

A blurred, 3D-style logo of the German Research Foundation (DFG) in white, set against a blue background with a bokeh effect.

DFG funding: Programmes and Criteria for successful applications

Presentation at the Technical University Dresden, February 25, 2015

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Immunology, Virology, Medical Microbiology

The official logo of the German Research Foundation (DFG), consisting of the letters 'DFG' in a bold, blue, sans-serif font.

Contents

1. What is the DFG?
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. Guidelines to follow
7. Some numbers



Contents

1. **What is the DFG?**
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. Guidelines to follow
7. Some numbers



What is the DFG?

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_profil/gremien/mitgliederversammlung/mitgliederversammlung_liste/index.jsp

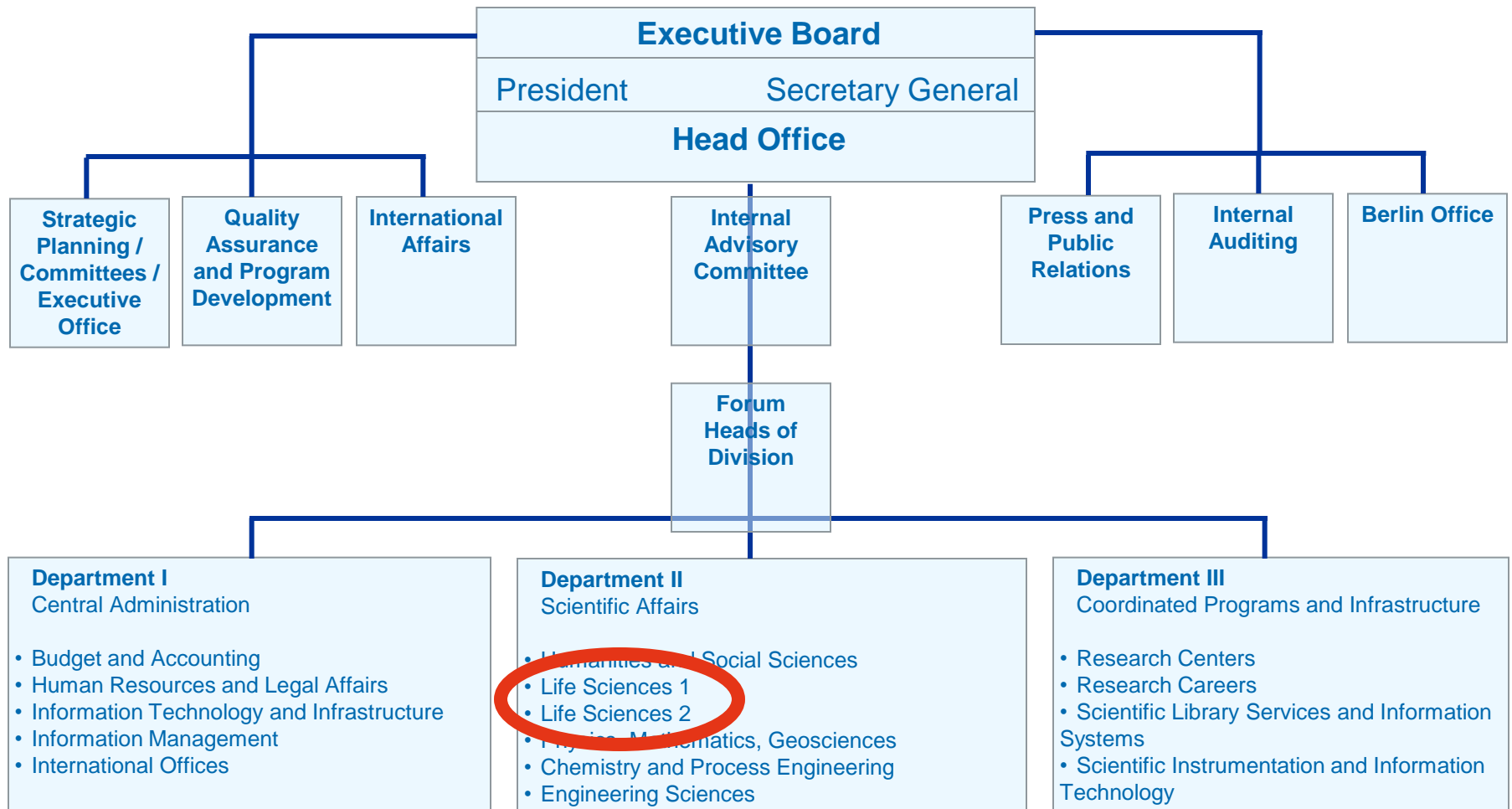
What is the DFG?

The structure of the association



What is the DFG?

The head office



What is 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 is 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 including central grants committees; sponsors („the politics“) are involved in decisions (they pick up the bill, after all!)

Contents

1. What is the DFG?
2. **What does the DFG fund?**
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. Guidelines to follow
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What does the DFG fund?

Projects in all fields of basic science

The DFG receives funding proposals for

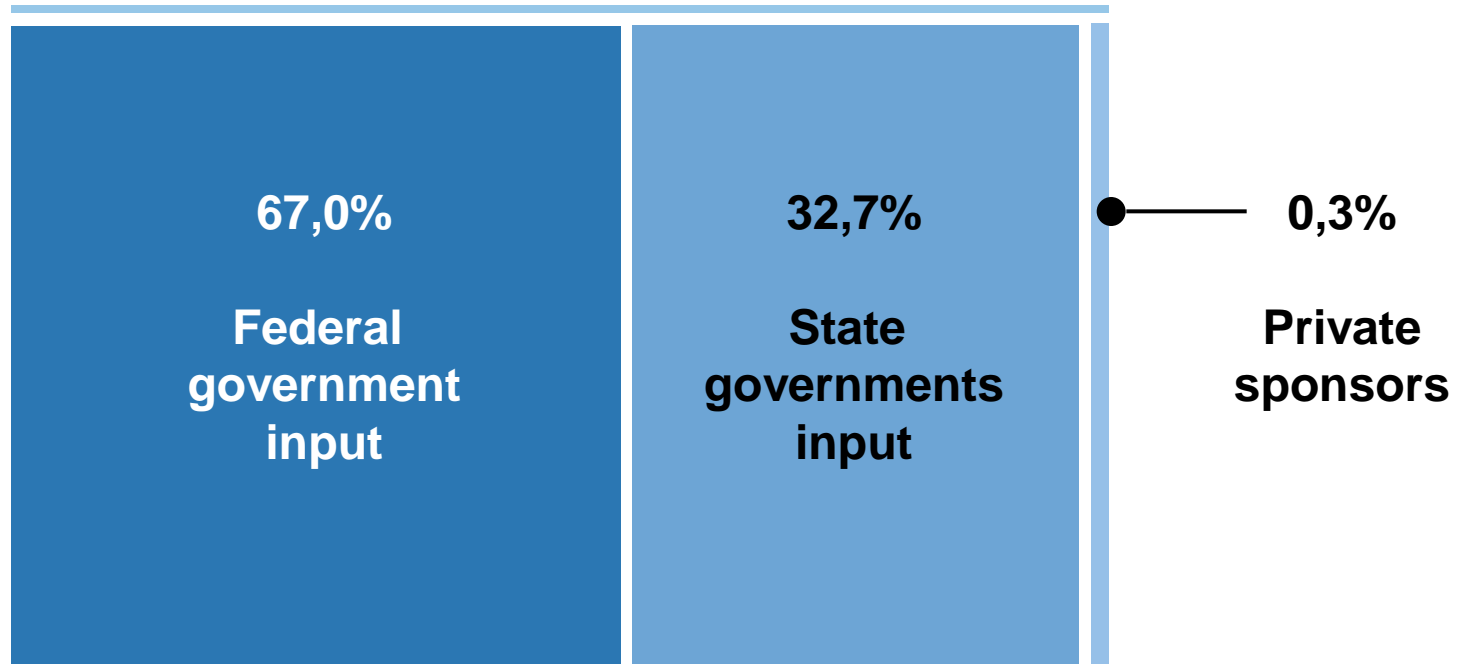
- ▶ individual projects
- ▶ coordinated research projects
- ▶ research infrastructure
- ▶ scientific contacts



What does the DFG fund?

