



DFG

Criteria for successful DFG proposals

Presentation at the University of Tübingen, January 25, 2012

Dr. Andreas Strecker

Program Director

Immunology, Virology, Medical Microbiology

Topics

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



Topics

- **Who we are**
- **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 is a (desirable!) side-effect; *the advancement of science is the driving force*

▶ Bottom-up principle

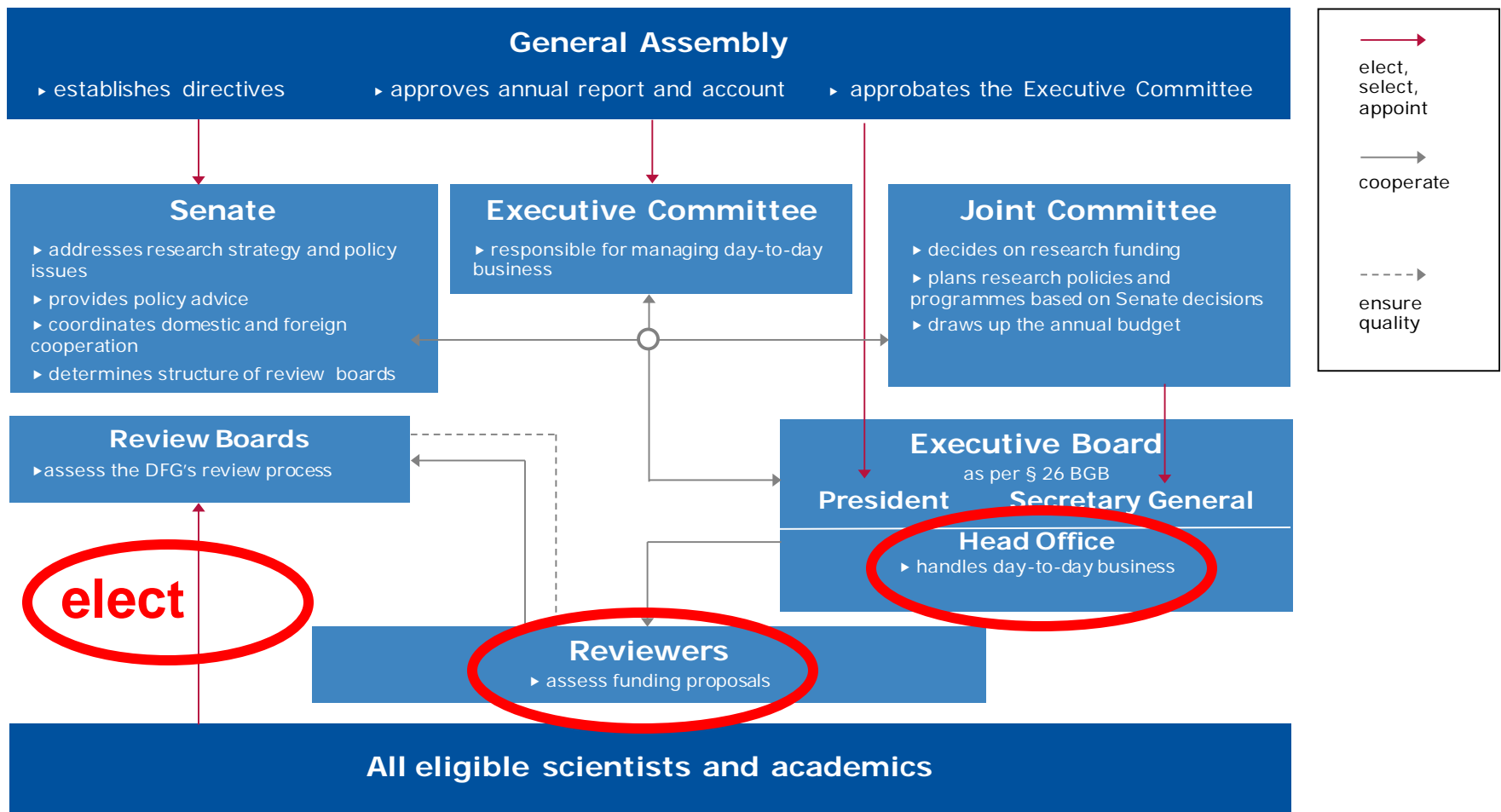
- Scientists propose projects whenever they consider them ready (few exemptions)

▶ Self-governed

- Peer review! Scientists decide on the best science on all levels; sponsors („the politics“) are involved in decisions (they pick up the bill, after all!)

