Criteria for successful DFG proposals

Presentation at the University of Münster, May 19, 2011

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Immunology, Virology, Medical Microbiology

Topics

- **Who we are**
- **What we do**
- **What you need to do – Some guidelines to follow**
- **Some numbers**

Topics

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- What we do
- What you need to do – Some guidelines to follow
- Some numbers

Who we are
The members

- **The DFG is the central public funding organisation responsible for promoting research in Germany**
- ***De jure* a private association!**
- **Its members are:**
  - German universities (69)
  - non-university research institutions (16)
  - German academies of sciences and humanities (8)
  - scientific associations (3)

- http://www.dfg.de/dfg_im_profil/struktur/gremien/mitgliederversammlung/mitglieder.html

Hallmarks of the DFG

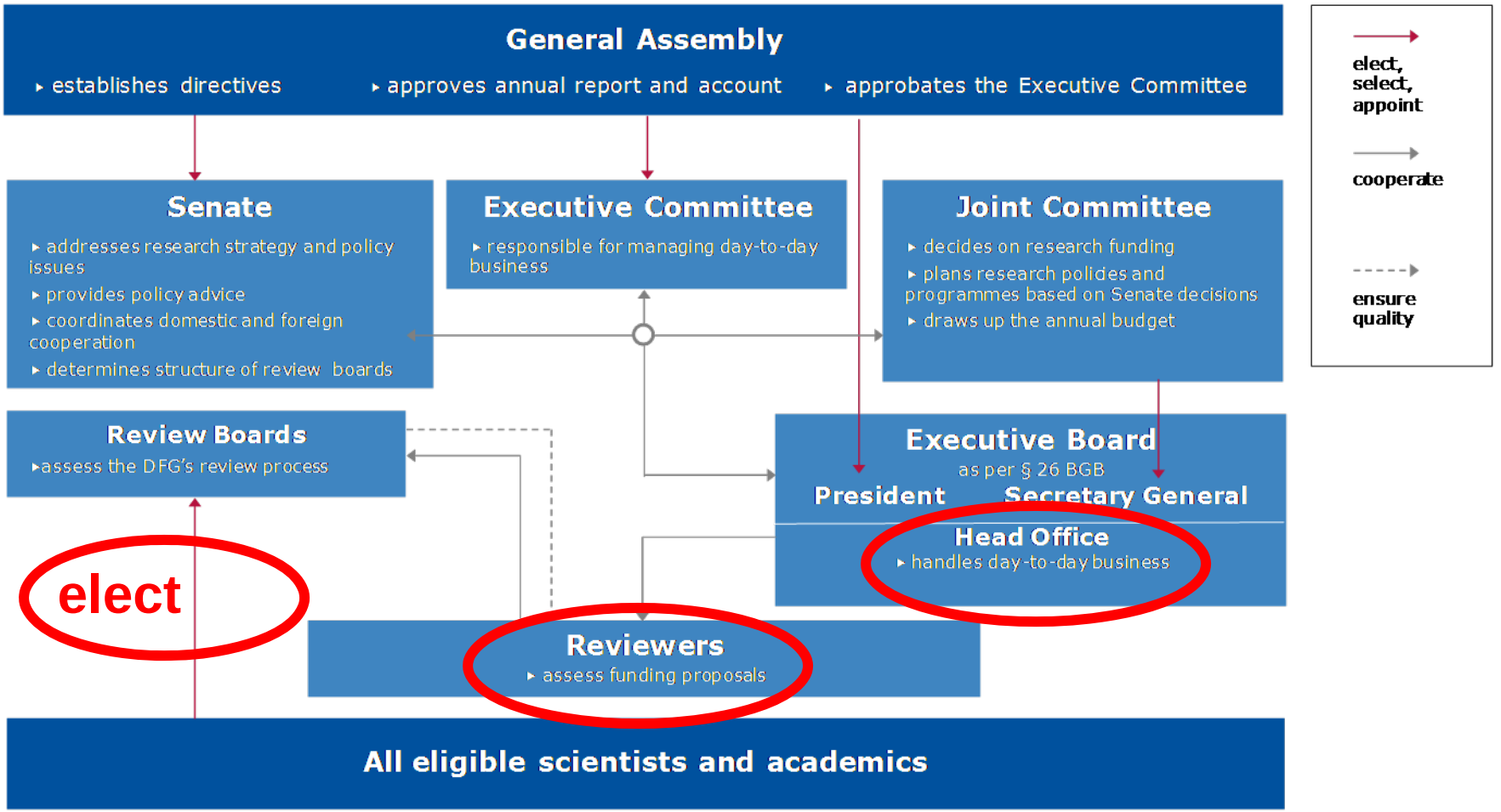
The core principles

The DFG furthers the progress of (basic) science:

- **Science-driven**
  - Funding of science itself is at the core, funding of scientists can be a (desirable!) side-effect; ***the advancement of science is the driving force***
- **Bottom-up principle**
  - Scientists propose projects whenever they consider them ready (few exemptions)
- **Self-governed**
  - Peer review! Scientists decide on the best science on all levels; sponsors („the politics“) are involved in decisions (they pick up the bill, after all!)