The budget and its sources

Grand total (2013): ~2,850 Mio. € (+ 540 Mio. € Excellence Initiative)

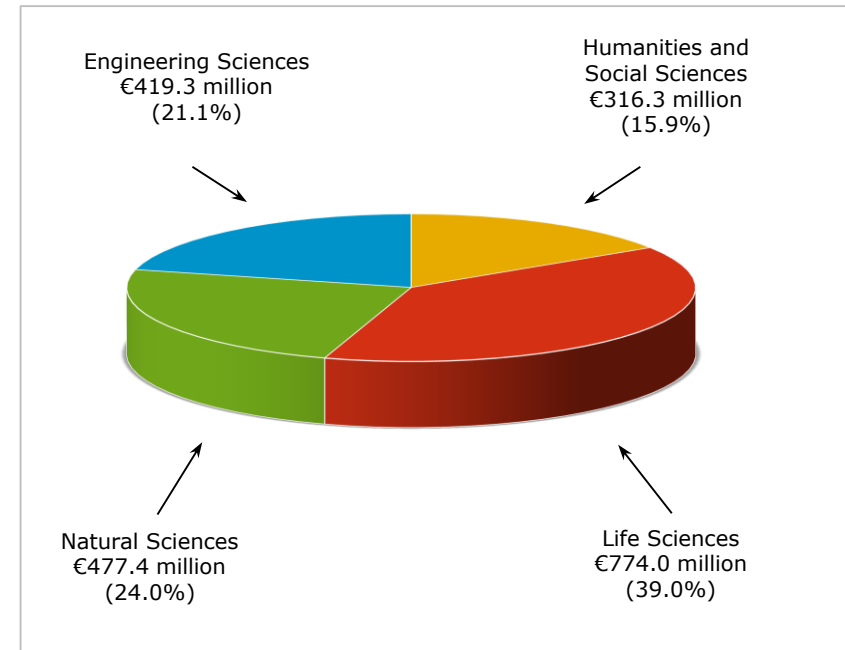


What does the DFG fund?

The mandate of the DFG: Funding of basic science in all disciplines

The DFG

- ▶ serves **all branches of science and the humanities**
- ▶ fosters **scientific excellence** through competition
- ▶ supports **international cooperation in research**
- ▶ **advises** political and social decision-makers
- ▶ supports the **transfer of knowledge** between science and industry



Please note:

5% annual increase of total budget guaranteed according to the „Pakt für Forschung“!

Contents

1. What is the DFG?
2. What does the DFG fund?
3. **What are the DFG's funding criteria?**
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. Guidelines to follow
7. Some numbers



What are the DFG's funding criteria?

DFG reviewers evaluate proposals based on

- ▶ projects' scientific merit
- ▶ applicants' qualifications
- ▶ goals and work programme
- ▶ employment opportunities
- ▶ proposed use of funding
- ▶ quality and added value of the cooperation
- ▶ programme-specific criteria

in coordinated programmes



Contents

1. What is the DFG?
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. **How does the DFG provide funding?**
5. What funding programmes does the DFG offer?
6. Guidelines to follow
7. Some numbers



How does the DFG provide funding?

The DFG promotes projects by providing

- ▶ staff funding
- ▶ funding for direct project costs and consumables
- ▶ funding for animal costs
- ▶ travel allowances
- ▶ instrumentation funding
- ▶ funding for other items such as
 - publications
 - trial-related expenses
 - PR activities



How does the DFG provide funding?

The DFG awards

- ▶ individual grant funding
- ▶ coordinated programme funding
→ *not further discussed today*



What funding programmes does the DFG offer?

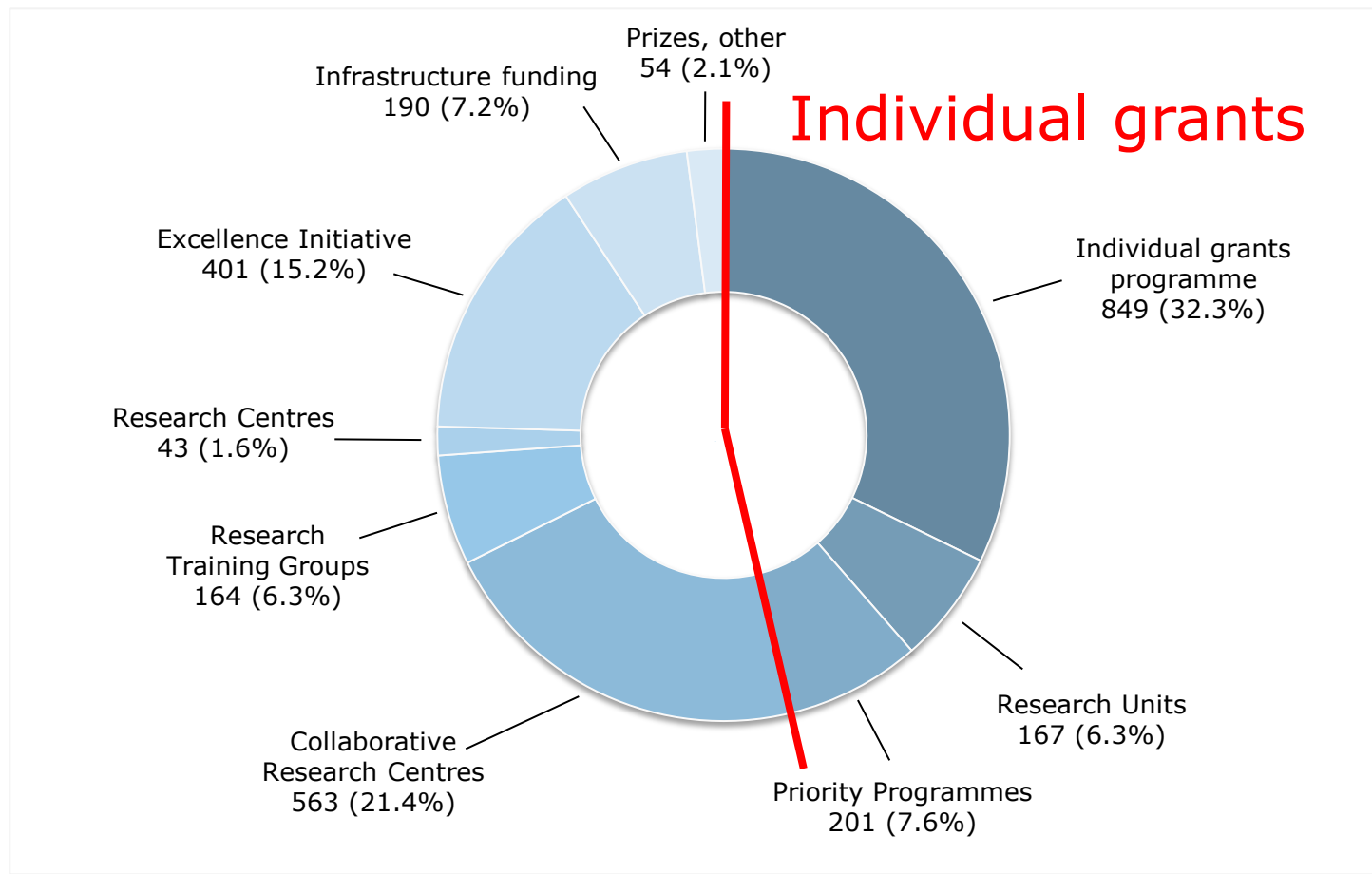
Funding instruments for individual applications

- ▶ research grants (with publication funding)
- ▶ research fellowships
- ▶ temporary positions for principal investigators
- ▶ Emmy Noether Programme
- ▶ Heisenberg Programme
- ▶ Reinhart Koselleck projects
- ▶ Clinical Trials



What funding programmes does the DFG offer?

