



DFG

# „CMFI meets DFG – Writing a proposal: programs and advice to foster your career “

University of Tübingen, February 29, 2024

Andreas Strecker, Programme Director German Research Foundation

# Agenda

- 1. Some General Information on the DFG**
- 2. Funding Instruments for (Early Career) Researchers**
- 3. Do's and Don'ts of Grant Writing**
- 4. Funding of Coordinated Grants**

# Agenda

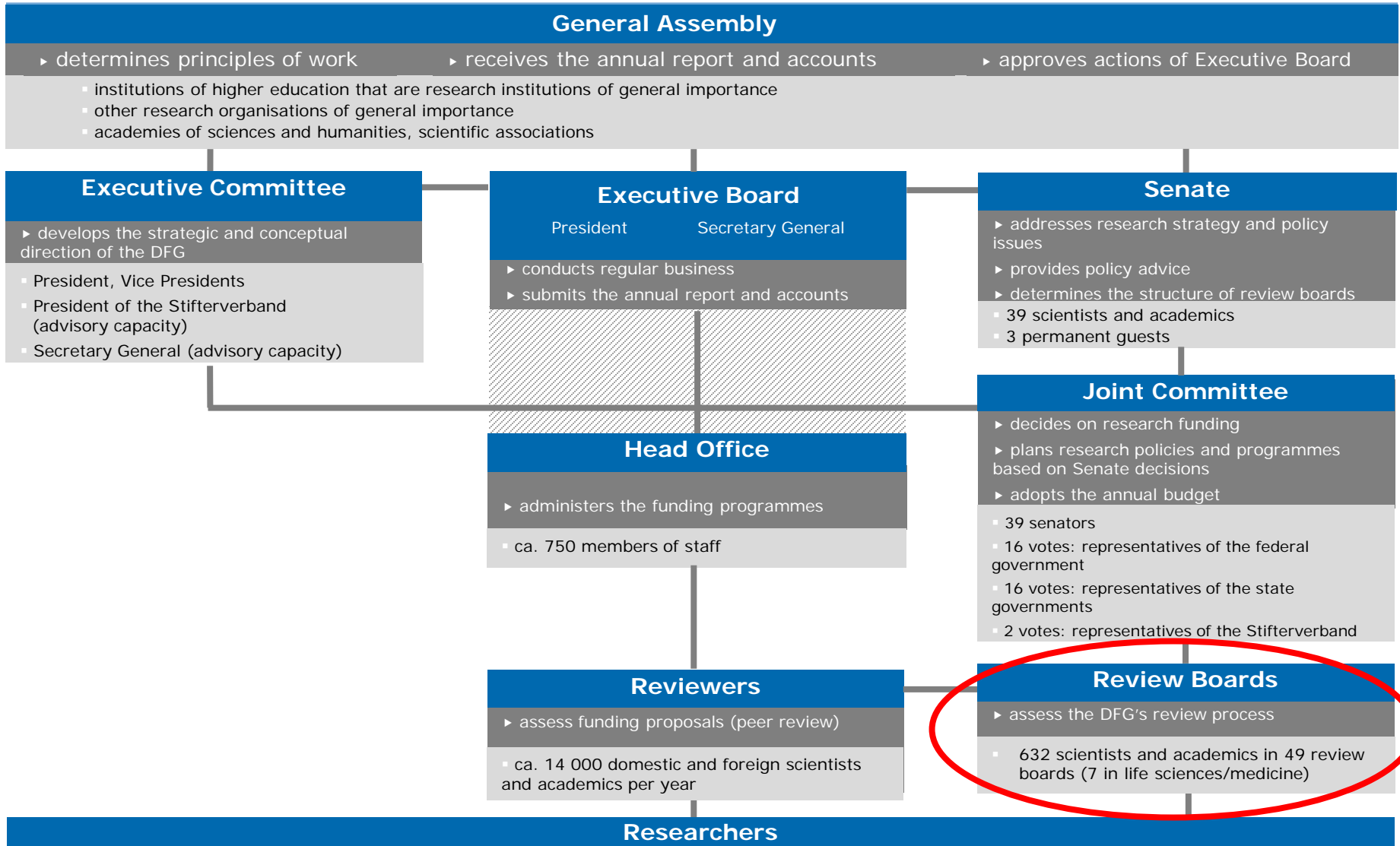
1. **Some General Information on the DFG**
2. Funding Instruments for (Early Career) Researchers
3. Do's and Don'ts of Grant Writing
4. Funding of Coordinated Grants