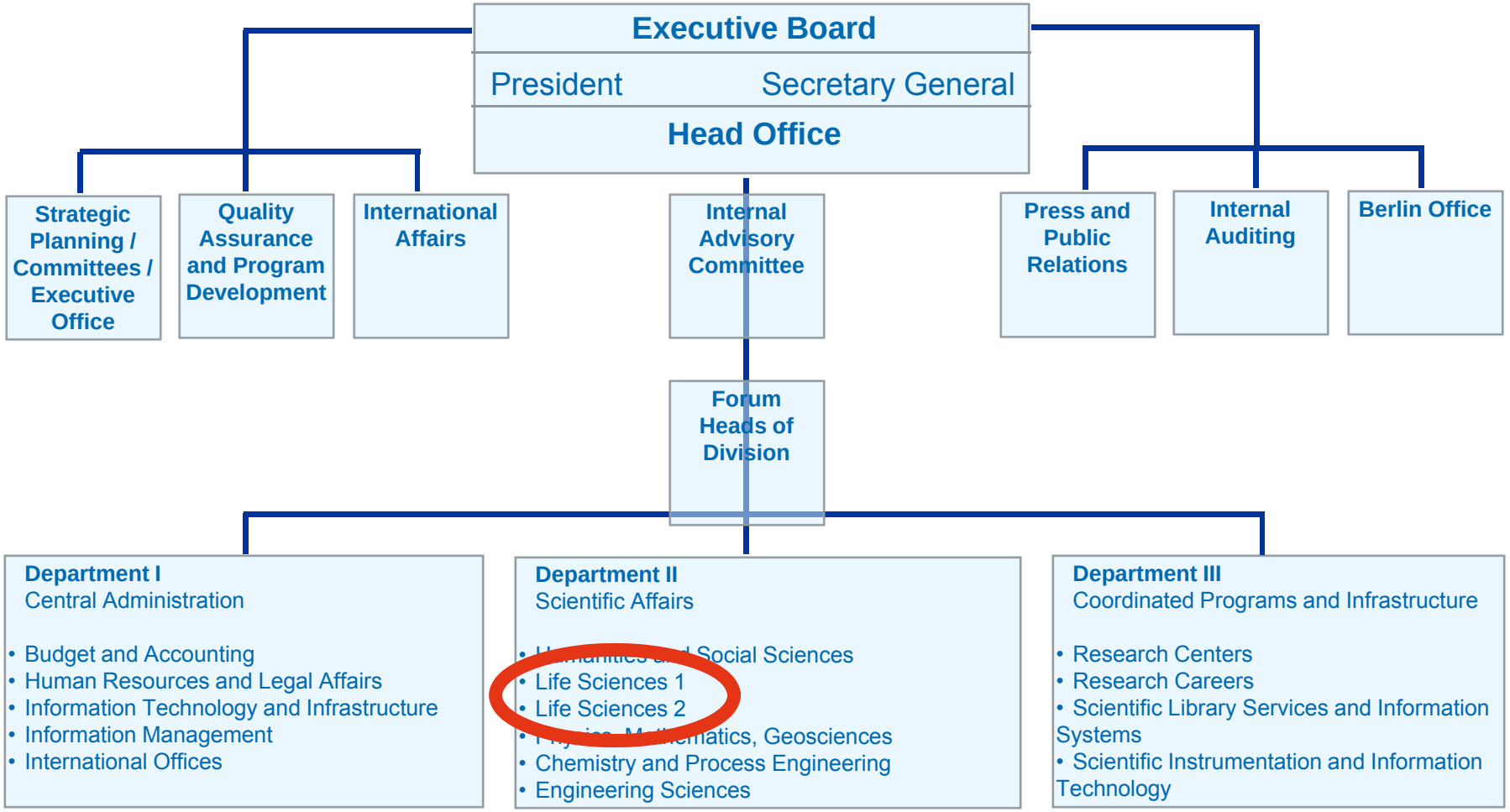
Who we are

The structure of the association



Who we are

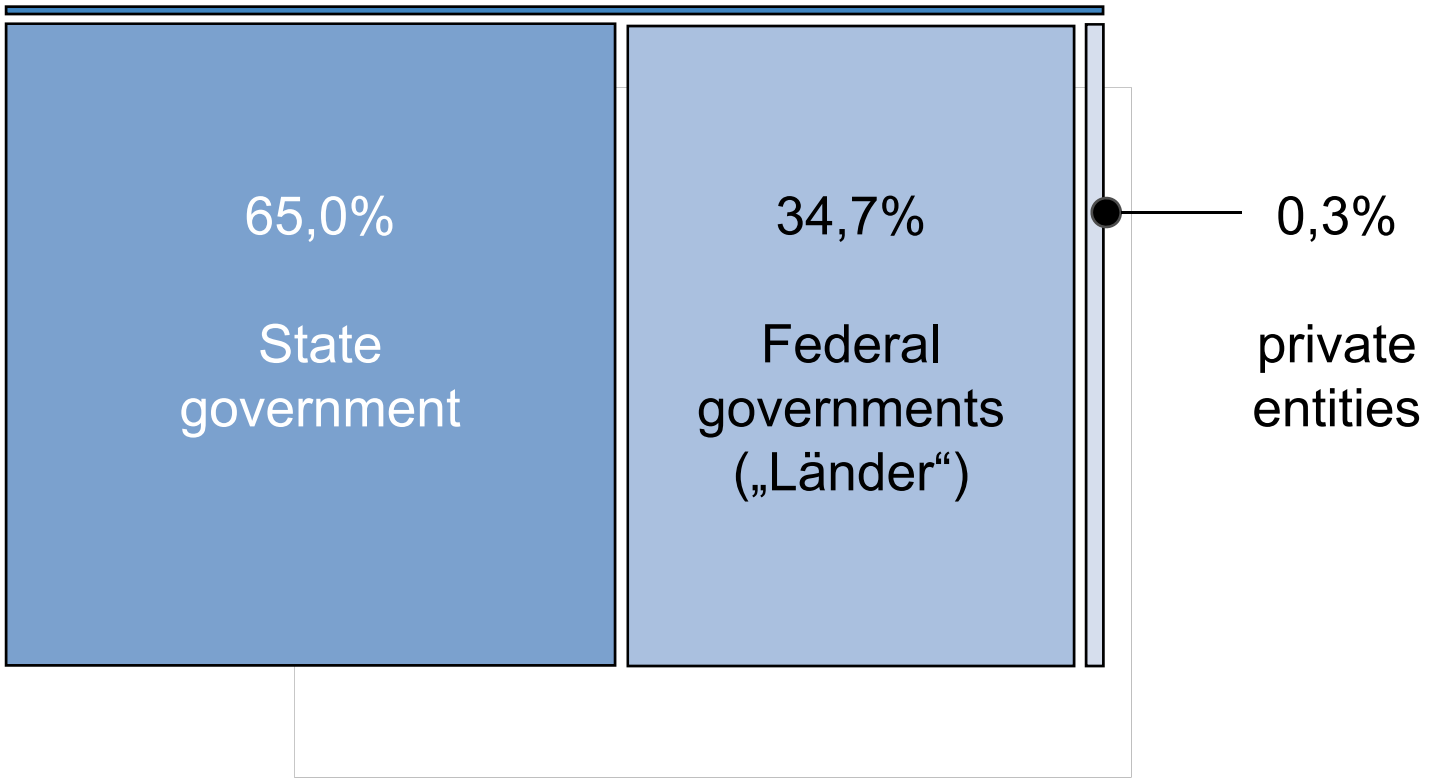
The head office



Who we are

The budget and its sources

Total budget: 2,739.1 m€ (2009)



Topics

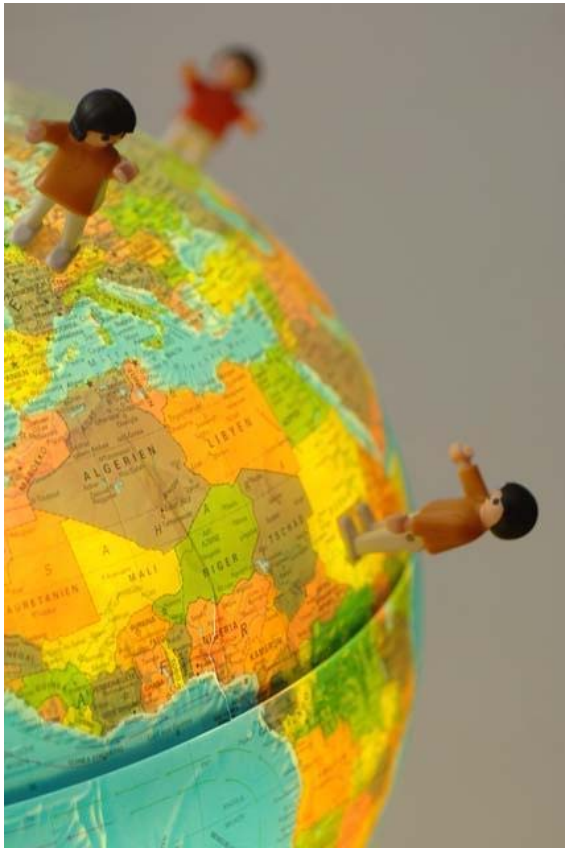
- Who we are
- **What we do**
- What you need to do – Some guidelines to follow
- Some numbers

What we do

- DFG **serves all branches of science and the humanities** by **funding research projects** carried out by scientists and academics working at universities or research institutes

- DFG **promotes scientific excellence** through competition

- DFG wants Germany‘s research to be **future-oriented** and **internationally competitive** and to be prepared to the **scientific challenges** of the future



What we do

Article I. Purpose of the Association

The Deutsche Forschungsgemeinschaft (German Research Foundation) **serves all branches** of science and the humanities by **funding research projects** and facilitating cooperation among researchers. It devotes particular attention to the education and advancement of **young researchers**. It promotes **equality** between men and women in the scientific and academic communities. It **advises parliaments** and public authorities on scientific matters and **fosters relations** with the private sector and between scientists and academics at home and abroad.

What we do

Hallmarks of project funding

- In the **centre** of every proposal submitted to the DFG is a **scientific project**; every proposal must have convincing **scientific merit** to be considered for funding

- Funding of an individual, a scientific career or a scientific structure is a desired side effect; in coordinated programmes, the benefit for (a) scientific structure(s) is essential (e.g. University, topic...)