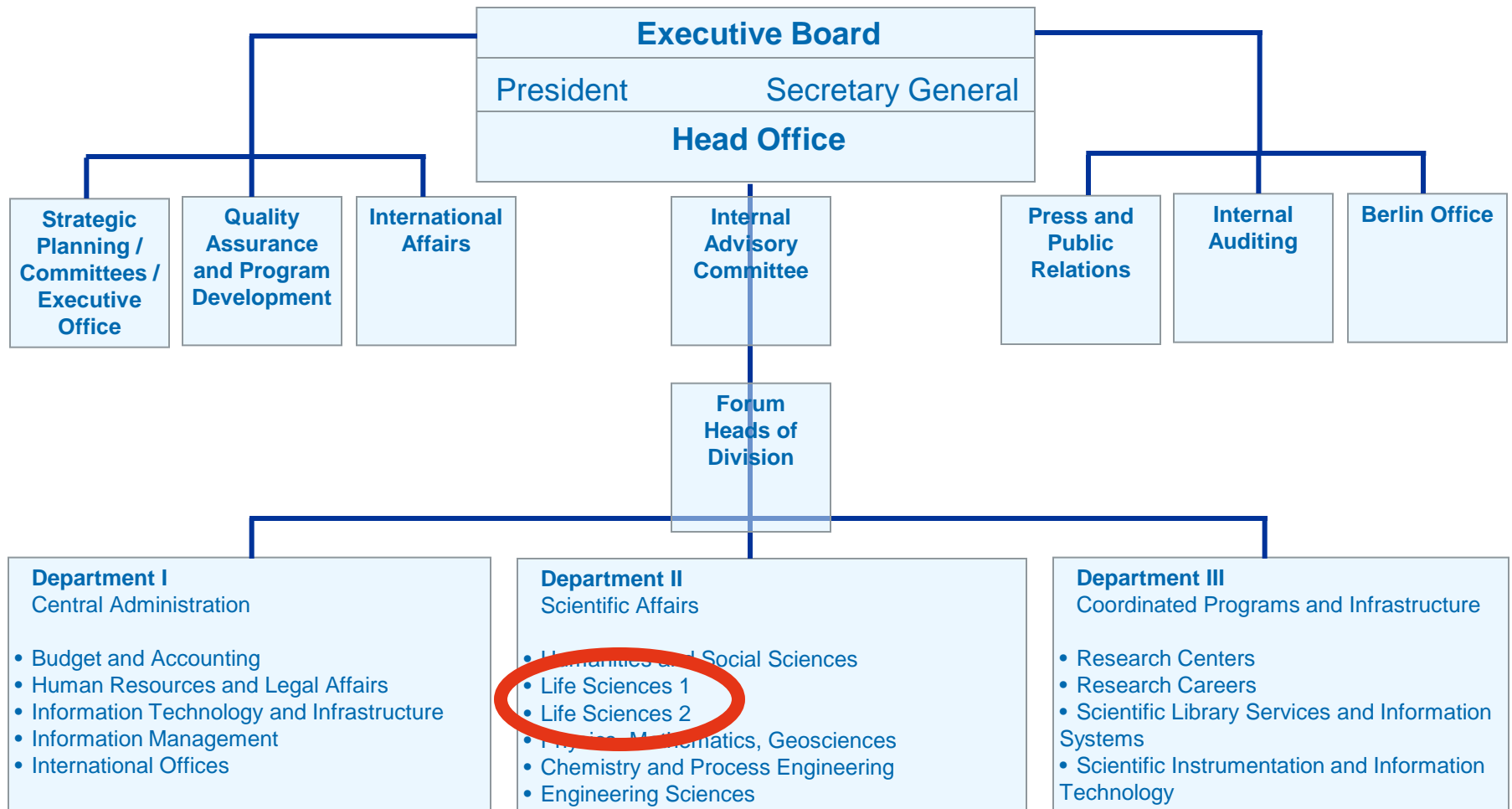
Who we are

The structure of the association



Who we are

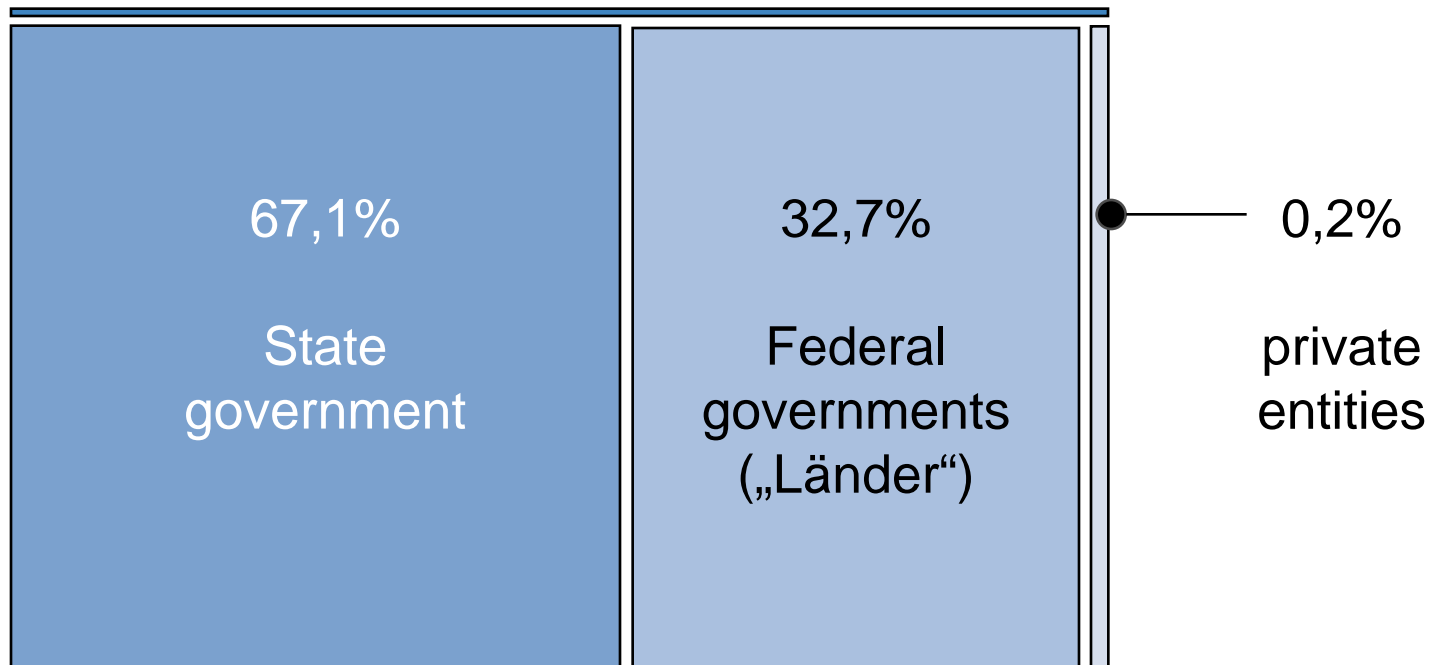
The head office



Who we are

The budget and its sources

Total budget: 2,310 m€ (2010; excl. Excellence initiative)



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



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!

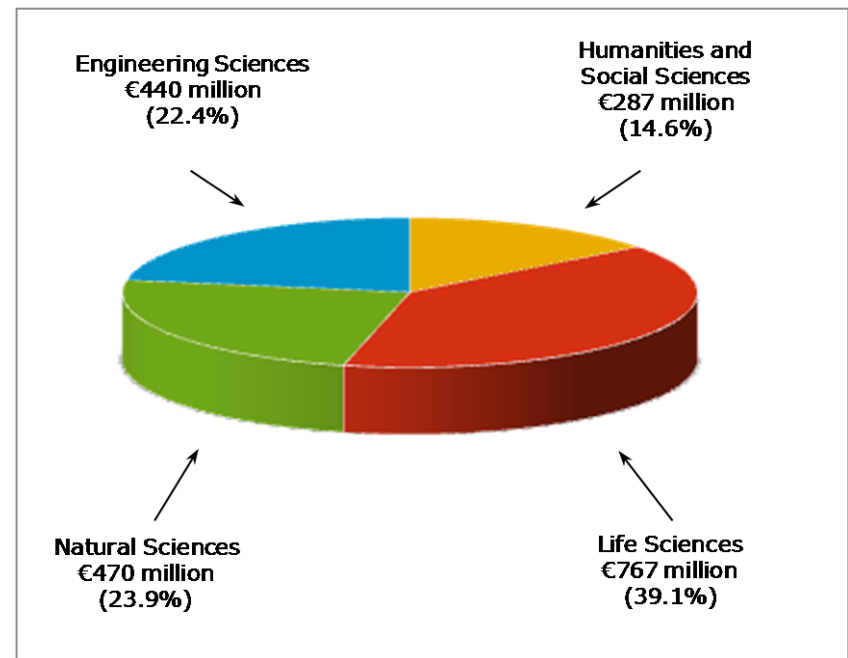
What we do

DFG head office: 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 2010, by discipline (excl. overhead):



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



What we do

Our mandate

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 Science Europe and the ERC; negotiations with science funders abroad to allow for bilateral research projects