# 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 (70)
  - non-university research institutions (13)
  - German academies of sciences and humanities (9)
  - scientific associations (6)
- ▶ [DFG, German Research Foundation - DFG Member Organisations](#)

# How is the DFG structured?

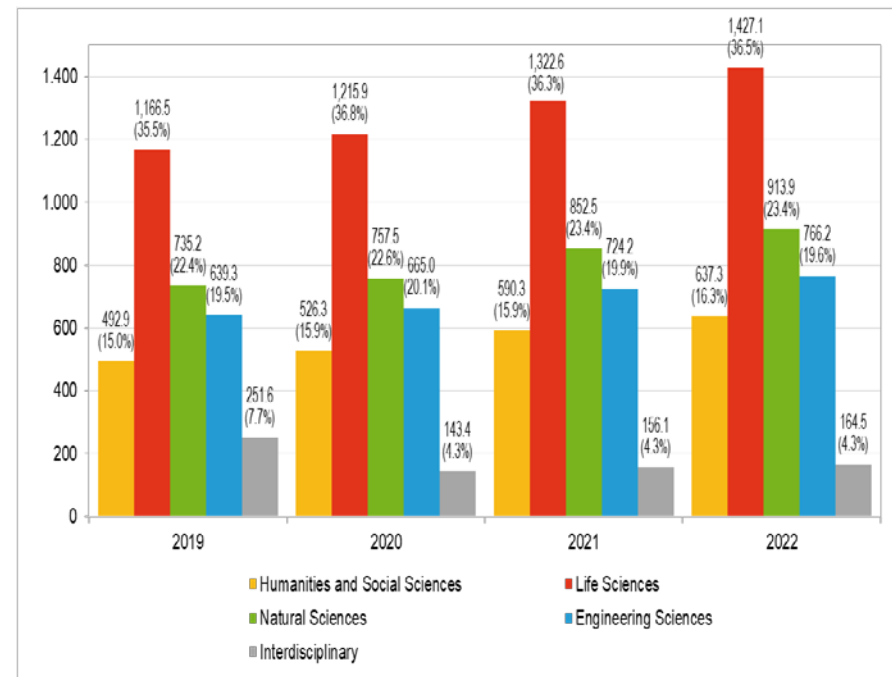


# The DFG's Mission Statement

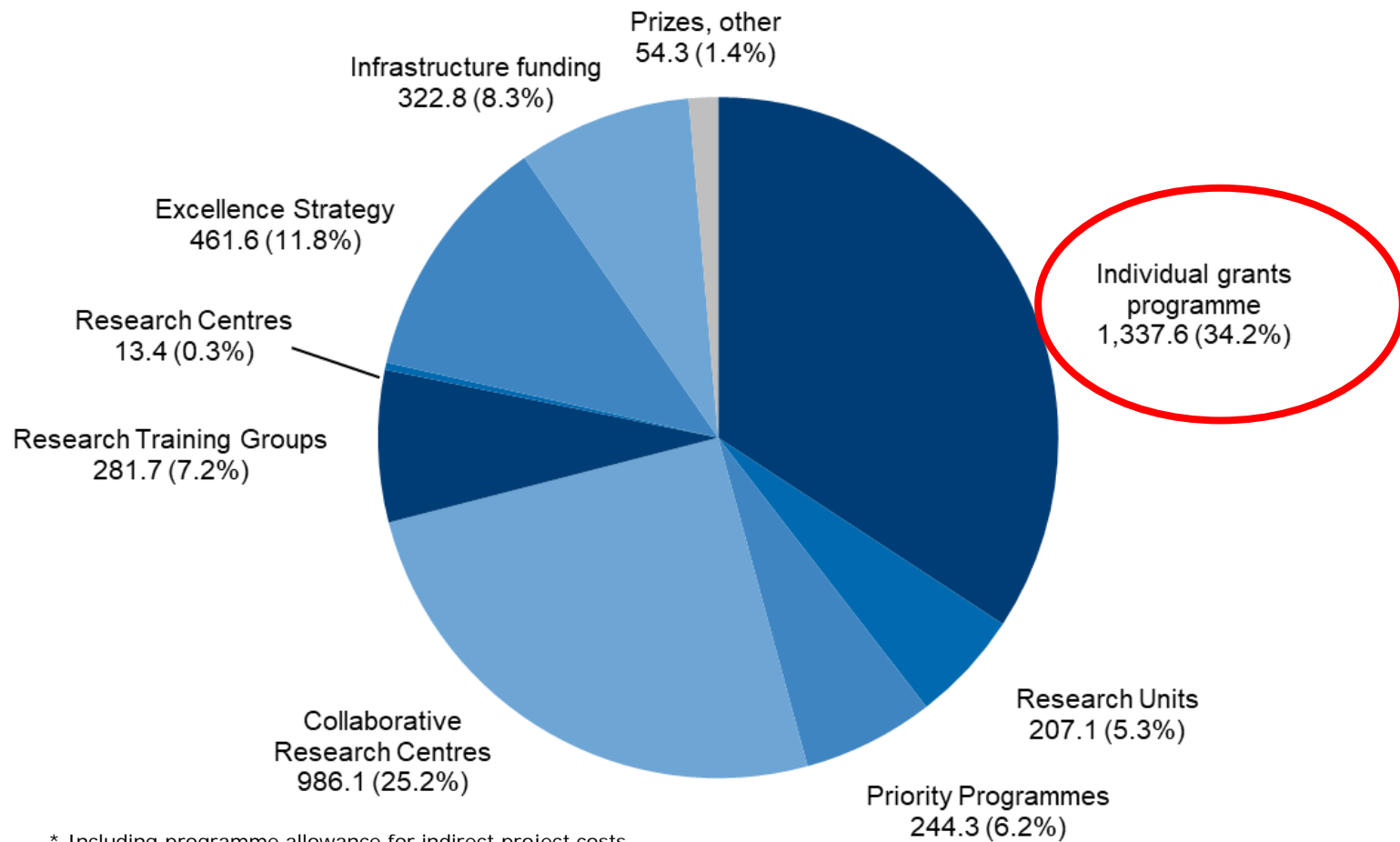
## The DFG

- ▶ 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
- ▶ encourages the **advancement and training of early career researchers**