- All disciplines are in direct competition to ensure the best of science is funded

→ Funds are exclusively granted to further the scientific progress!

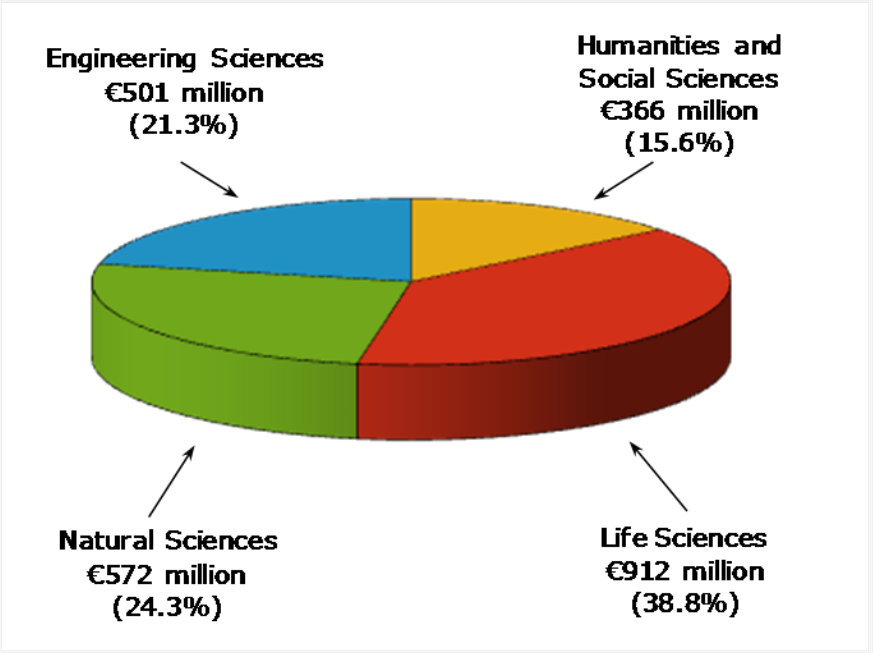
What we do

DFG: A servant of science

Funding of science

- Advise applicants
- Handle applications
- Initiate research programmes
- Identify research potentials
- Respond to new developments in science
- Promote networking
- Inform
- Review and evaluate

Funding in 2009, by discipline:



What we do
Key issues

The principles

- self-administration of the scientific community
- funding of projects (individual/coordinated)
- promotion of research cooperation
- prizes for outstanding research achievements
- establish scientific infrastructure
- foster contacts in science and research
- strictly bottom-up
- applications accepted any time
- peer review, decisions made transparent

Consulting of Political and Scientific Agencies

(national and international)

- Consulting of national decision-makers in politics and society
- Expert commissions: Recommendations for current and arising problems
- Representation of science and scientists in the course of political decisions → in accord with other organizations
- Assist and foster the establishment of international collaborations: Multilateral European initiatives; close collaboration with the ESF and ERC; negotiations with science funders abroad to allow for bilateral research