What we do

Establish European relations

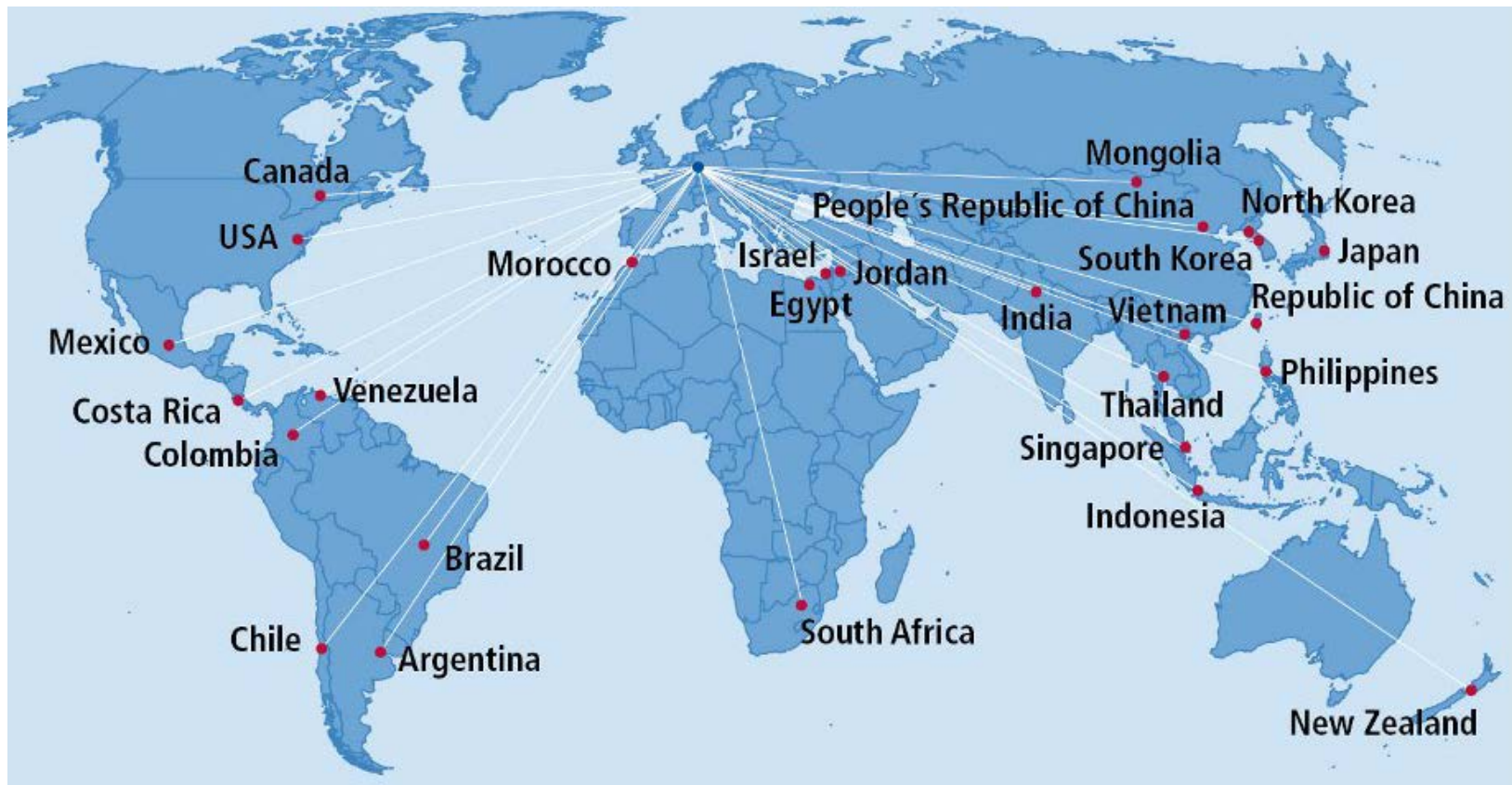
European Bilateral agreements in 2009



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



Criteria for successful DFG proposals/ Dr. Andreas Strecker
Tübingen, January 25, 2012

What we do

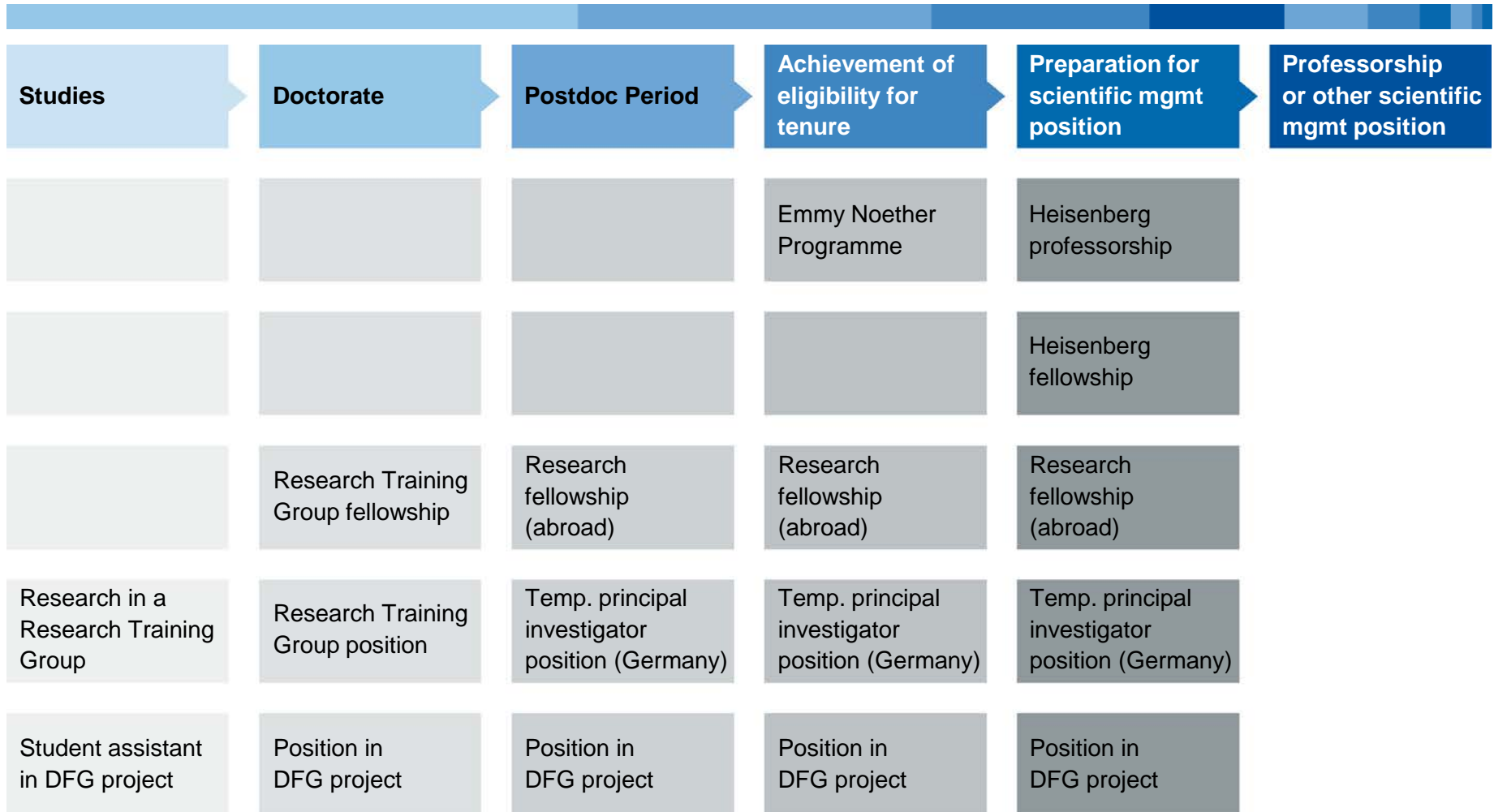
The DFG funding portfolio – individual proposals

