO:
  - FWO administration will see to it that applicants strictly observe the eligibility regulations and other guidelines
  - When a violation is detected => application is ineligible
External Peer Review at FWO (New Situation)

• Small region/small council
  • Col is everywhere:
    • Remote referees: only outside Belgium
  • Not enough staff capacity to look for remote referees by the council:
    • Partly “outsourcing” this task (e.g. former ESF, etc.) through European tender

• Expert panels
  • Majority from outside Flanders
    – Chair/Vice-chair: from outside Flanders