What we do

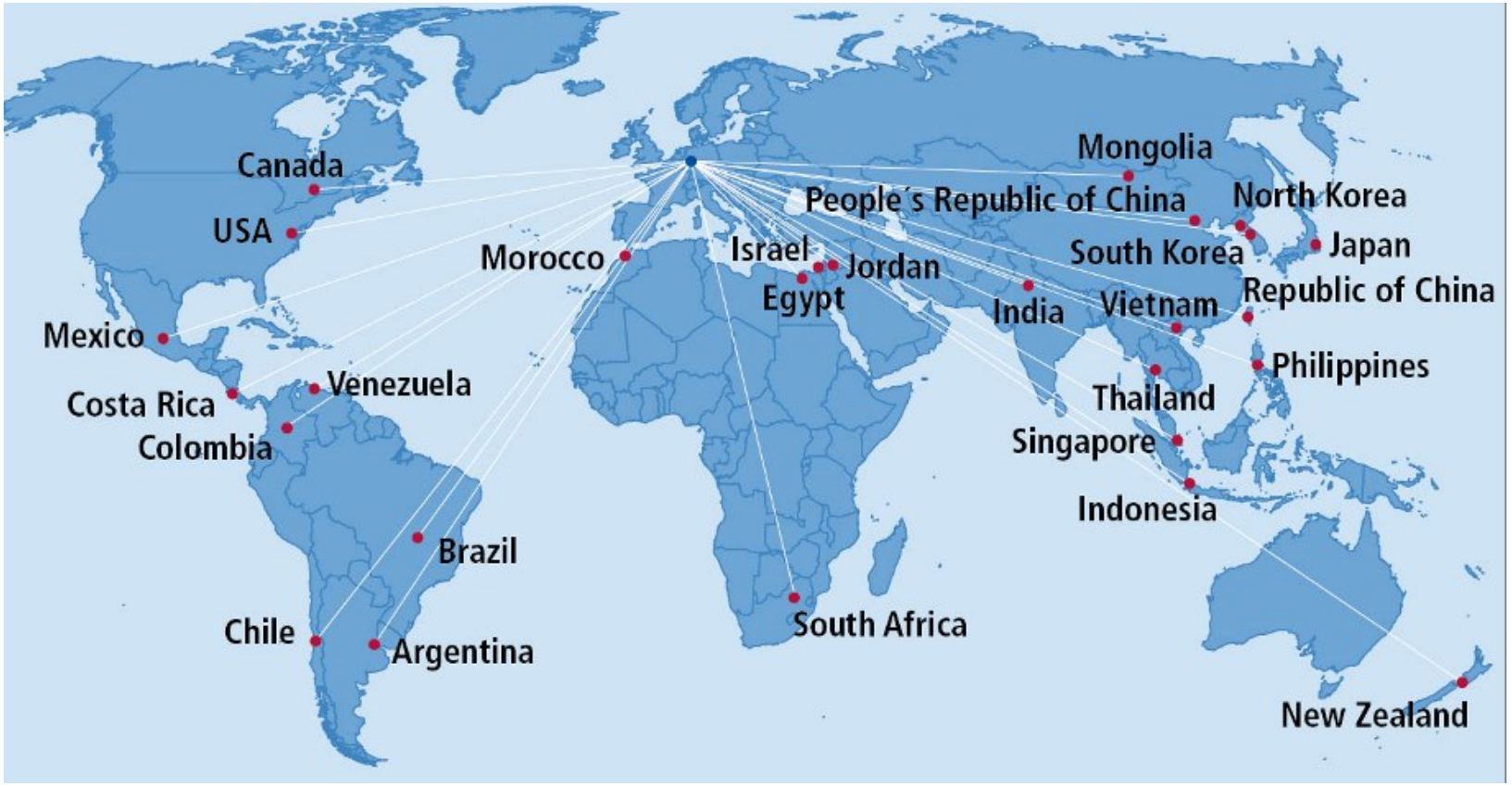
Establish European relations

European Bilateral agreements in 2009

What we do

Establish world-wide relations

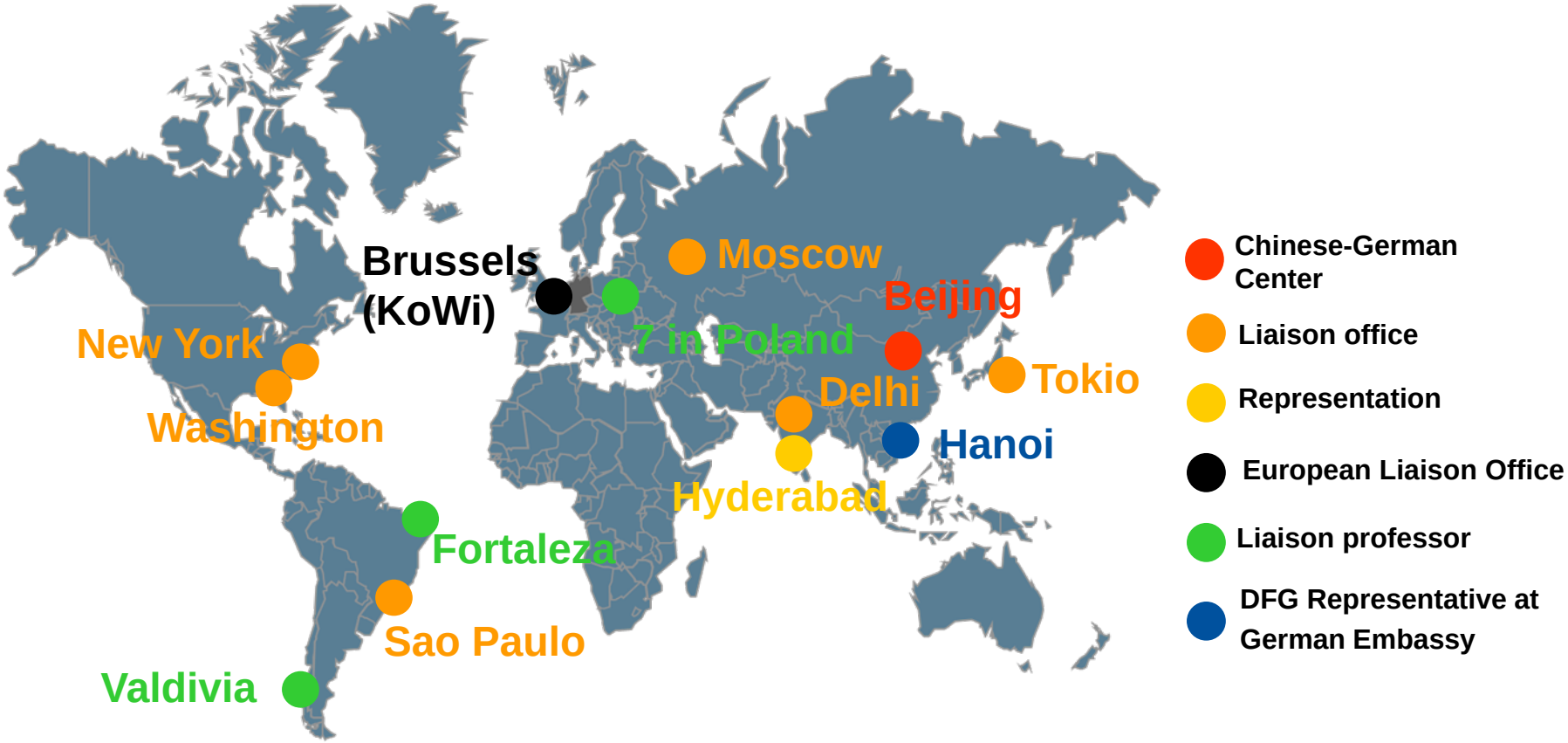
Extra-European agreements in 2009



What we do

DFG: An ambassador for German science abroad

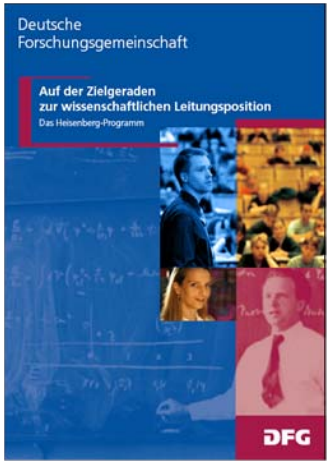
Permanent DFG liaison offices and representations

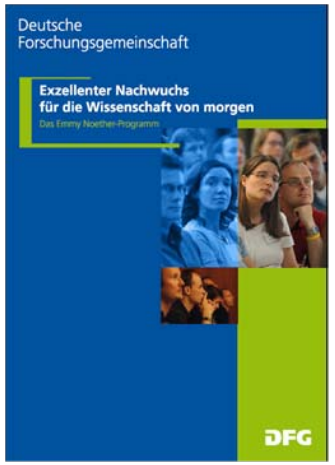


What we do

The DFG funding portfolio – individual proposals

- Research fellowships
- Temporary positions for principal investigators
- Emmy Noether Program
- Heisenberg Program (Fellowships and Temporary Professorships)
- Individual grants (“Einzelverfahren”)
- Reinhard Koselleck Projects





What we do

The DFG funding portfolio – coordinated projects

- Collaborative Research Centres and CRC/Transregios
- DFG Research Centres
- Research Training Groups and International Research Training Groups
- Priority Programmes
- Research Units and Clinical Research Units

Coordinated programmes are national, international and/or interdisciplinary. They provide opportunities for cooperation with other universities and non-university research institutions (e.g. partners in industry) and bundle expertise at a universitiy or several university locations.

Training of junior scientists is an important or central aspect of those programs.

Topics

- Who we are
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- **What you need to do – Some guidelines to follow**
- Some numbers

Some guidelines to follow

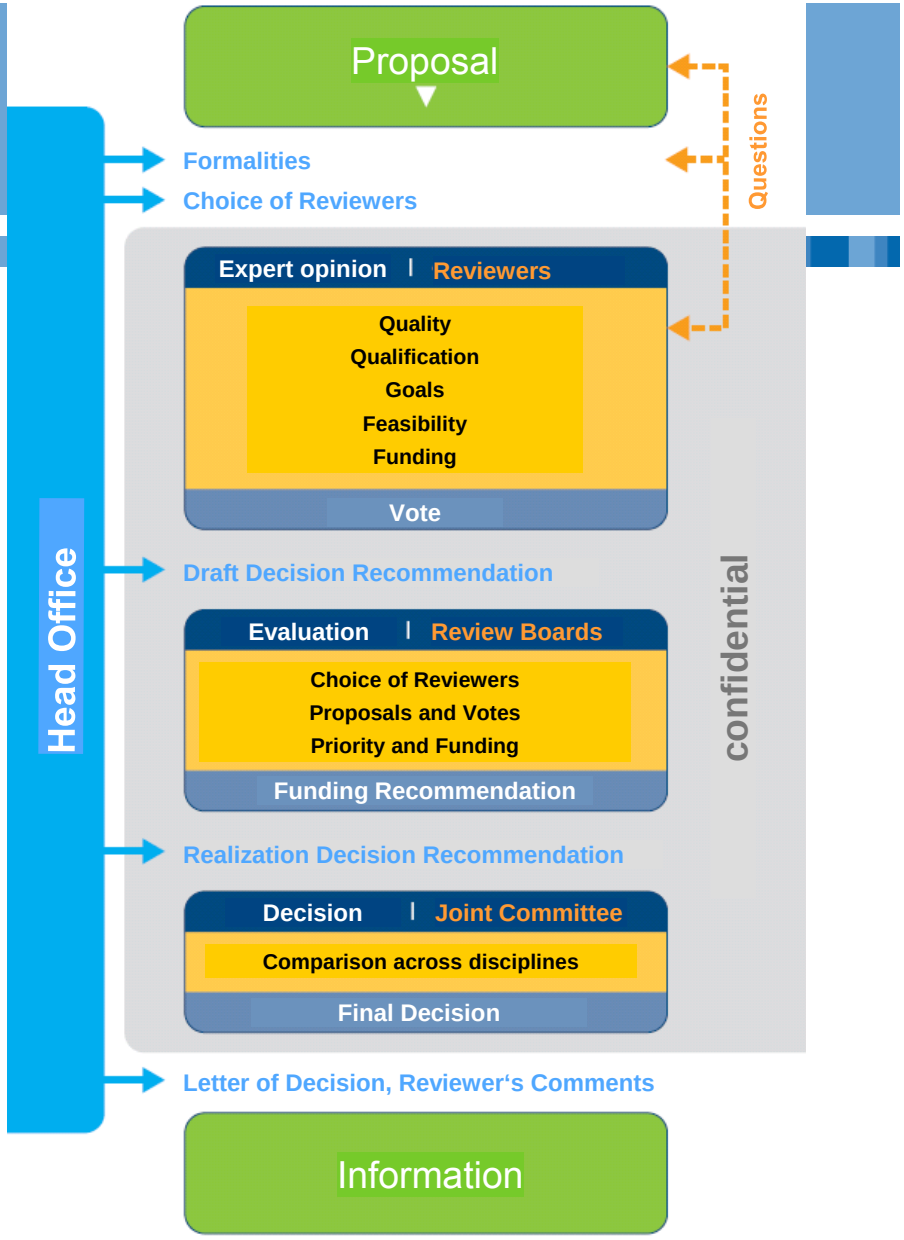
The review process

Criteria:

- Scientific quality and originality
- Qualification of scientists involved
- Hypothesis & strategy
- Working environment

Not:

- Age, Sex, Gender
- Previous DFG-record



Some guidelines to follow

What is required for a *good* proposal? (1)

General considerations:

- Think like the reviewers to make their job as easy as possible
- Think of your application as your scientific business card – like a job application!
- Ask a colleague for a critical reading!
- Avoid the „copy-paste-problem“: *„aim 1, aim 2, goal 4, phase 5“*

Essentials:

- Give all the information neccessary, but **only** that
- Ensure easy reading and clear presentation
- Follow the guidelines – reviewers will appreciate it! (*They have them, too!!)*
- Enclose publications and manuscripts to document preliminary work

Some guidelines to follow

What is required for a *good* proposal? (2)

Core virtues:

Hypothesis: *Exactly* what do you want to prove, falsify, find out?

Work plan / strategy:

- Is the work program as core of the application original, novel, but not overloaded? → Focus!
- Which are your primary goals? Prioritize!

Alternative strategies: What do you do when your strategy fails?

→ Develop „Plan B“!

Funds applied for: Be realistic - our application is not the only one in this year!

Consider this: Very large first applications are harder to get approved; a grant should fund a focused scientific project, not your whole team! The expectation is to ***first prove you are able to deliver on a project proposed***.

Some guidelines to follow

What is required for a *good* proposal? (3)

Following the Guidelines („DFG-Merkblatt 1.02/Guideline 1.02e“):

1.8 Summary: max. 1600 characters

2.1 State of the art :

- discuss the current literature extensively – show you are familiar with the field and have critically reflected on what you are proposing
- short but concise - you are an expert, show it!

Never Ever:

- cite your own papers only and ignore the competition
- neglect literature contradicting your hypothesis

Some guidelines to follow

What is required for a *good* proposal? (4)

Following the Guidelines (DFG-Merkblatt 1.02)

2.2 Preliminary work / progress report (for continuation applications)

- (self)critical and detailed, but project-related
- enclose project-related publications

3.1 Goals

- rigid depiction of your goals and hypothesis
- the project should be novel and original – surprise the reviewer

3.2 Work programme

- detailed experimental plan: what do you want to achieve when and how?
- why do you consider your methods appropriate?
- elaborate on alternative strategies

Some guidelines to follow

What is required for a *good* proposal? (5)

Following the Guidelines (DFG-Merkblatt 1.02)

3.3 Experiments on humans or human-derived materials
3.4 Experiments involving animals
3.5 Experiment involving genetically engineered reagents
3.6 Research subject to the Convention on Biological Diversity (CBD)
3.7 Data handling

- always answer the questions
- if you use human-derived material, ethical clearance is mandatory by law – you will lose time if it is missing
- rules of animal protection must be obeyed
- Obeyance of the CBD must be explicitly stated and its rules followed!

Some guidelines to follow

What is required for a *good* proposal? (6)

Following the Guidelines (DFG-Merkblatt 1.02)

4. Funds requested

4.1. Staff: do you have experienced candidates for the positions?

4.2. Equipment: provide quotes!

4.3. Consumables: Project-related only; provide rough calculation!

4.4. Travel costs

4.5. Publication costs

4.6. Other funds required (remuneration of volunteers, animal costs...)

Give a justification in line with your work programme for every staff position, consumables, travel costs, animal costs and equipment!

The DFG funds project-related additional costs, but not basic equipment – this is expected from your institutes´ core funding

Some guidelines to follow

What is required for a *good* proposal? (7)

Following the Guidelines (DFG-Merkblatt 1.02)

5. Prerequisites for carrying out the project

5.1. Your team

5.2. Cooperations with other scientists relevant for this project & others

5.3. Scientific equipment

5.4. Running costs for materials

5.6. Other requirements

A reasonable input of institutional funding is expected!

Some guidelines to follow

What is required for a *good* proposal? (8)

A correct list of your publications:

- **do not mix different types of publications!**
  - peer-reviewed original papers, presentation abstracts, poster-abstracts, book chapters, reviews, patents must be listed **separately**
  - list publications relevant for the project (documenting your preliminary work) separately
  - highlight your name, help the reviewers
  - **NEW publication rules:** list max. 2 papers/year of project-specific publications, 5 papers as personal highlights in your CV
- **do not swap authors when „equally contributed“:**
  this constitutes scientific misconduct!
  cite as in PubMed, including title, mark shared authorships by asterisks

Some guidelines to follow

A successful grant...

- has a novel topic and approach
- is well investigated and clearly described
- has published preliminary work
- is phrased precisely (as much as neccessary and as little as possible)
- presents the experimental strategy comprehensibly and convincingly
- states short-term goals, embedded in a broader context
- applies for appropriate funding
- promises successful accomplishment of the proposed work
- convinces by an attractive layout