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



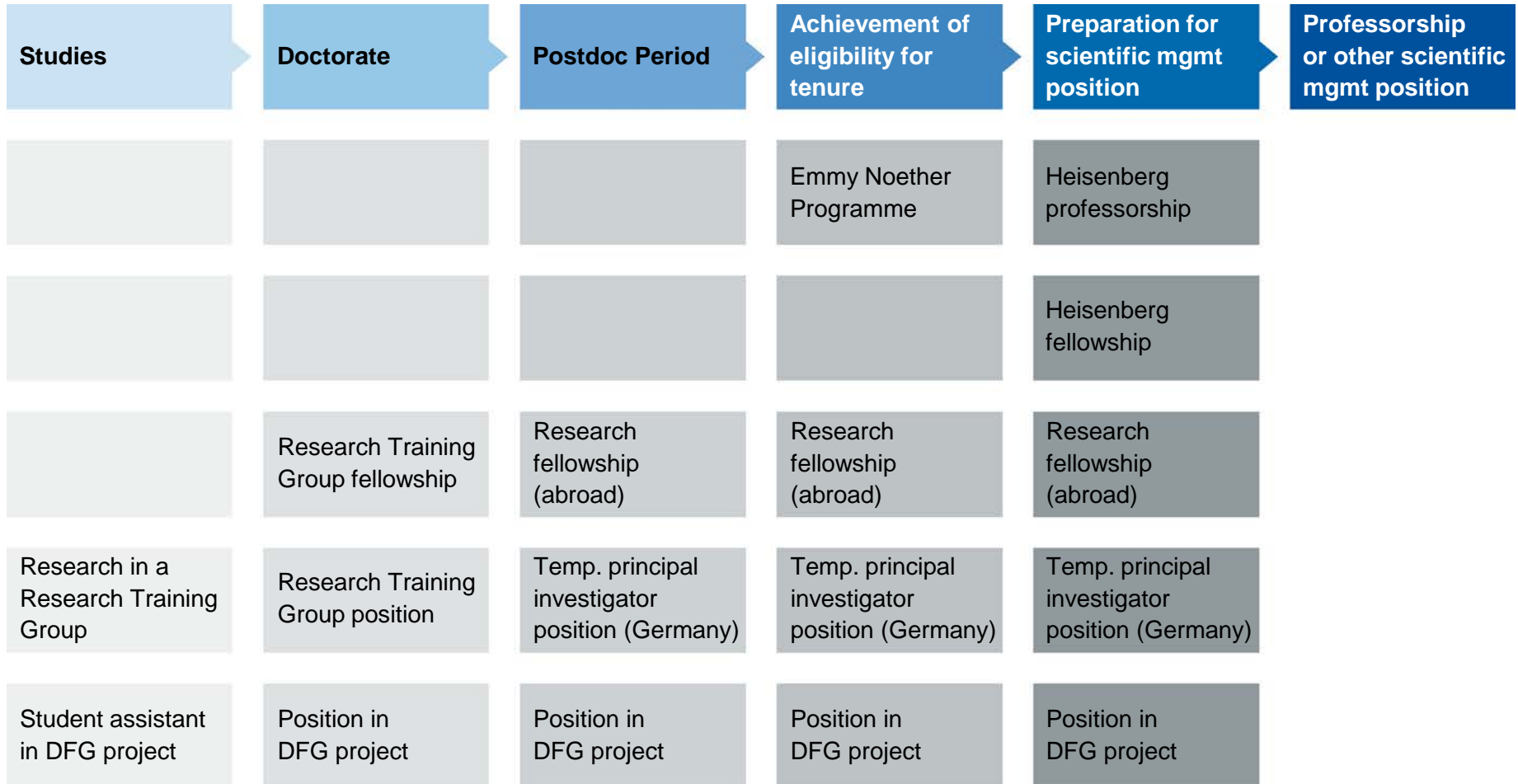
What we do: The DFG's objectives in funding top young talent

Programmes for each career stage



What we do: The DFG's objectives in funding top young talent

Offer researchers appropriate funding options at each career stage



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 university or several university locations.