Overall allocation of funding to the various instruments



Contents

1. What is the DFG?
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
- 5. What funding programmes does the DFG offer?**
6. Guidelines to follow
7. Some numbers



What funding programmes does the DFG offer?

Research grants

Purpose

To carry out a focused research project within a specific time frame

Eligibility

Researchers from all disciplines at German research institutions who have completed their scientific training (in most cases by achieving their doctorates)

Duration

Project-specific (usually several years)



What funding programmes does the DFG offer?

Research fellowships

Purpose

To carry out a defined research project abroad in order to become acquainted with new scientific methods or to complete a larger project

Eligibility

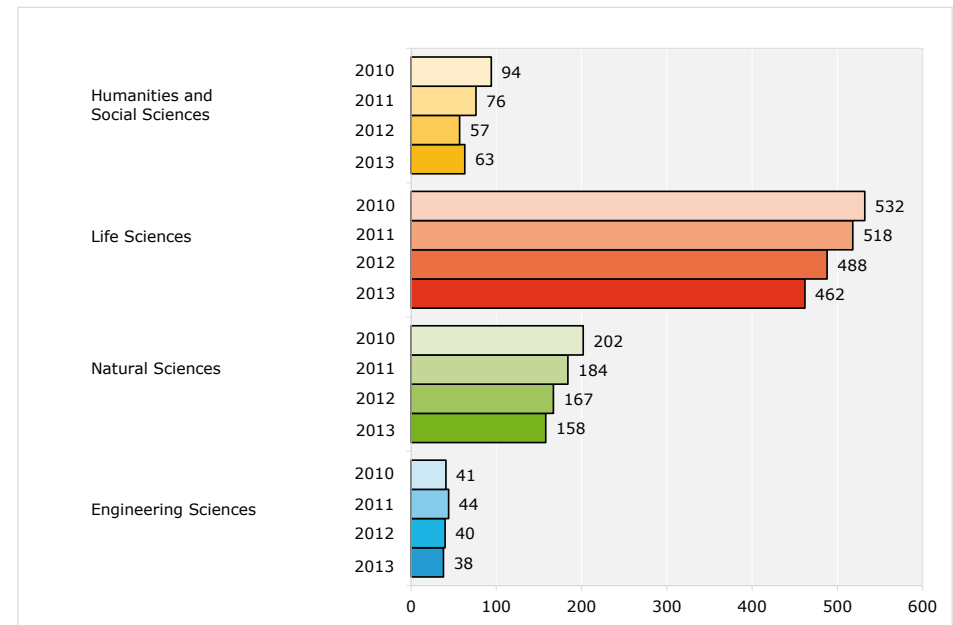
Young researchers from all disciplines who have completed their doctorates

Duration

Usually two years

Particular features

Six-month return grants are also available



What funding programmes does the DFG offer?

Temporary positions for principal investigators (“Eigene Stelle”)

Purpose

To carry out an individual project in the researcher’s chosen research environment

Eligibility

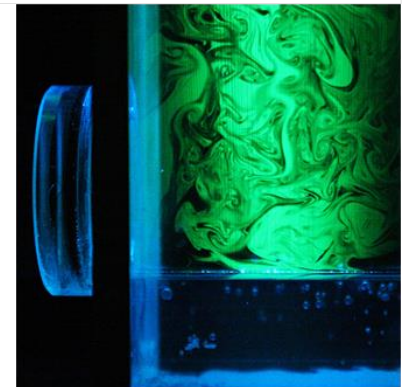
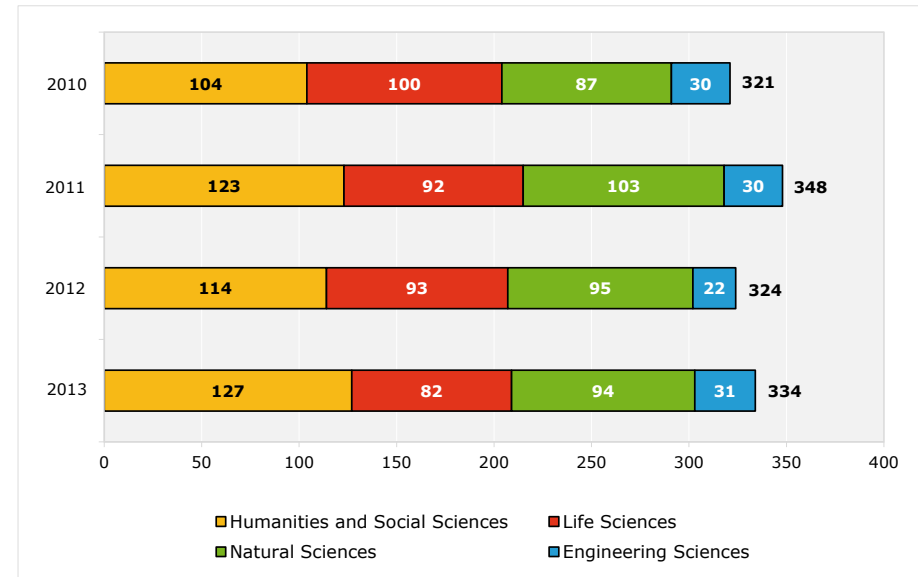
Researchers from all disciplines who have completed their doctorates

Duration

Three years initially

Specific requirement:

No other 3rd party funding from any funder can be applied for!



What funding programmes does the DFG offer?

Emmy Noether Programme

Purpose

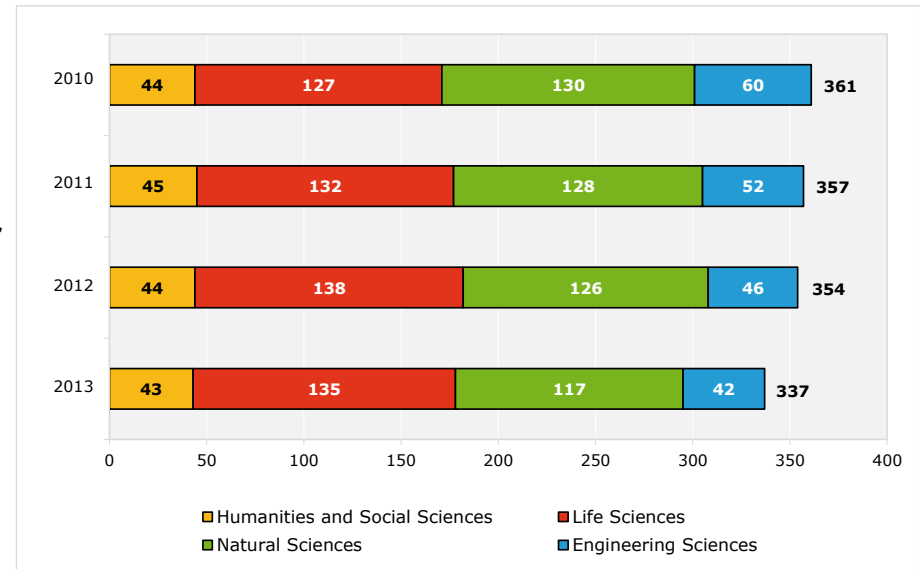
To allow researchers to achieve early independence and to enable them to qualify for a university teaching career by leading their own independent junior research group

Eligibility

Outstandingly qualified postdoctoral researchers with significant international experience may apply within two to four years (six years for M.D.s) after obtaining their doctorates

Duration

Usually five years



What funding programmes does the DFG offer?