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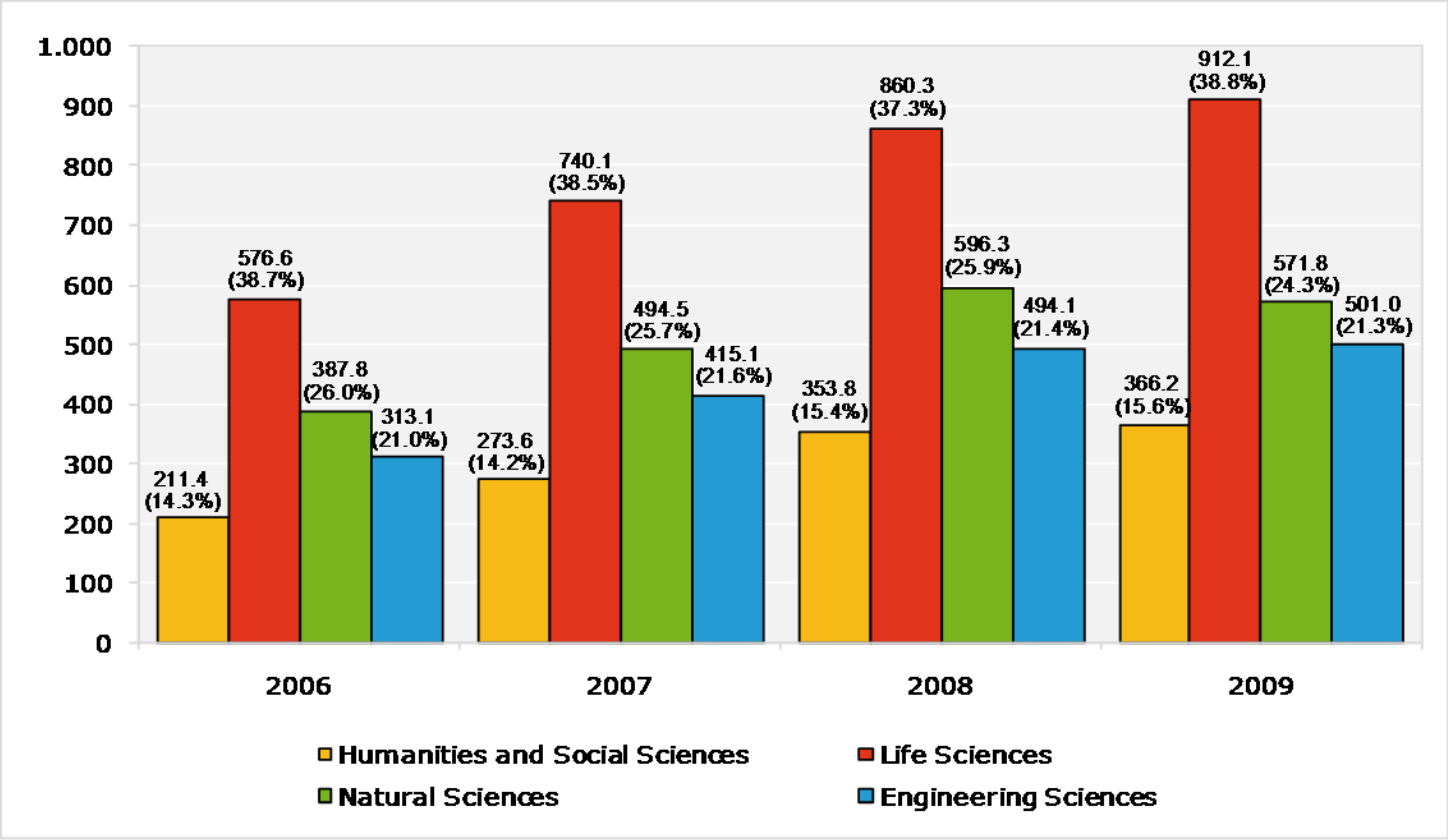
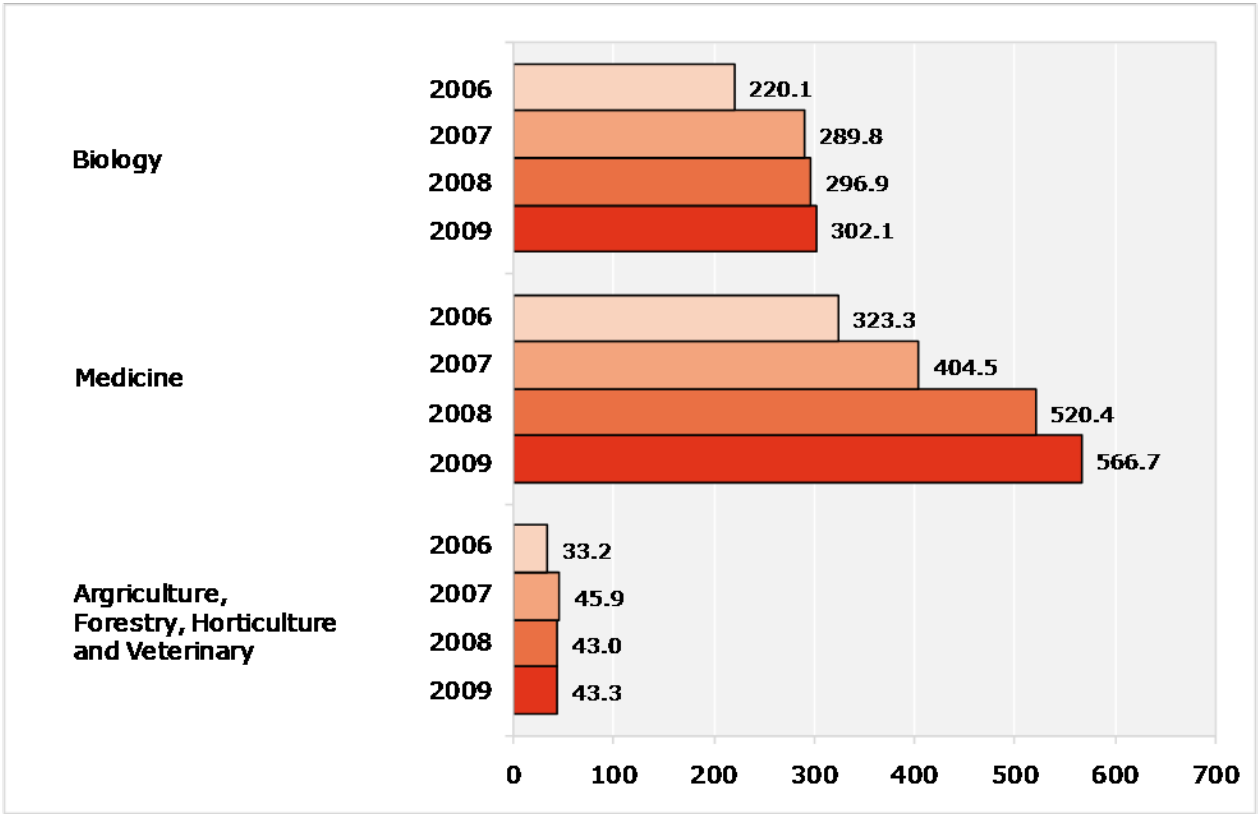
Total DFG funding 2006 to 2009

According to areas of science (Mio. Euro)



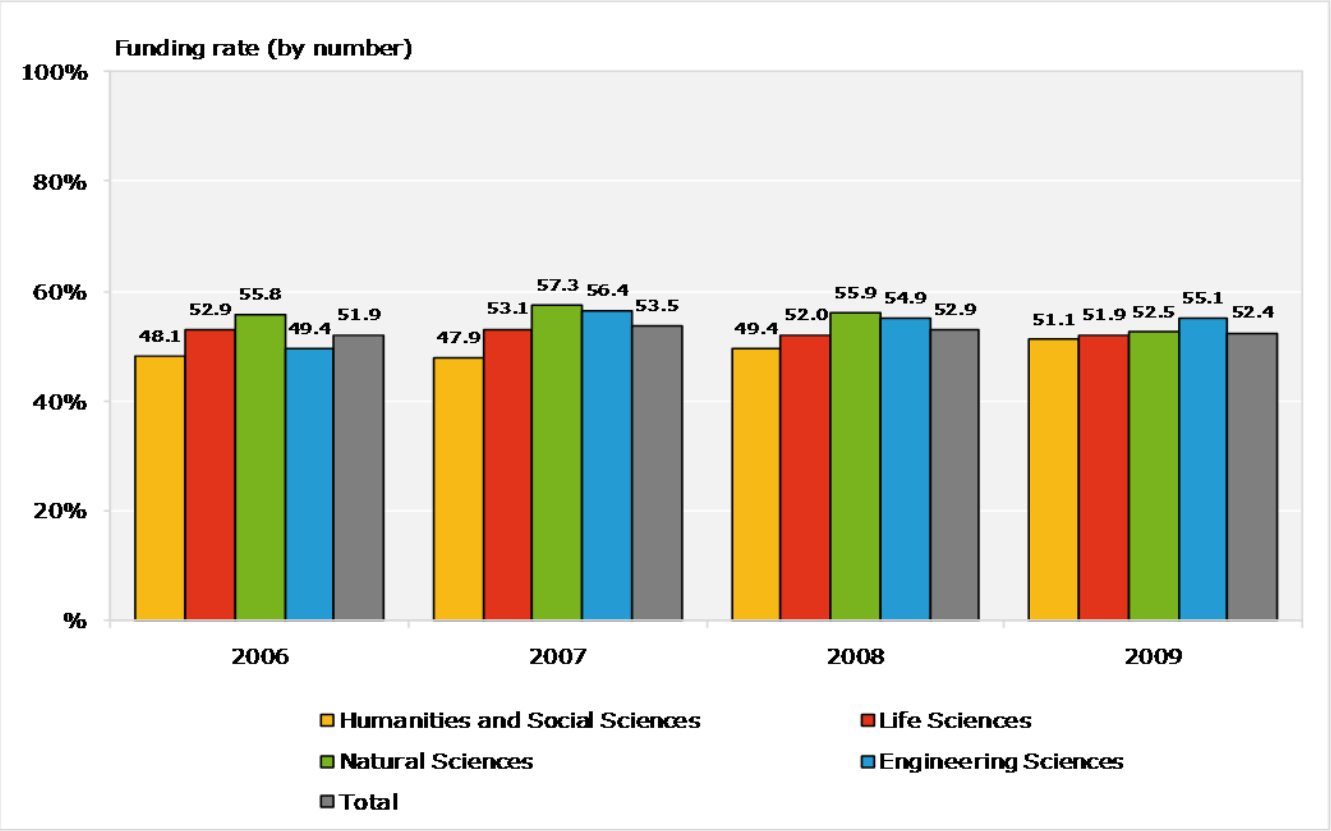
Based on: Individual grants and coordinated programmes (not including institutional strategies or graduate schools that cannot be classified to a particular specialist field). Increases are due, for example, to supplemental allowances for indirect project costs, introduced in 2007 for coordinated programmes and 2008 for additional programmes (20 percent of the award amount).