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

Topics

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



Some guidelines to follow

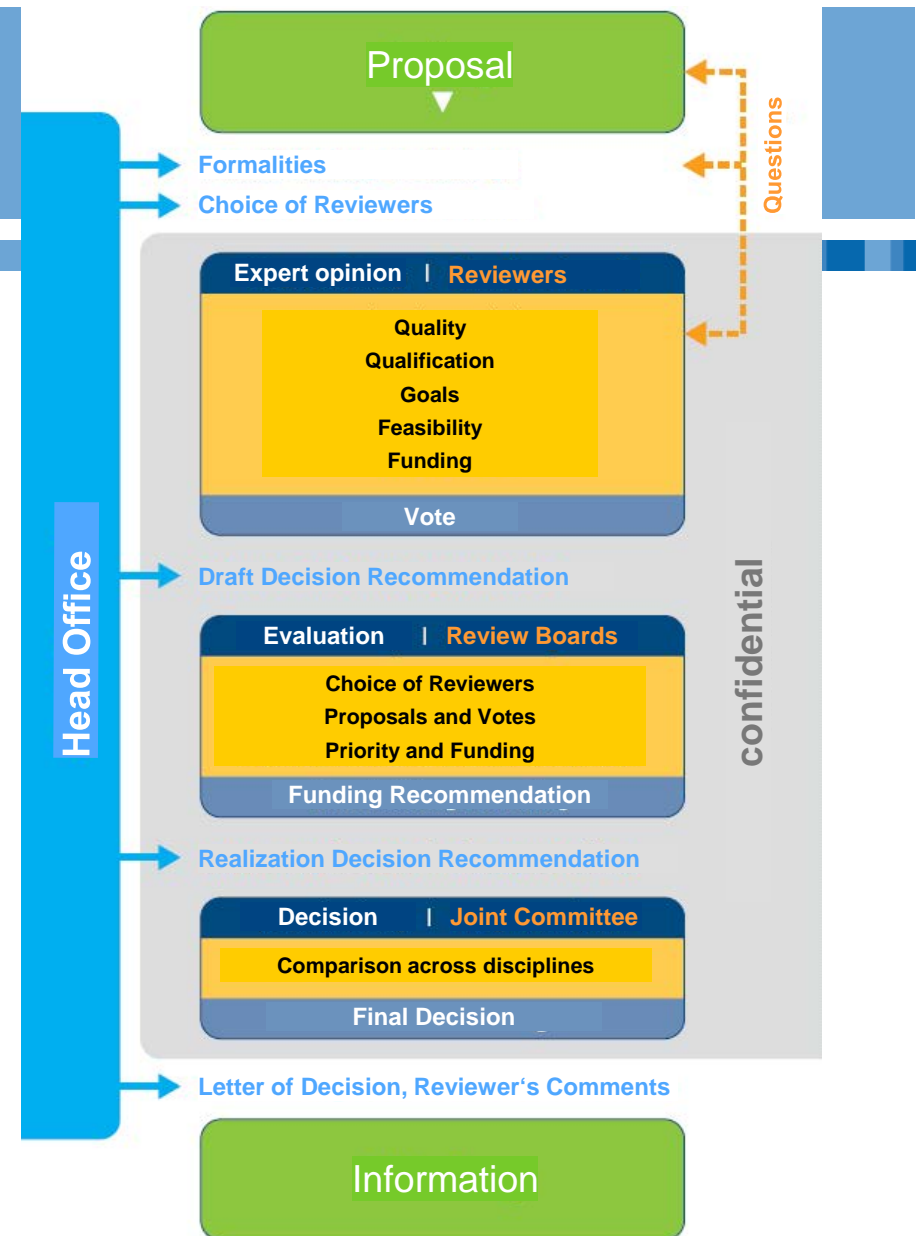
The review process

Criteria:

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

Not:

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

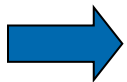


Some guidelines to follow

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 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

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)

NEW: full electronic application! (elan) → format has changed!

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):

- 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

Some 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 your goals and hypothesis
- the project should be novel and original – surprise the reviewer

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 literature in paragraph 3

Some guidelines to follow

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

Following the Guidelines (DFG-Merkblatt 54.01)

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

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
- 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

Some guidelines to follow

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

Following the Guidelines (DFG-Merkblatt 54.01)

3. The reference list: new rules for reference lists

- A maximum of **two publications per year** of proposal depicting project-specific **preliminary work** (e.g. six papers for three years)
- 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 five „personal highlights“ in your CV (no more!), not necessarily project-specific

Some guidelines to follow

Excursus: A scientists' original sins

This is Important!!!



Never Ever:

- neglect 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!

Some guidelines to follow

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

Following the Guidelines (DFG-Merkblatt 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 rough calculation!

Travel costs

Publication costs

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

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? (8)

Following the Guidelines (DFG-Merkblatt 54.01)

5. Prerequisites for carrying out the project

5.1 Your current position

5.2 First 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

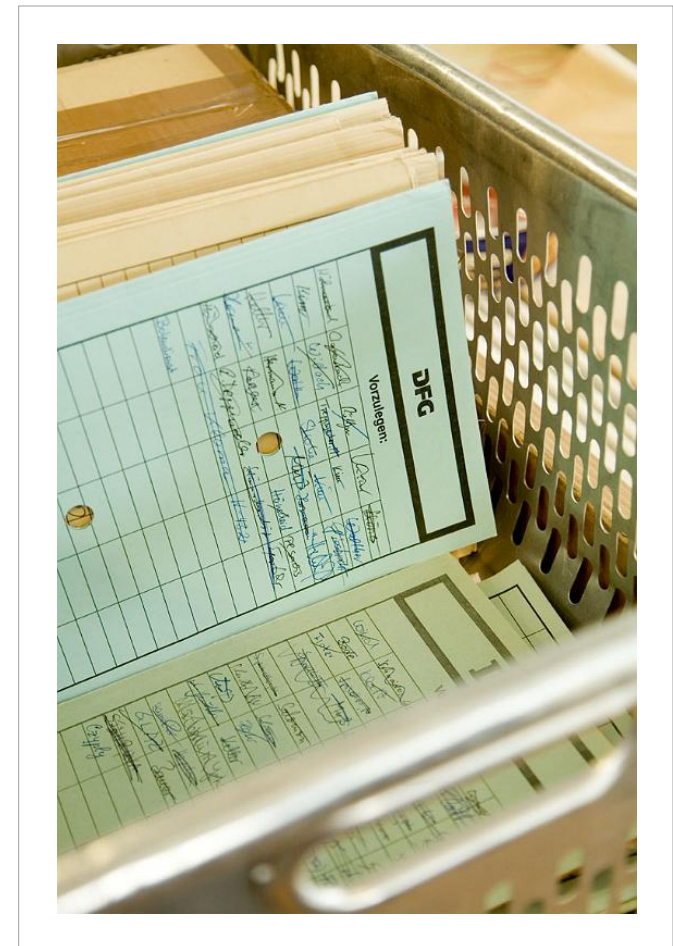
5.6 Other requirements

A reasonable input of institutional funding is expected!

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 necessary 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