Heisenberg Programme

Purpose

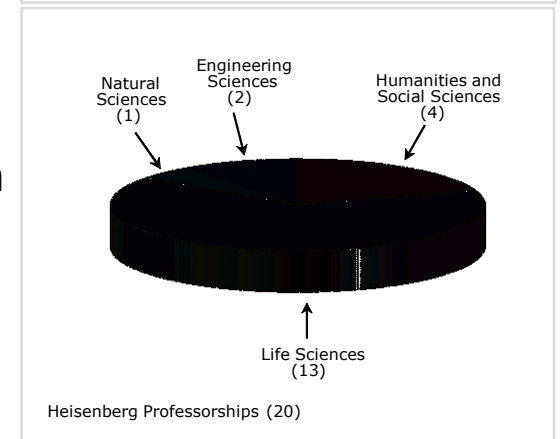
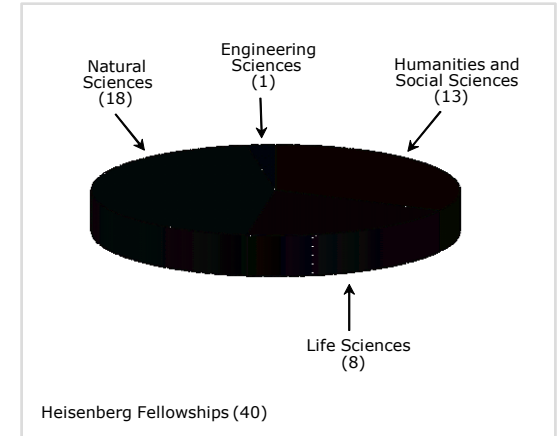
To enable researchers to prepare for scientific leadership positions while simultaneously working on advanced research topics

Eligibility

Young researchers from all disciplines who meet the requirements for a long-term professorship and who have achieved outstanding results in their career so far. Demonstrated scientific independence is important!

Duration

Maximum of five years; professorship funding based on W2/W3 salary level (depending on the university's transition funding)



What funding programmes does the DFG offer?

DFG funding of positions or projects within coordinated projects

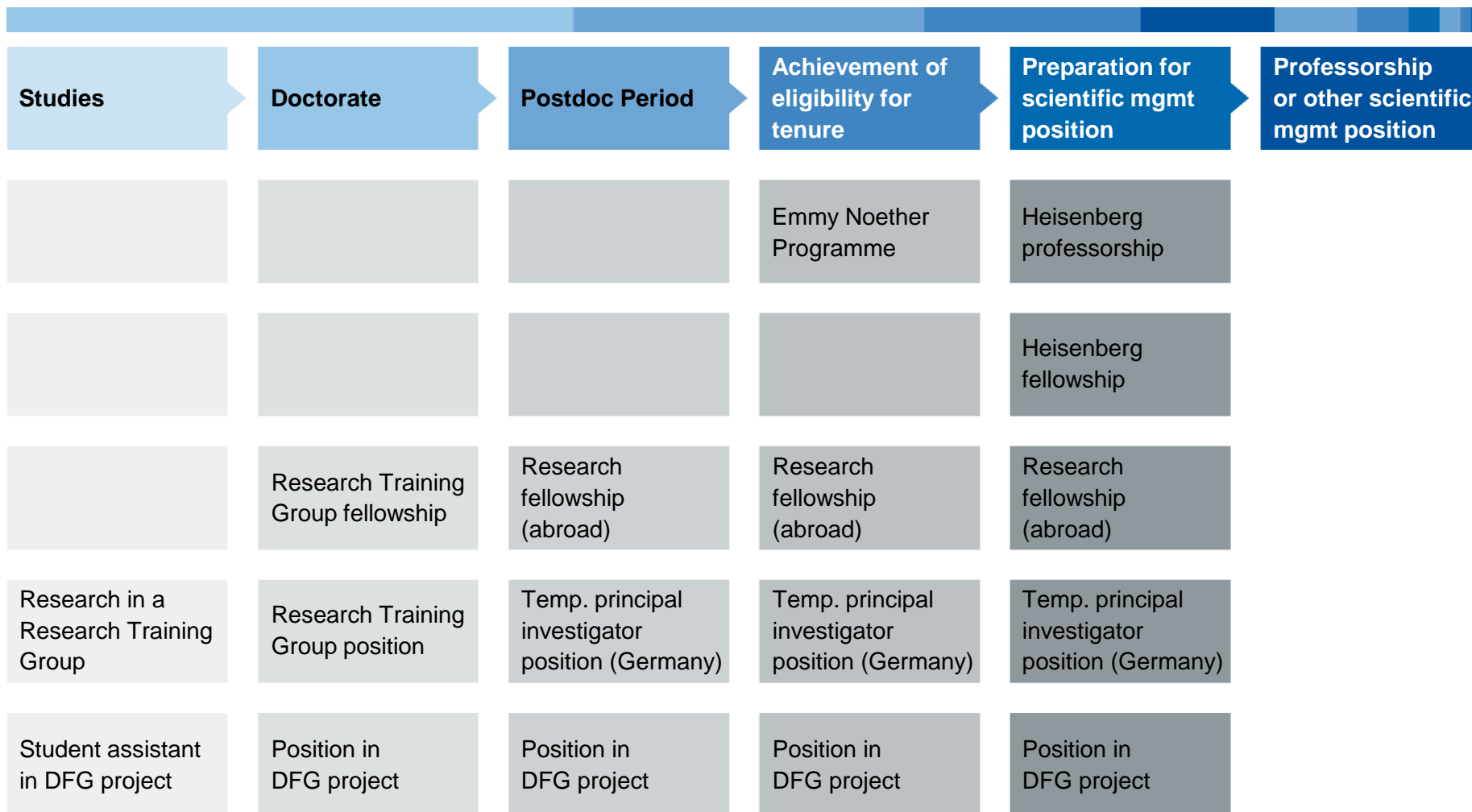
- ▶ Collaborative Research Centres and CRC/Transregios
- ▶ DFG Research Centres
- ▶ Research Training Groups and International Research Training Groups
- ▶ Priority Programmes
- ▶ Research Units and Clinical Research Units

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 university or several university locations.

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

What funding programmes does the DFG offer?

Overview of programmes directed at junior investigators



Contents

1. What is the DFG?
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. **Guidelines to follow**
7. Some numbers



Guidelines to follow

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!