DFG Funding in the Life Sciences 2006 to 2009 in Mio. Euro



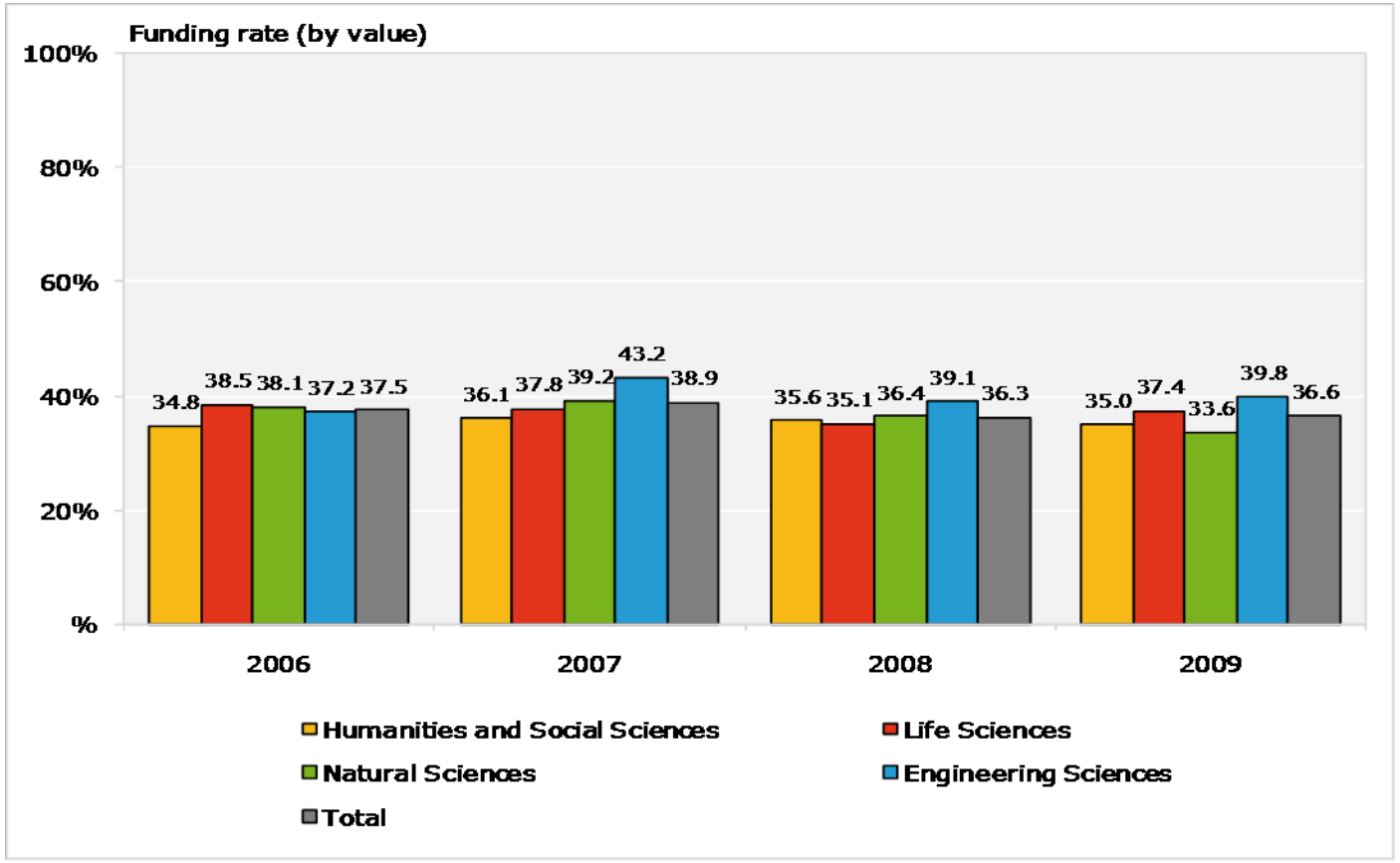
Funding rates for Individual Grants

Relative to total numbers of applications 2006 to 2009



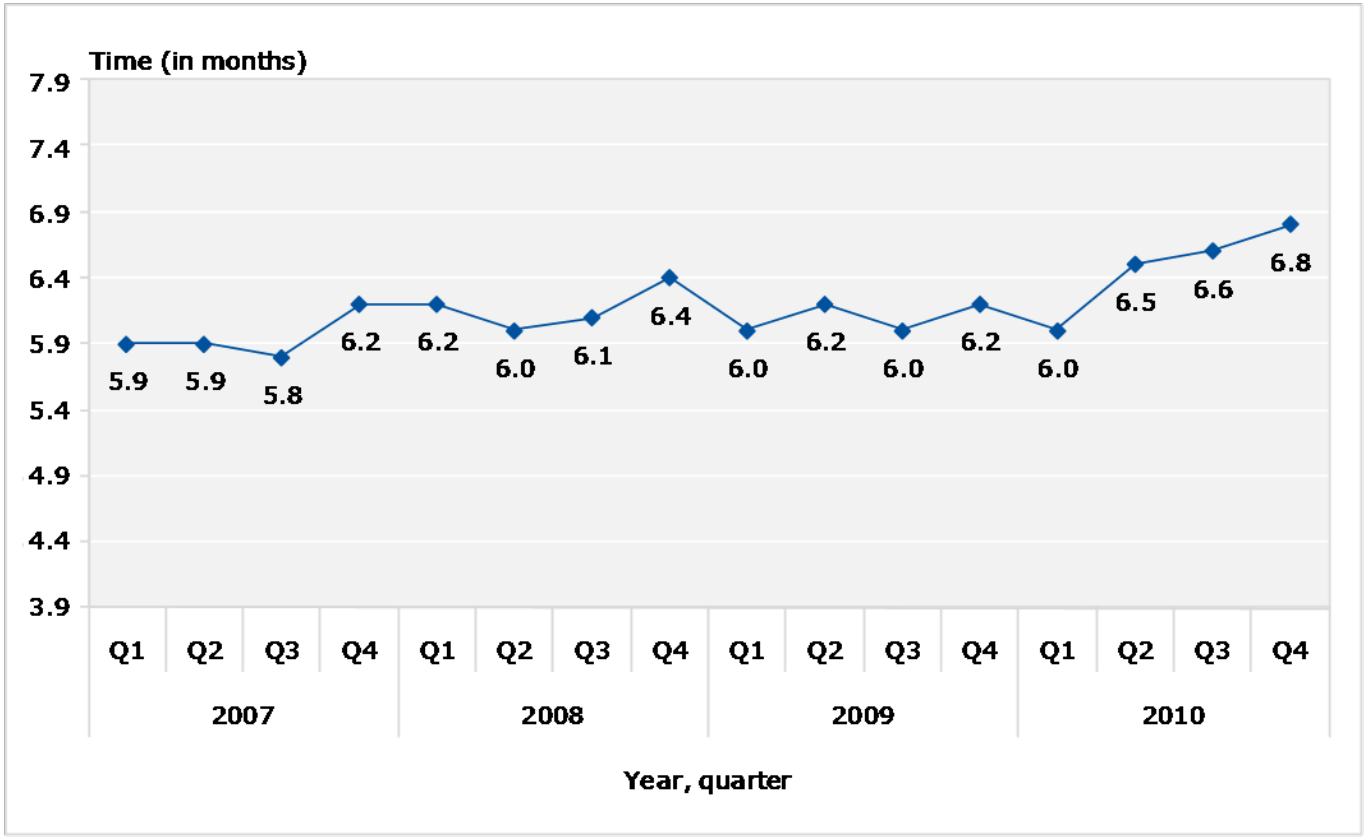
Funding rates for Individual Grants 2006 bis 2009