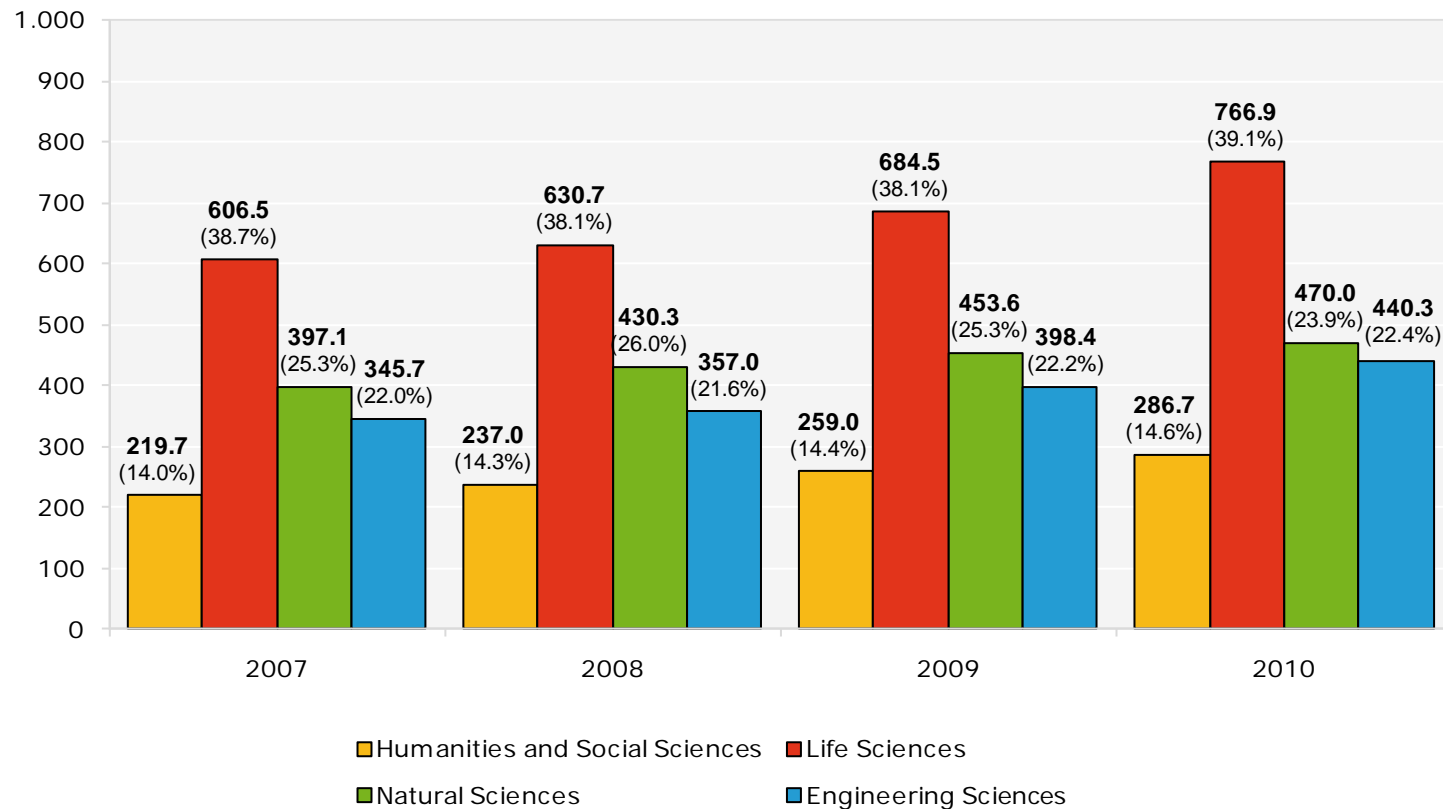
Topics

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



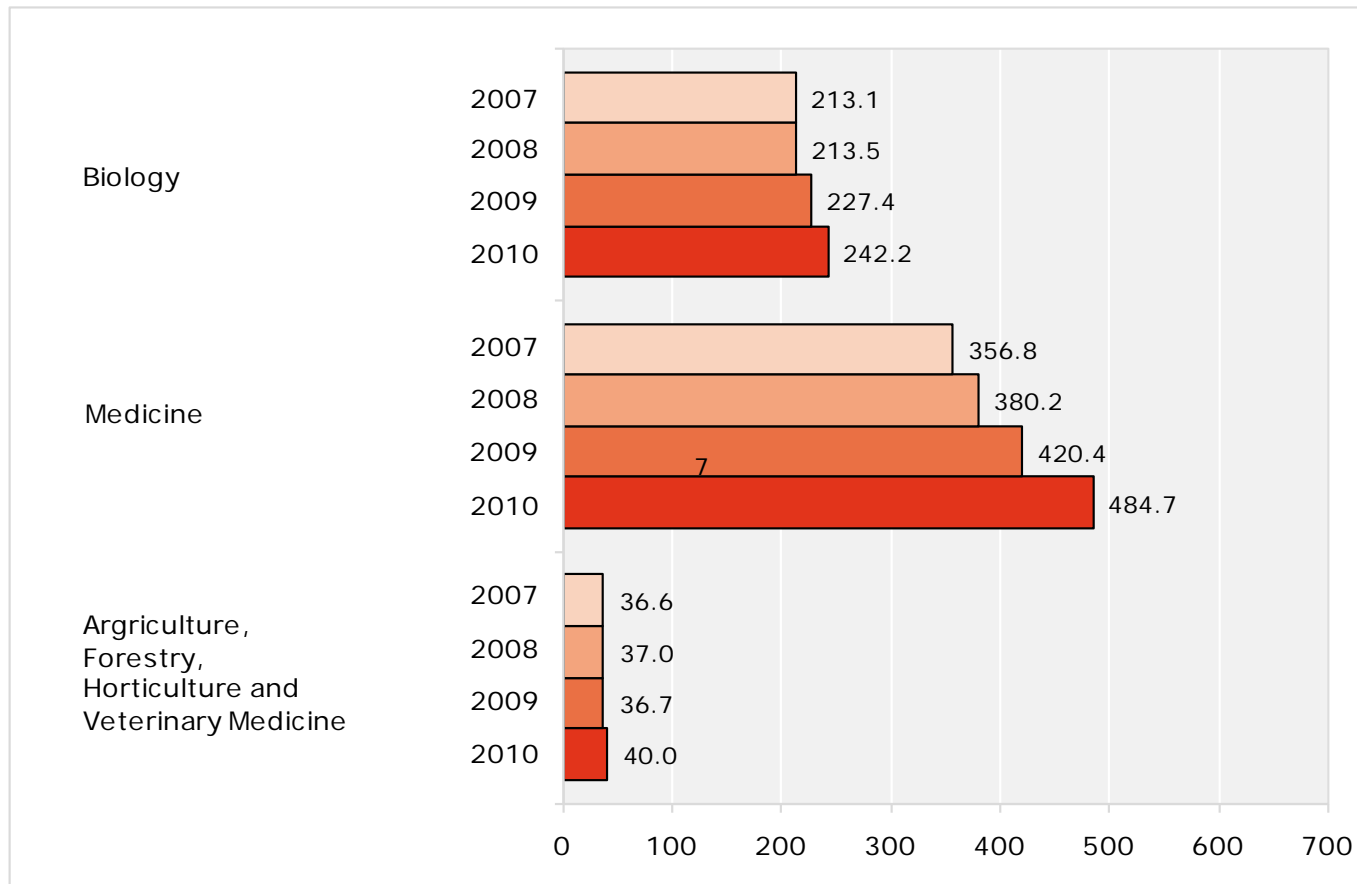
Total DFG funding 2007 to 2010

According to areas of science (Mio. Euro)