## Funding 2019-22, by scientific discipline

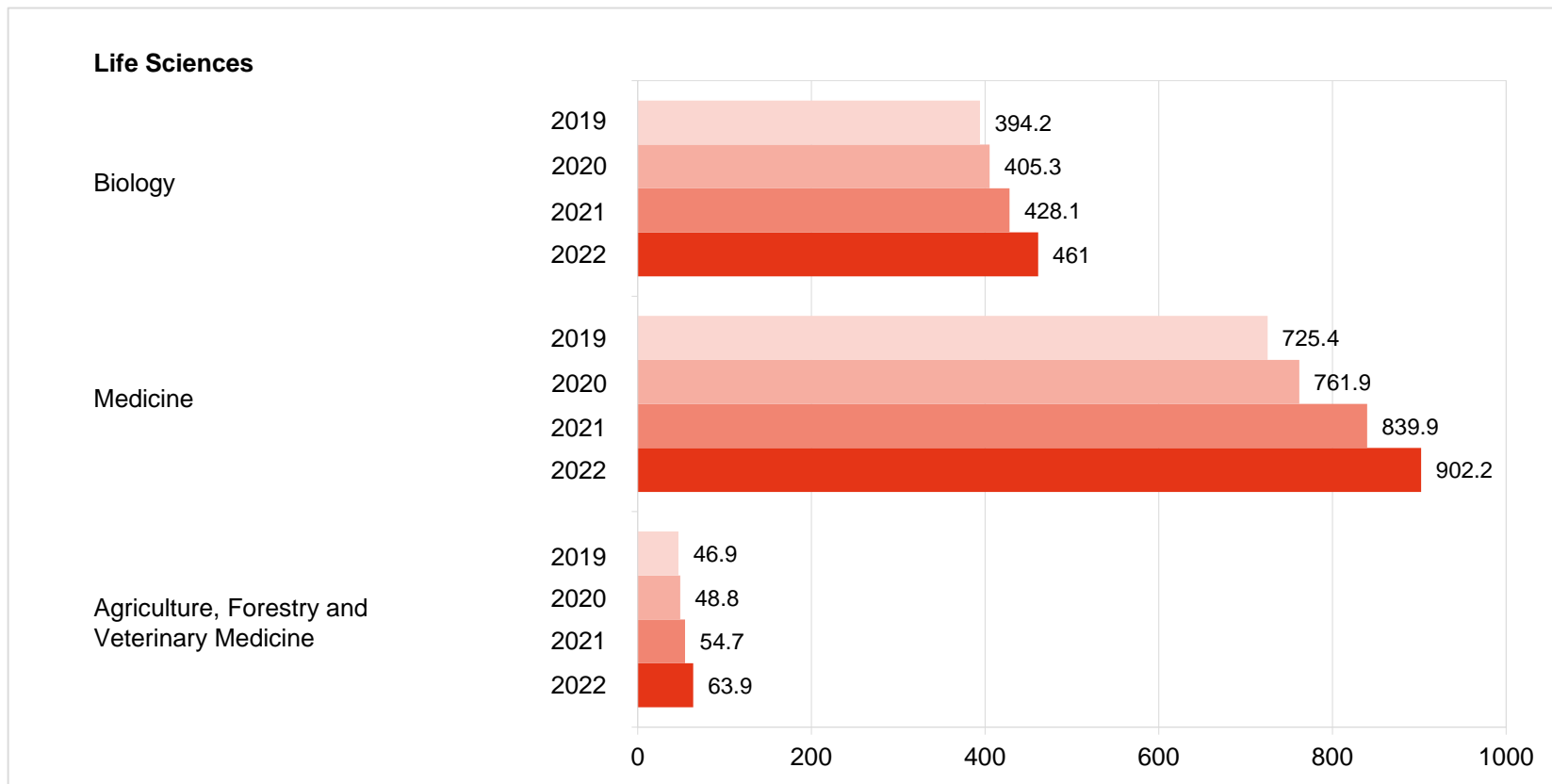


# Amount of research funding\* awarded by programme for 2022 (in €m and %, total budget: ~4 bn. €)



\* Including programme allowance for indirect project costs

# Amount of research funding awarded by research area for each calendar year 2019 to 2022 (in €m)





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# DFG Funding Opportunities

## Eligibility



### Researchers

- ▶ who have completed their scientific training, i.e. who hold a **doctorate** and
  - ▶ who would like to work **in Germany**
  - ▶ of **any age**
  - ▶ conducting **basic research**
- 
- ▶ **Please note: eligibility to apply for proposals is not restricted to DFG member institutions; if in doubt, contact the head office before applying!**