Relative to funding volume applied for



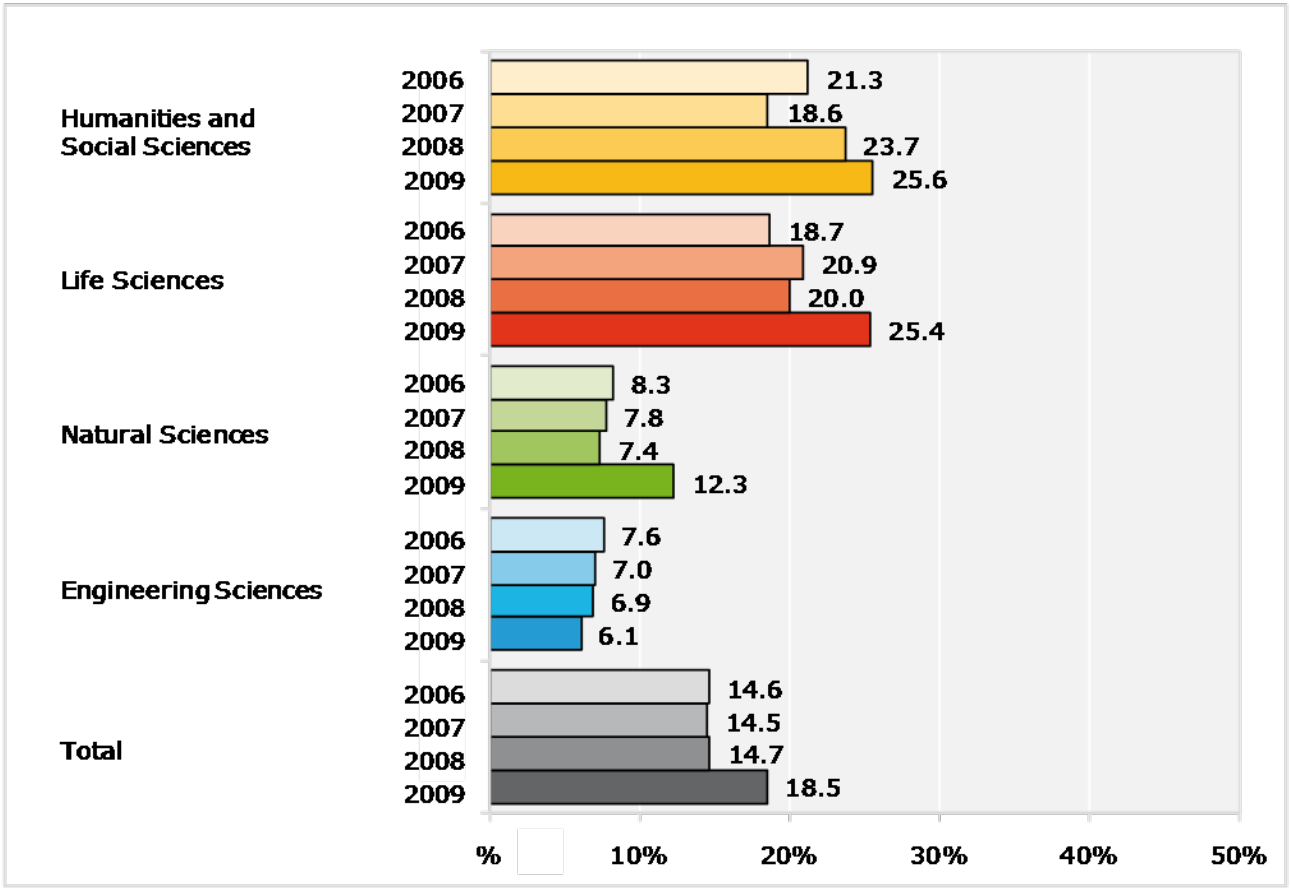
Processing time for Individual Grants

(submission date to decision date, months)



Total percentage of funding granted to female applicants

Individual grants, 2006 to 2009



Based on: Individual proposals for individual grants, research fellowships and Heisenberg fellowships

Thank you very much!

Please contact the DFG Head Office for advice and consulting!

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Tel. 0228-8852530

More information

- about the DFG: **www.dfg.de**
- about funded projects: www.dfg.de/gepris/
- 2009 Research ranking : http://www.dfg.de/ranking/ranking2009/index.html
- about more than 17,000 German Research Institutions: www.dfg.de/research_explorer/

Temporary Position for Principal Investigators

Requirements for members of non-university research institutions

Quote from „Guidelines on Research grants“ (Form 1.02e)

“Researchers in Germany, or those working at a German research institution abroad, who have completed their academic training (a doctorate as a rule) are eligible to apply for DFG research grants.

The following applies to researchers who are employed at one of the institutes or member organisations of the Max Planck Society, Fraunhofer Society, Helmholtz Association or Leibniz Association, researchers working at a publicly funded institute associated with one of these organisations, and researchers working at international research facilities located in Germany:

If you are employed on a permanent contract, you may, as a rule, only submit a proposal for a joint project and in cooperation with a university partner (duty to cooperate). The joint project may only be funded if at least 50% of the award is allocated to the partner at the German university or if the partner at the German university heads the project. You are eligible to submit an independent proposal if you are employed on a fixed-term contract at your institution and are considered a *Nachwuchswissenschaftler*.

If you are not cooperating with a partner from a German university, you are eligible if you are affiliated with a Leibniz institution (WGL), which pays a lump sum to the DFG.

Special conditions apply to proposals for temporary positions for principal investigators which will be located at such research institutions. Please note that the duty to cooperate also applies to young researchers (*Nachwuchswissenschaftler*). You may be exempt from this obligation, however, if you submit your funding proposal for a temporary position as a principal investigator within six years of obtaining your doctorate and if the non-university research institution bears 45% of the costs for the project, including the cost of your position.

In general you are not eligible to submit a proposal if you work at an institution that is not non-profit or one that does not allow immediate publication of research findings in a generally accessible form.

This rule does not apply to proposals for research grants submitted within the framework of Priority Programmes or Research Units.

This 6-year period may be extended on a case-by-case basis with suitable justification, for example due to maternity/paternity leave. In such cases, please contact the DFG’s Head Office (Quality Assurance and Programme Development Division) before submitting the proposal, as we will not be able to process your proposal otherwise.”