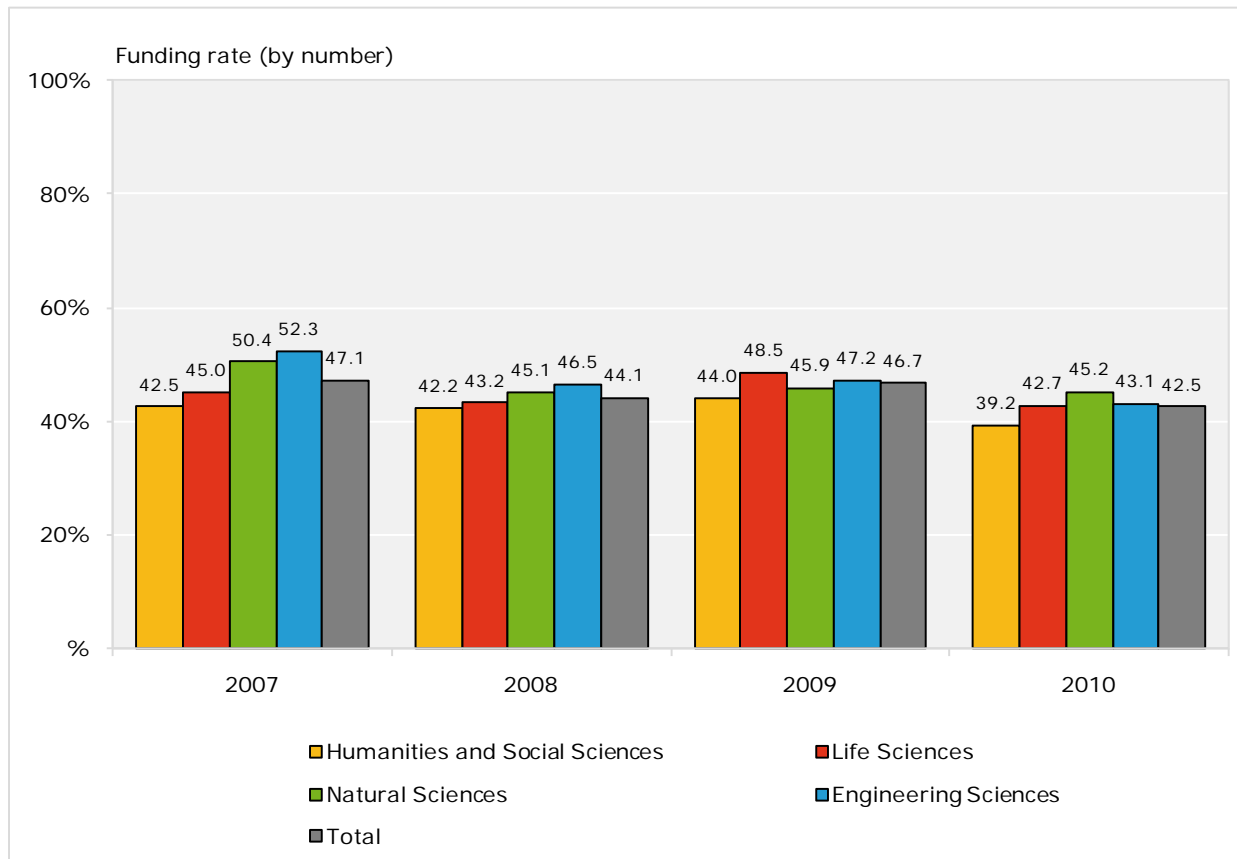
Based on: Individual grants and coordinated programmes (not including institutional strategies or graduate schools that cannot be classified to a particular specialist field). Increases are due, for example, to supplemental allowances for indirect project costs, introduced in 2007 for coordinated programmes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