# DFG Funding Opportunities

## Funding Principles

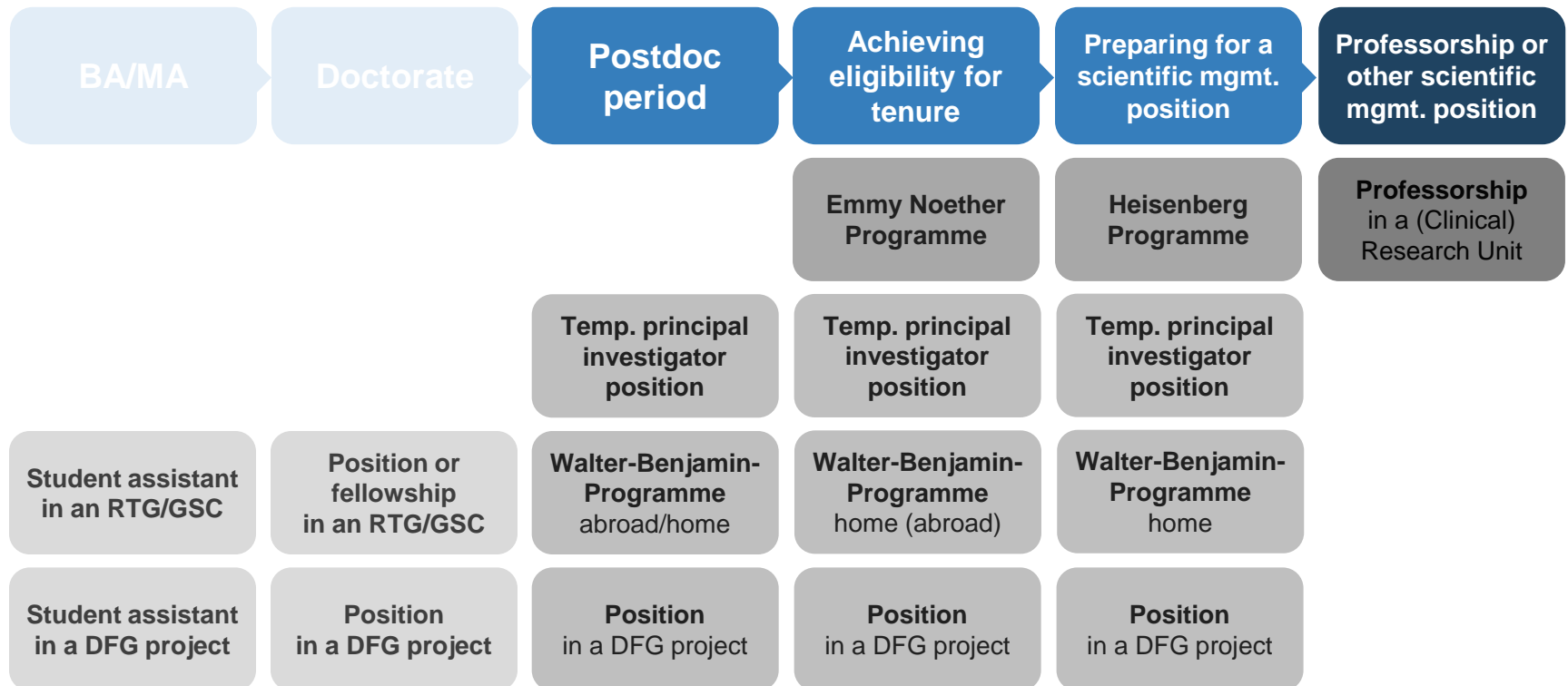
- ▶ **Research topic:** open, bottom-up\*
- ▶ **Type of research:** basic research in any field of science and the humanities
- ▶ **Note:** individual career phases and family-related career breaks are considered
- ▶ **Deadlines:** none\*



\* Exceptions: Priority Programmes, international activities, workshops for early career investigators