Guidelines to follow

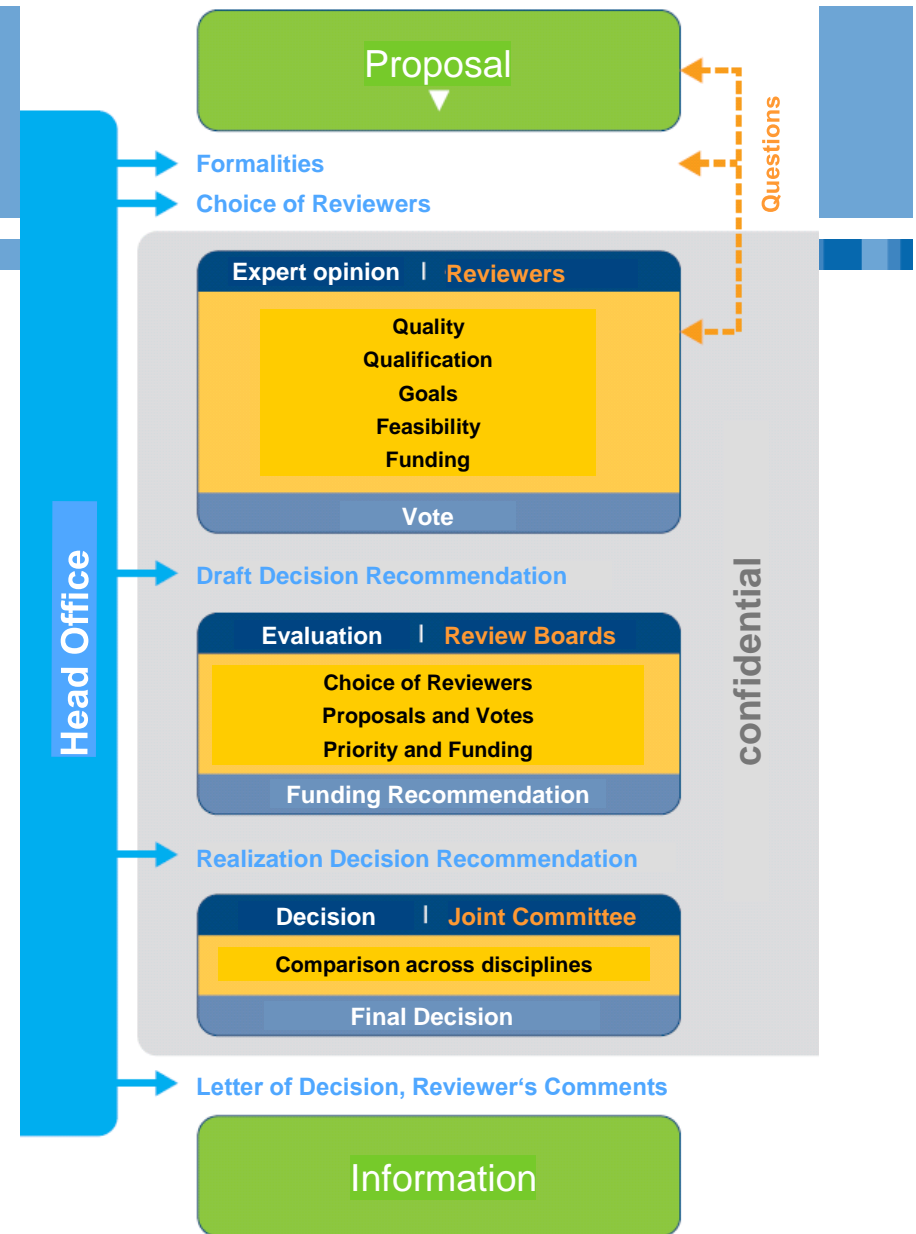
The review process

Relevant Criteria:

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

Not relevant:

- ▶ Age, Gender, Nationality
- ▶ Previous DFG-record

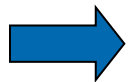


Guidelines to follow

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 necessary, 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

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 - your 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 and funded.*

Guidelines to follow

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

Full electronic application submission

Following the Guidelines („DFG-Merkblatt 50.01/Leitfaden 54.01 - Guideline 50.01e/Instruction 54.01):

Summary: max. 1600 characters (only in the form)

1. State of the art and own preliminary work/progress report (for continuation proposals):

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

Guidelines to follow

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

Following the Guidelines (DFG-Leitfaden 54.01)

2.1 Duration of project (new proposal or extension)

2.2 Goals

- rigid depiction of specific goals and hypothesis – don't explain the world!
- the project should be novel and original – reviewers like to be surprised!

2.3 Work programme incl. methods

- detailed experimental plan: what do you want to achieve when and how?
- why do you consider your methods appropriate?
- elaborate on alternative strategies
- depict methods established in your lab and those utilized in collaboration
- cite relevant literature (in paragraph 3) – your own and other work

Guidelines to follow

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

Following the Guidelines (DFG-Leitfaden 54.01)

2.4 Data handling – results achieved with public funding must be made accessible to the (scientific) community after publication

2.6 Experiments involving humans or human-derived material; experiments involving animals

- always answer the questions and describe the nature of the experiments
- if you use human-derived material, ethical clearance is mandatory by law – you will lose time if it is missing – the DFG **must** collect it
- rules of animal protection must be obeyed
- it is **your** duty to work according to the laws and ethical obligations

2.7 Collaboration with partners in Germany and abroad

Guidelines to follow

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

Following the Guidelines (DFG-Leitfaden 54.01)

3. The reference list: rules for reference lists

- A maximum of **ten publications** depicting project-specific **preliminary work**
- Separate peer-reviewed original papers from reviews, patents, book chapters and congress abstracts
- Only accepted manuscripts are considered as publications (include journal confirmation!)
- **NO** manuscripts submitted, in review, „in preparation“
- List ten „personal highlights“ in your CV (no more!), not necessarily project-specific

Guidelines to follow

Excursus: A scientists' original sins

This is Important!!!



Never Ever:

- Neglect/omit literature contradicting your hypothesis
- cite your own papers only and ignore the competition
- re-assess or ridicule other peoples' findings – they may be your reviewers (or the reviewer appreciates their data)!
- do not swap authors when „equally contributed“: this constitutes scientific misconduct! → cite as in PubMed, including title, mark shared authorships by asterisks; highlight your name (helps reviewers!)

Instead:

- Discuss other peoples' data – this might be inspiring to the reviewer and shows you contribute to the research field

Guidelines to follow

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

Following the Guidelines (DFG-Leitfaden 54.01)

4. Funds requested

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

Staff: do you have experienced candidates for the positions?

Equipment: provide quotes!

Consumables: Project-related only; provide a rough calculation!

Travel costs, Publication costs

Other funds required (animal costs must be precisely calculated, remuneration of volunteers,)

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

Guidelines to follow

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

Following the Guidelines (DFG-Leitfaden 54.01)

5. Prerequisites for carrying out the project

5.1 Your current position

5.2 First-time proposal („Erstantrag“) - not applicable if you have a SFB-project

5.3 Your team

5.4 Cooperations with other scientists relevant for this project & others

5.5 Scientific equipment

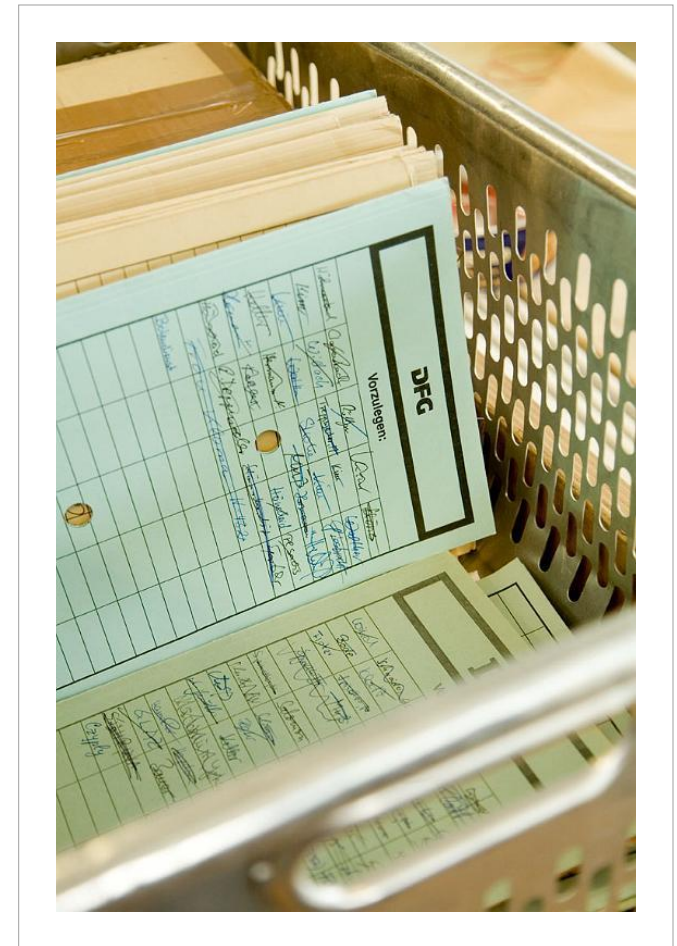
5.6 Other requirements

A reasonable input of institutional funding is expected!

Guidelines to follow

A successful grant...