DFG Funding in the Life Sciences 2007 to 2010 in Mio. Euro



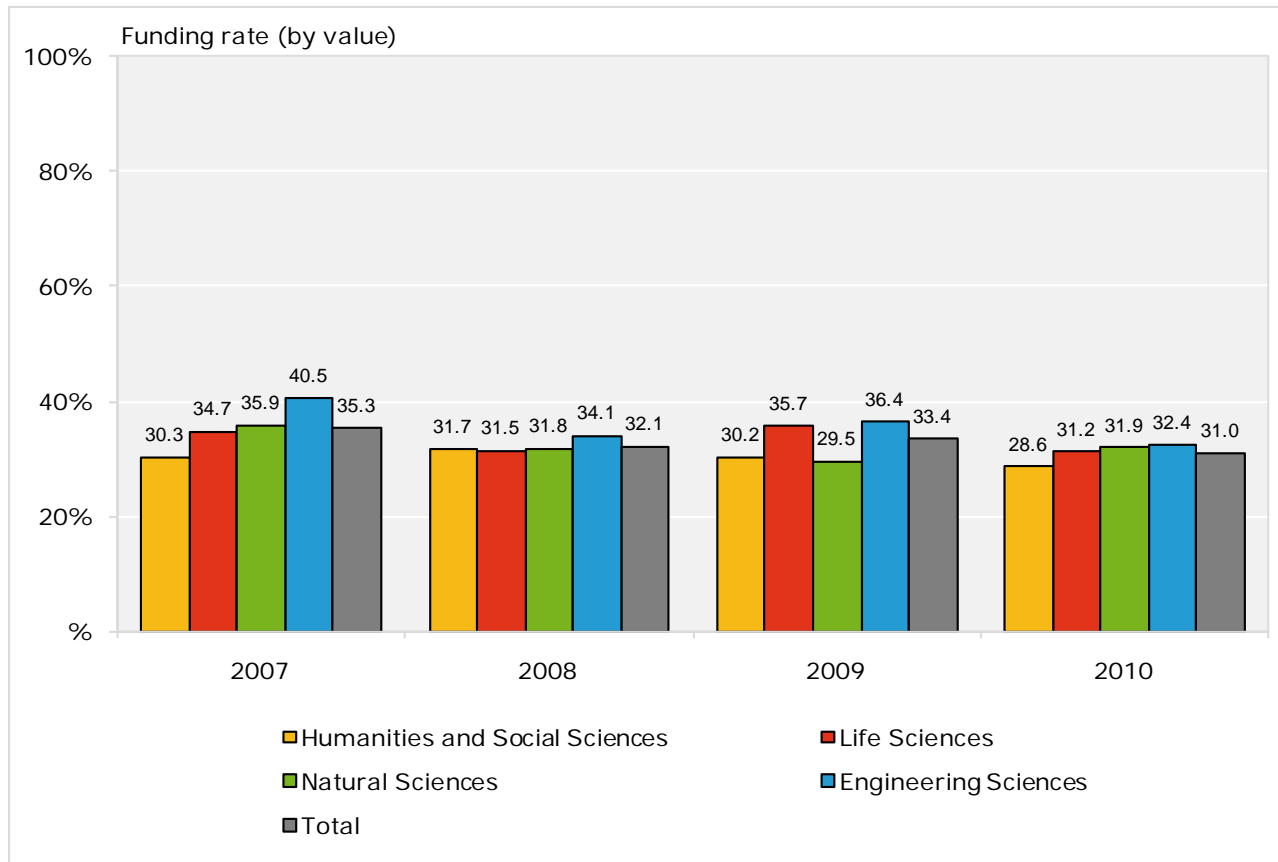
Funding rates for Individual Grants

Relative to total numbers of applications 2007 to 2010



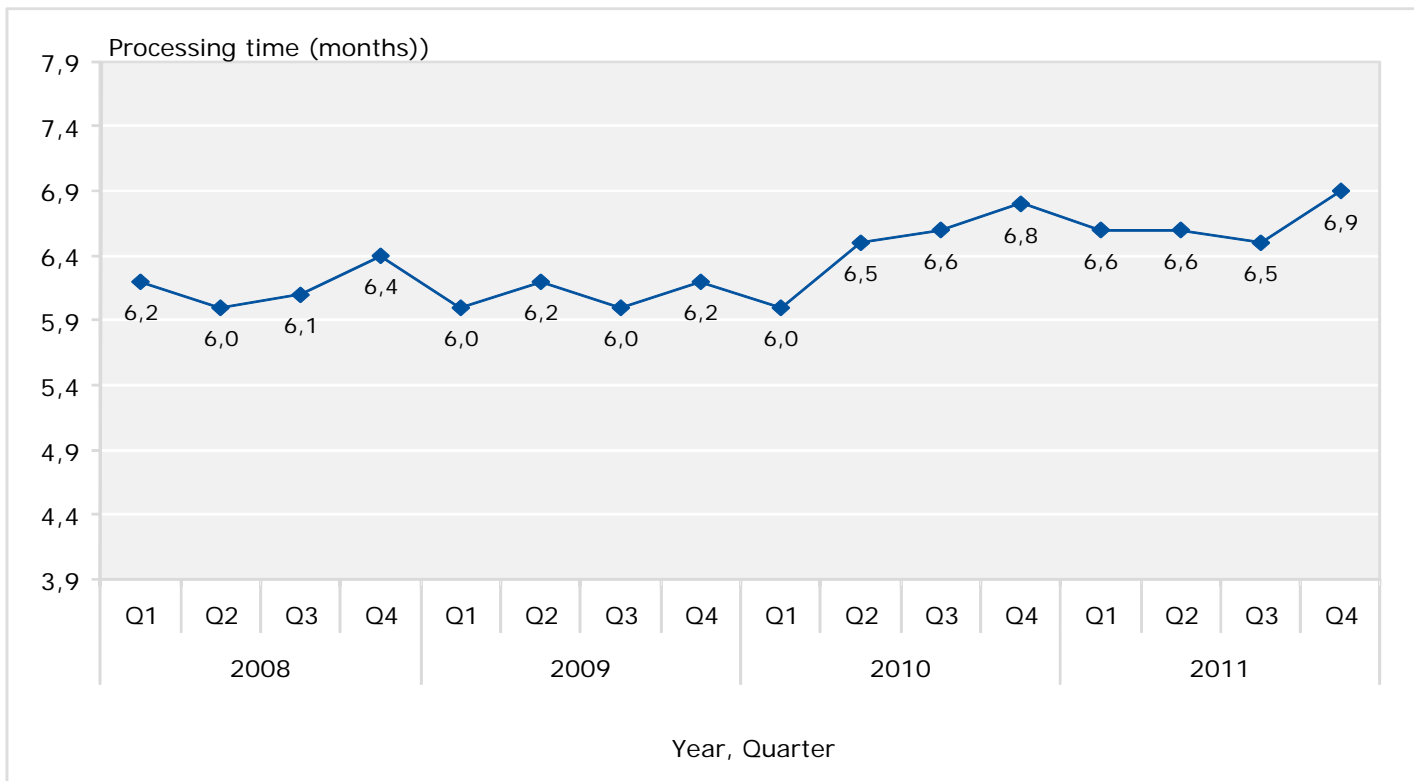
Funding rates for Individual Grants 2007 bis 2010

Relative to funding volume applied for



Processing time for Individual Grants

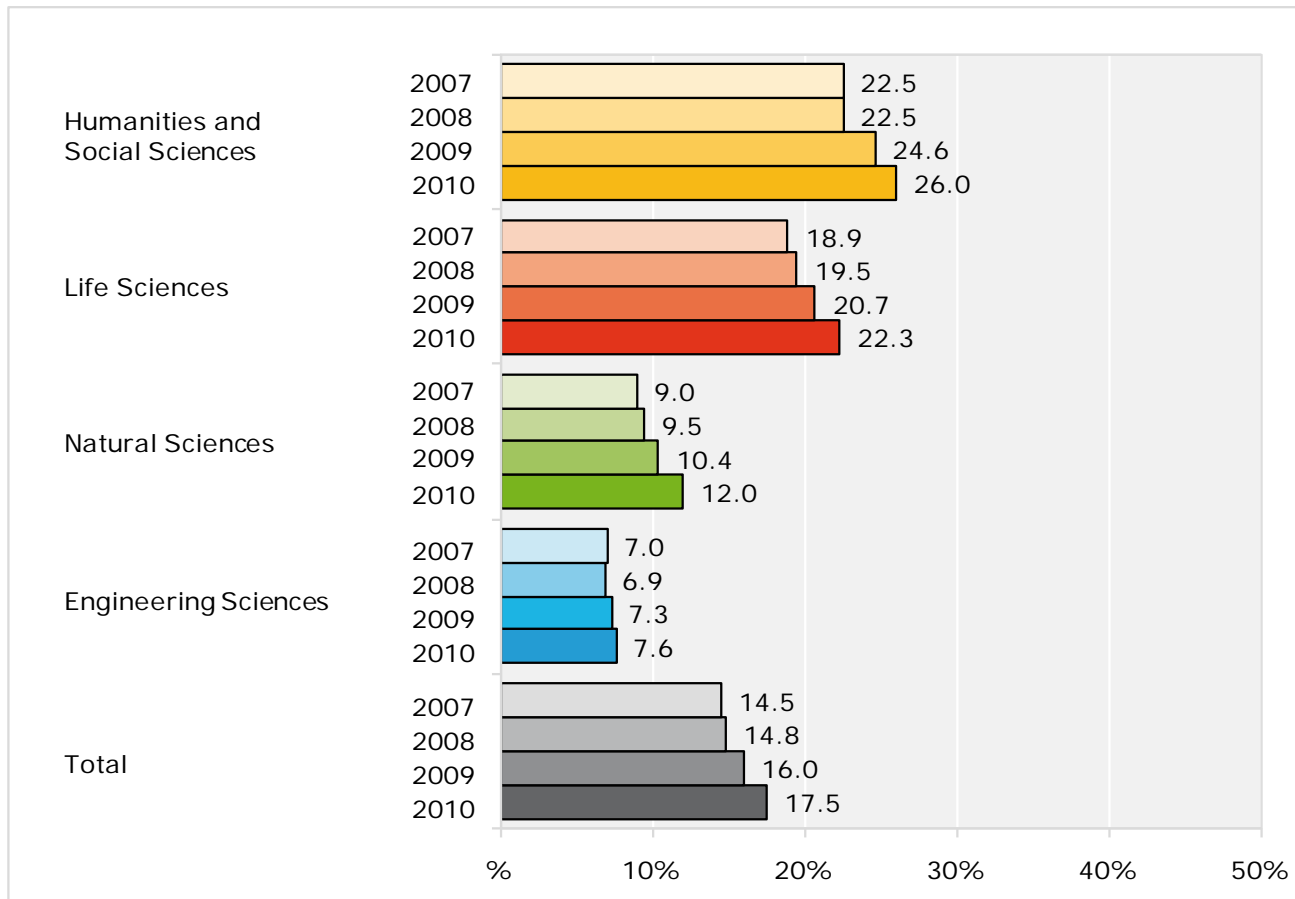
(submission date to decision date, months)



Average in life sciences (2011): 6.2 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!

andreas.strecker@dfg.de

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/

Criteria for successful DFG proposals/ Dr. Andreas Strecker
Tübingen, January 25, 2012



DFG

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.”