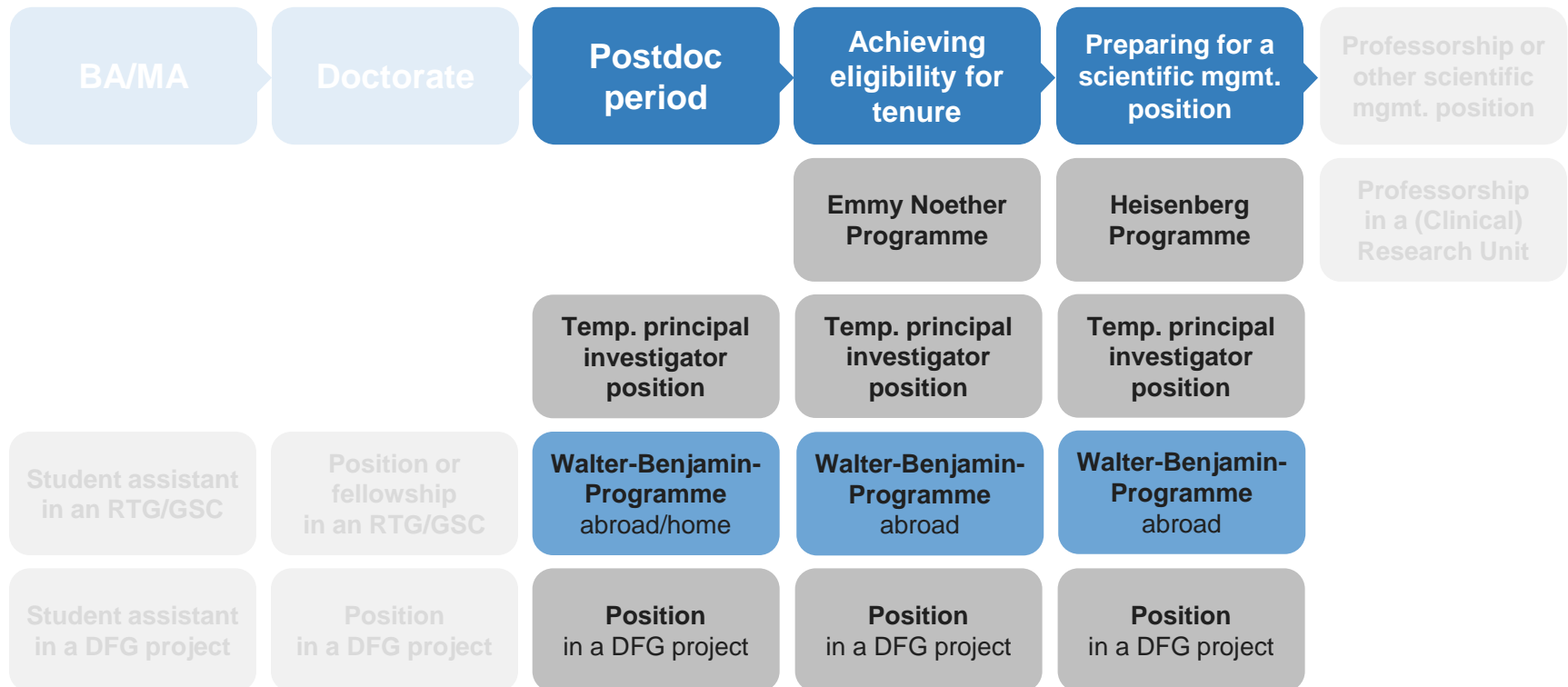
# DFG Funding Opportunities

## For early career researchers



# DFG Funding Opportunities

## For early career researchers



# DFG Funding Opportunities

## Walter-Benjamin-Programme

- ▶ Fellowships/positions for **postdoctoral** researchers for a research project **abroad** or at **home** to learn new methods or start in a new field of research