- ▶ has a novel and innovative topic and approach
- ▶ is well investigated and clearly described
- ▶ has published preliminary work
- ▶ is phrased concisely and precisely
- ▶ presents the experimental strategy comprehensibly and convincingly
- ▶ states short-term goals, embedded in a broader context
- ▶ presents a reasonable work plan to achieve the goals on time
- ▶ applies for appropriate funding
- ▶ convinces by an attractive layout



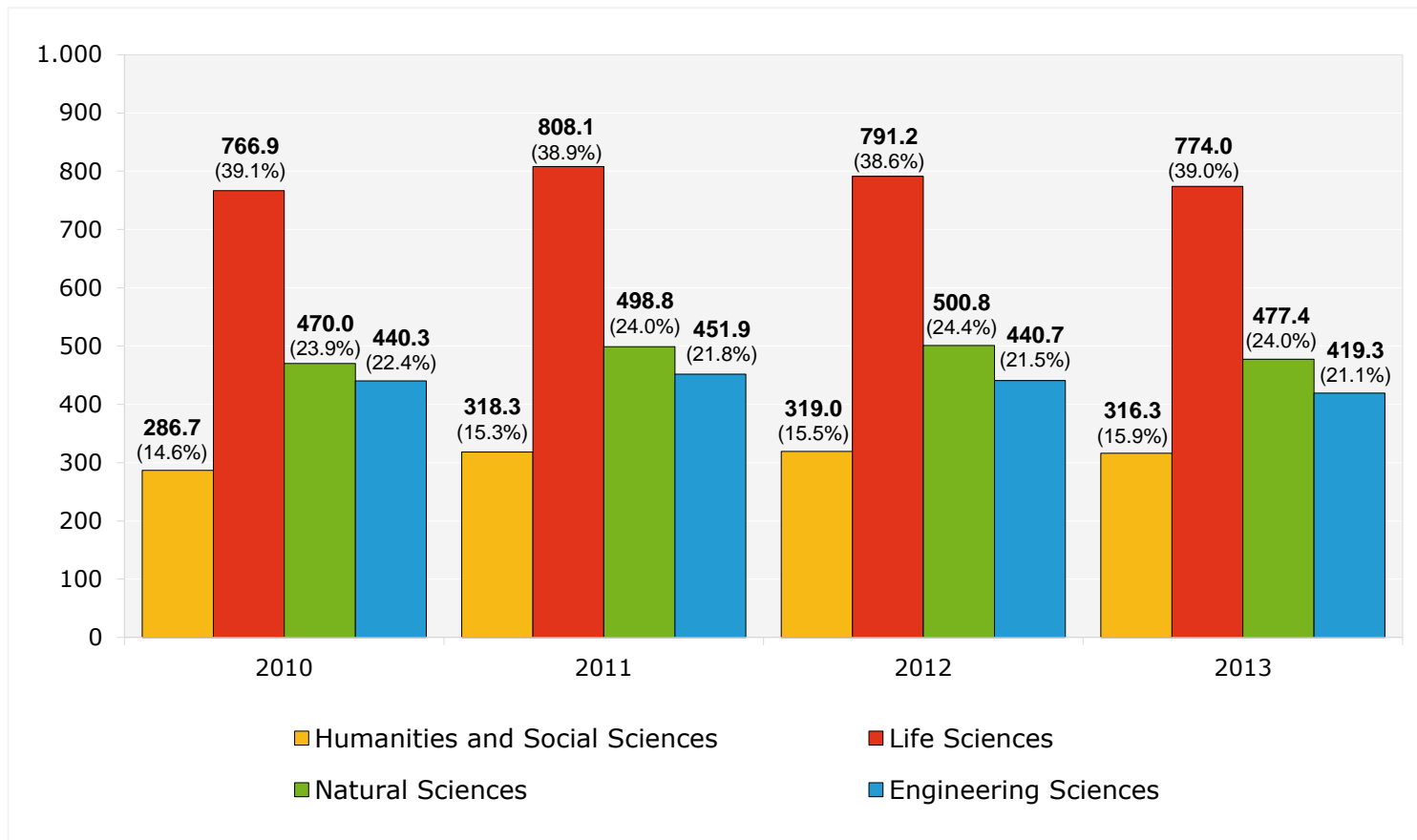
Contents

1. What is the DFG?
2. What does the DFG fund?
3. What are the DFG's funding criteria?
4. How does the DFG provide funding?
5. What funding programmes does the DFG offer?
6. Guidelines to follow
7. **Some numbers**

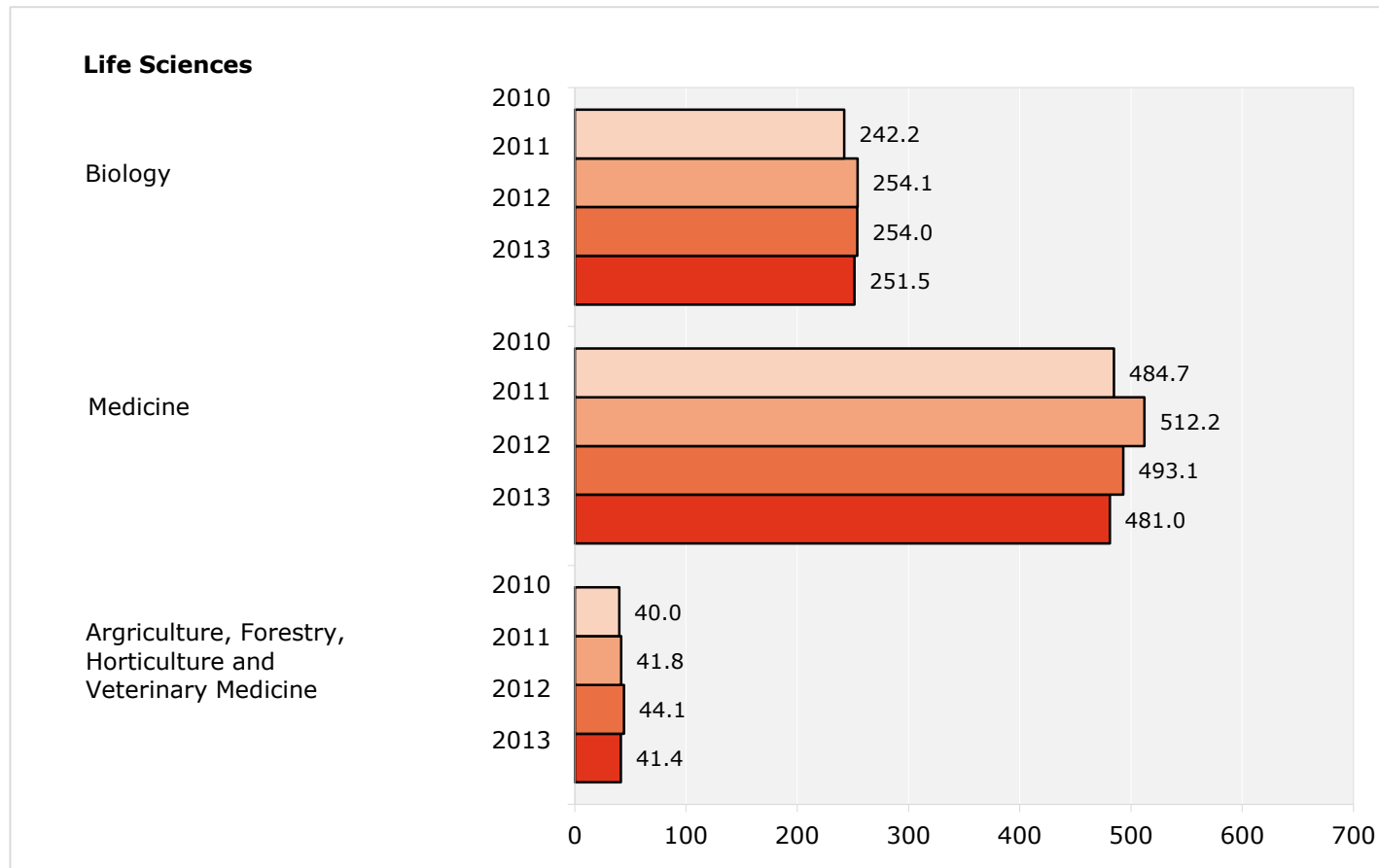


Total DFG funding 2010 to 2013

According to areas of science (Mio. Euro)