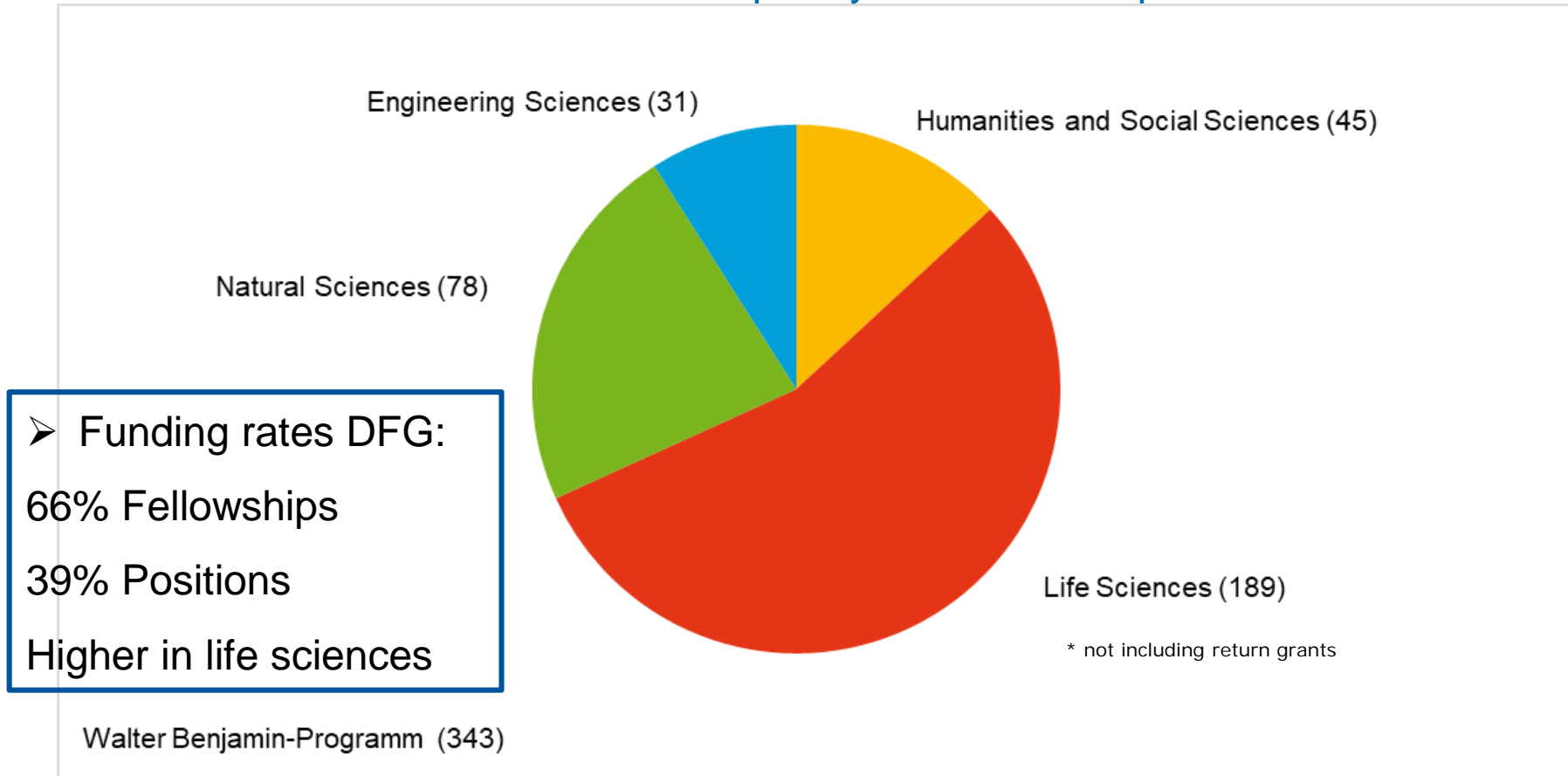
### Choice of:

- ▶ **Fellowship:** Go abroad, training aspect is essential; learn new methods not established in Germany
- ▶ **Position:** Stay in Germany, a post-doctoral position is financed, project-related costs covered by hosting lab → extend “unfinished” PhD work, also for applicants with limited mobility
- ▶ **Rotation position:** clinical scientists are relieved from clinical duties to allow for protected research time
- ▶ Possibility of max. 6-months return grant for abroad option