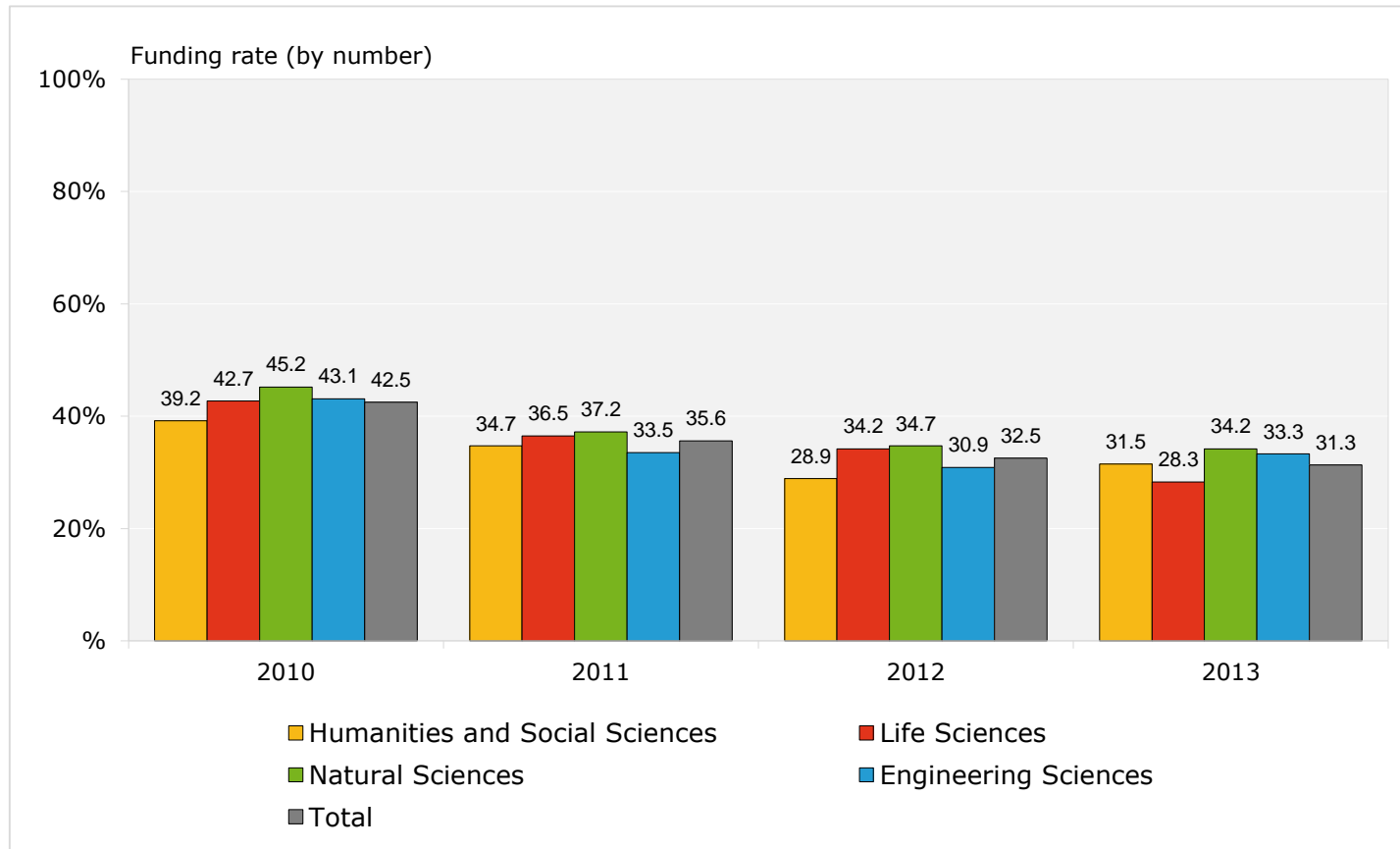


DFG Funding in the Life Sciences 2010 to 2013 in Mio. Euro



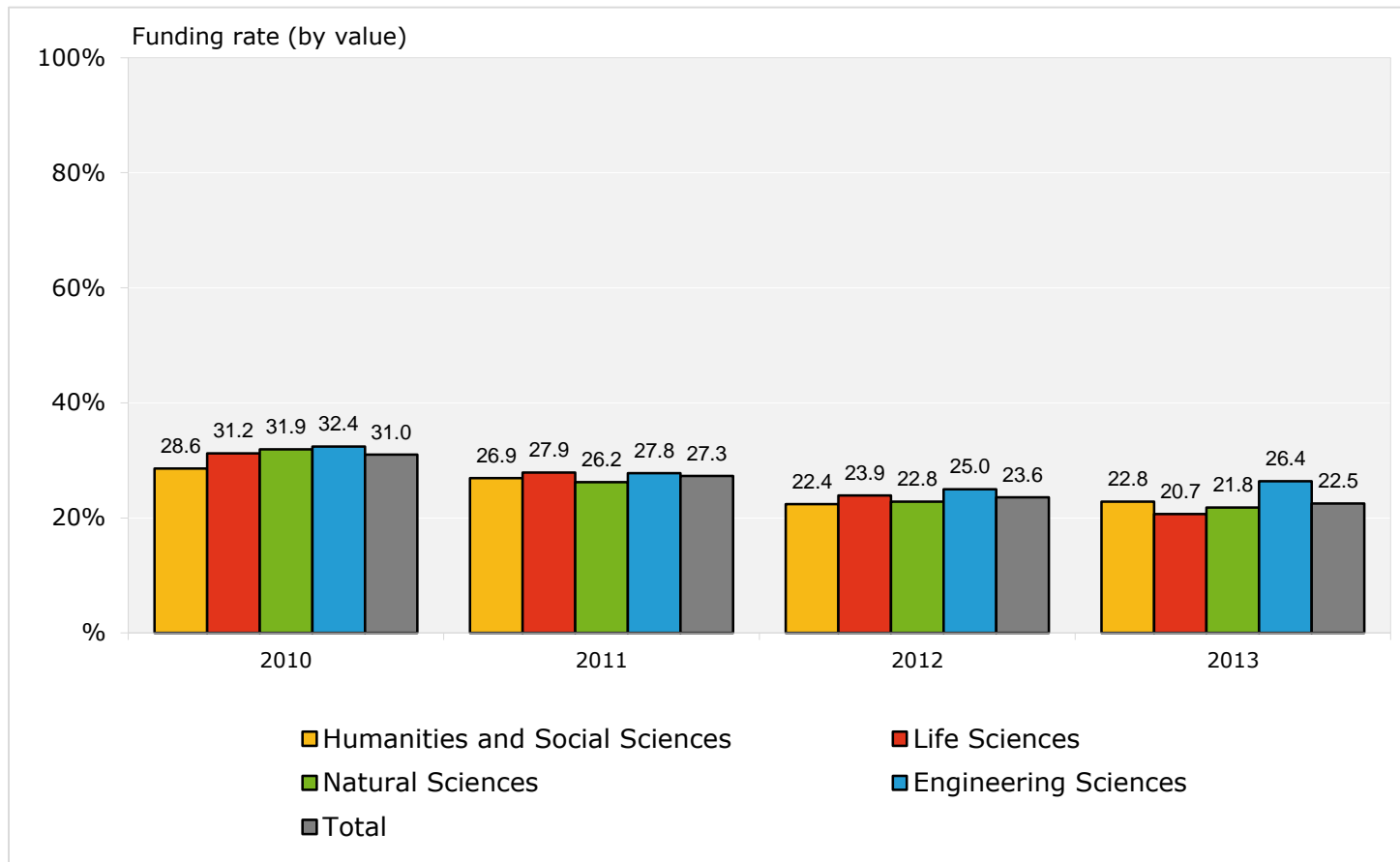
Funding rates for Individual Grants

Ratio of applications funded 2010 to 2013



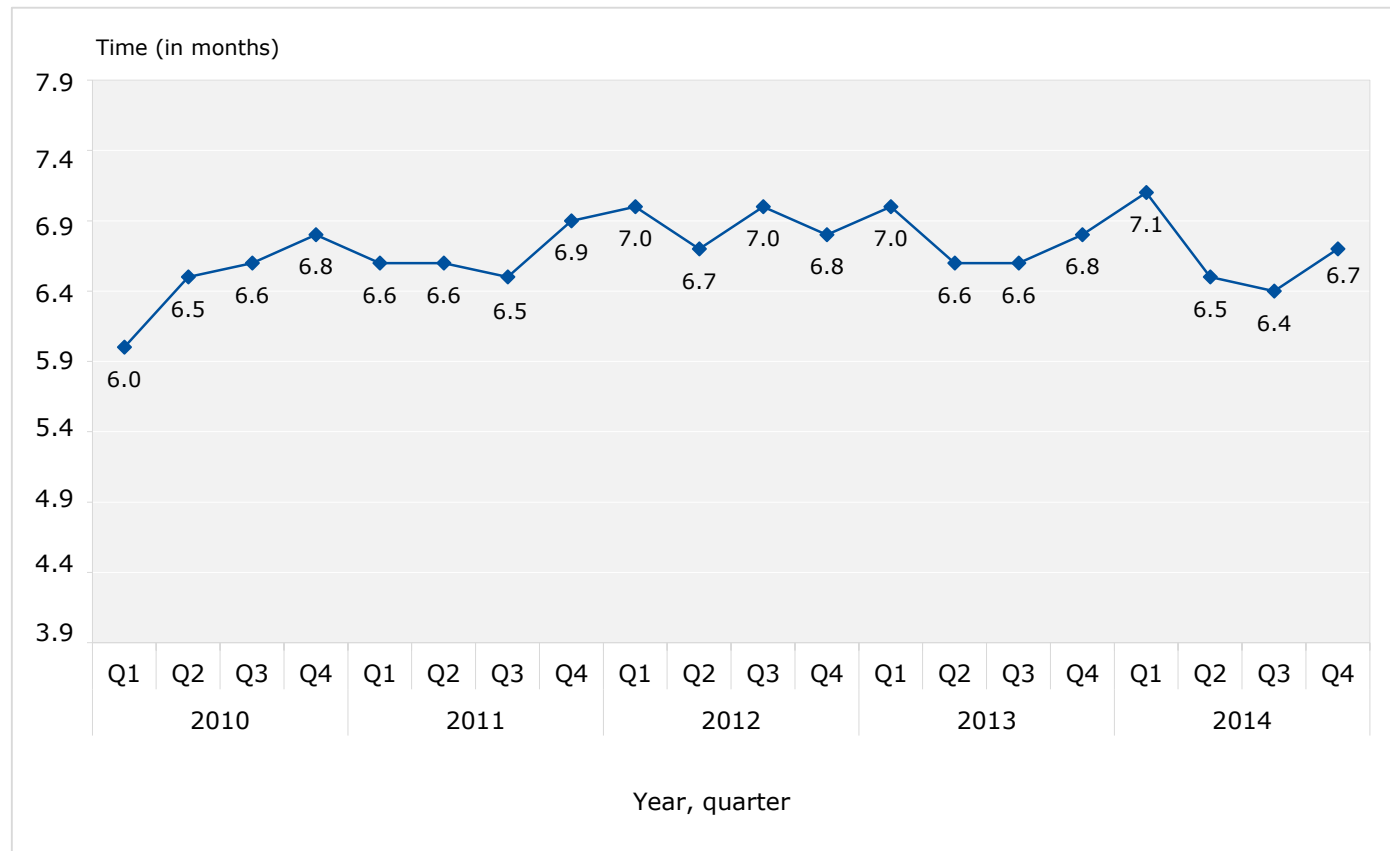
Funding rates for Individual Grants

Ratio of funding volume applied for funded 2010-13



Processing time for Individual Grants

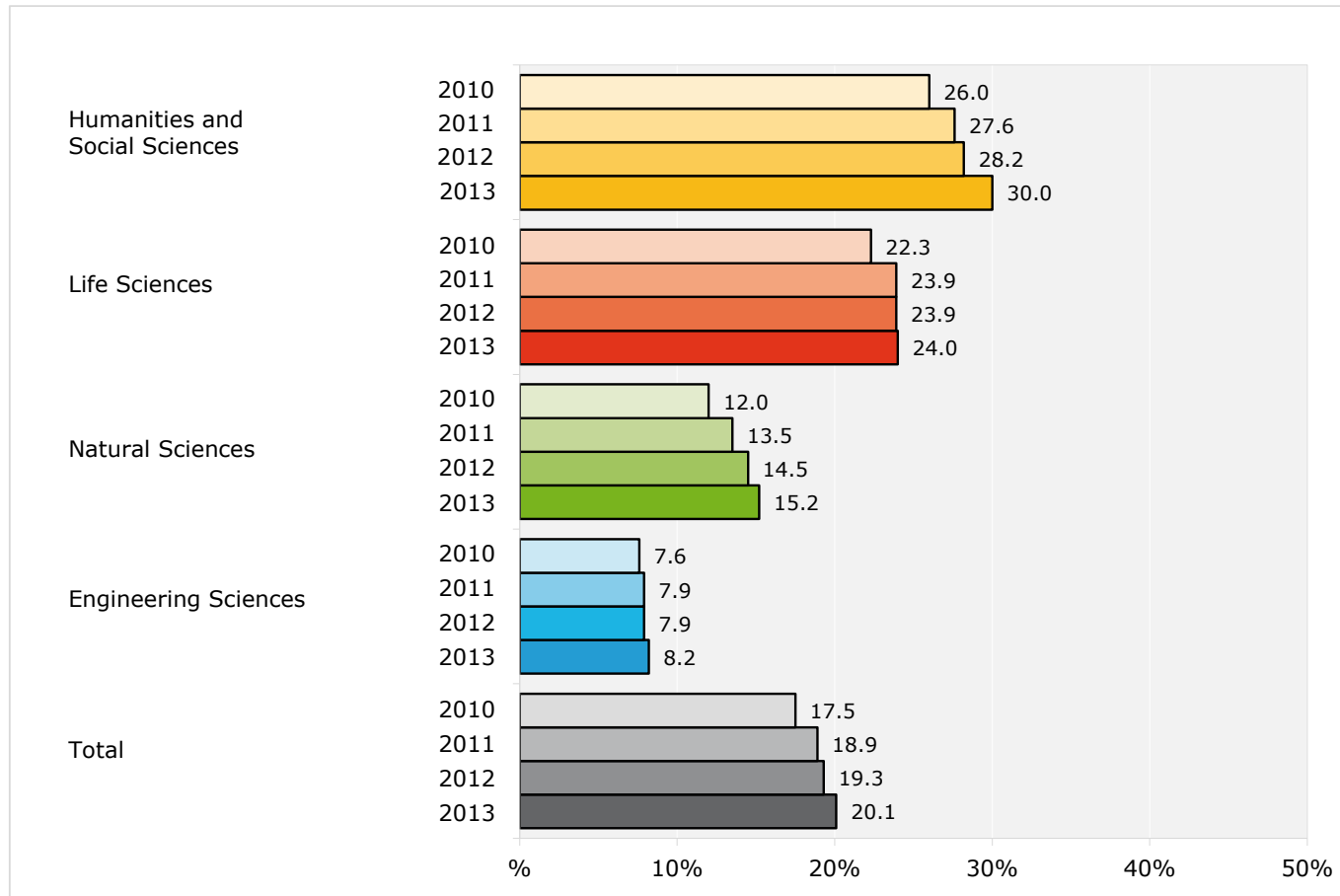
(submission date to decision date, months)



Average in Life Sciences (2014): 6.1 months

Total percentage of funding granted to female applicants

Individual grants, 2010 to 2013



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/
- ▶ 2012 Funding Atlas: http://www.dfg.de/dfg_profil/foerderatlas_evaluation_statistik/foerderatlas/index.jsp
- ▶ 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 the duty to cooperate“ (Form 55.01e)

- ▶ 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 project¹ 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 and 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 young researcher (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 doctorate² and if the non-university research institution bears 45% of the costs for the project, including the cost of your position.**

¹ This rule does not apply to proposals for research grants submitted within the framework of Priority Programmes or Research Units.

² This 6-year period may be extended on a case-by-case basis with suitable justification, for example due to maternity/paternity leave.