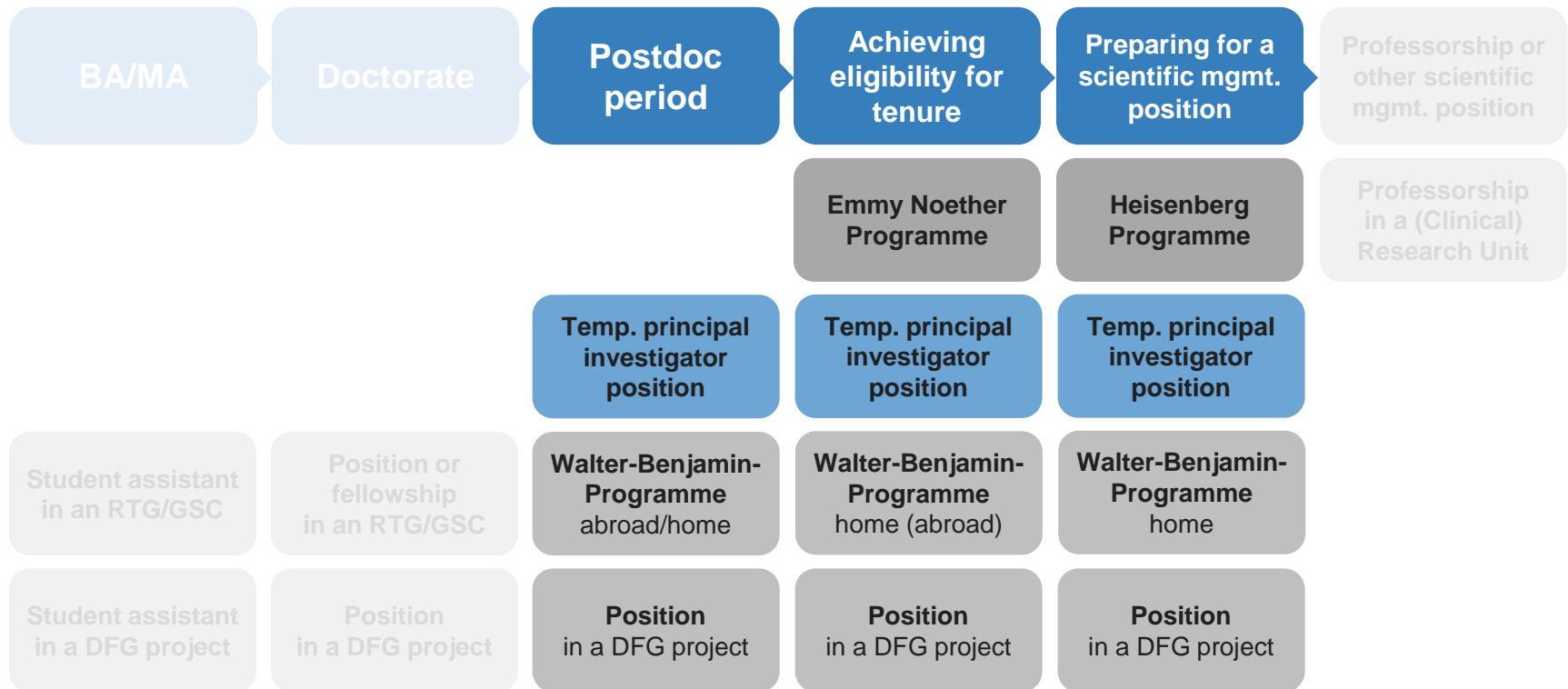
# DFG Funding Opportunities Walter-Benjamin-Program

## Number of new research fellowships\* by scientific discipline 2022



# DFG Funding Opportunities

## For early career researchers





# DFG Funding Opportunities – Individual Grant Programme

## Incl. Temporary Position for Principal Investigators (*Eigene Stelle*)

- ▶ Offers an opportunity to pursue an individual research project in Germany
- ▶ Allows flexibility
- ▶ No deadlines
- ▶ Funding: staff, consumables, travel, instrumentation, publication funding
- ▶ Typically three-years of funding, extendable
- ▶ Additional module: **Temporary position for principal investigator**



# DFG Funding Opportunities

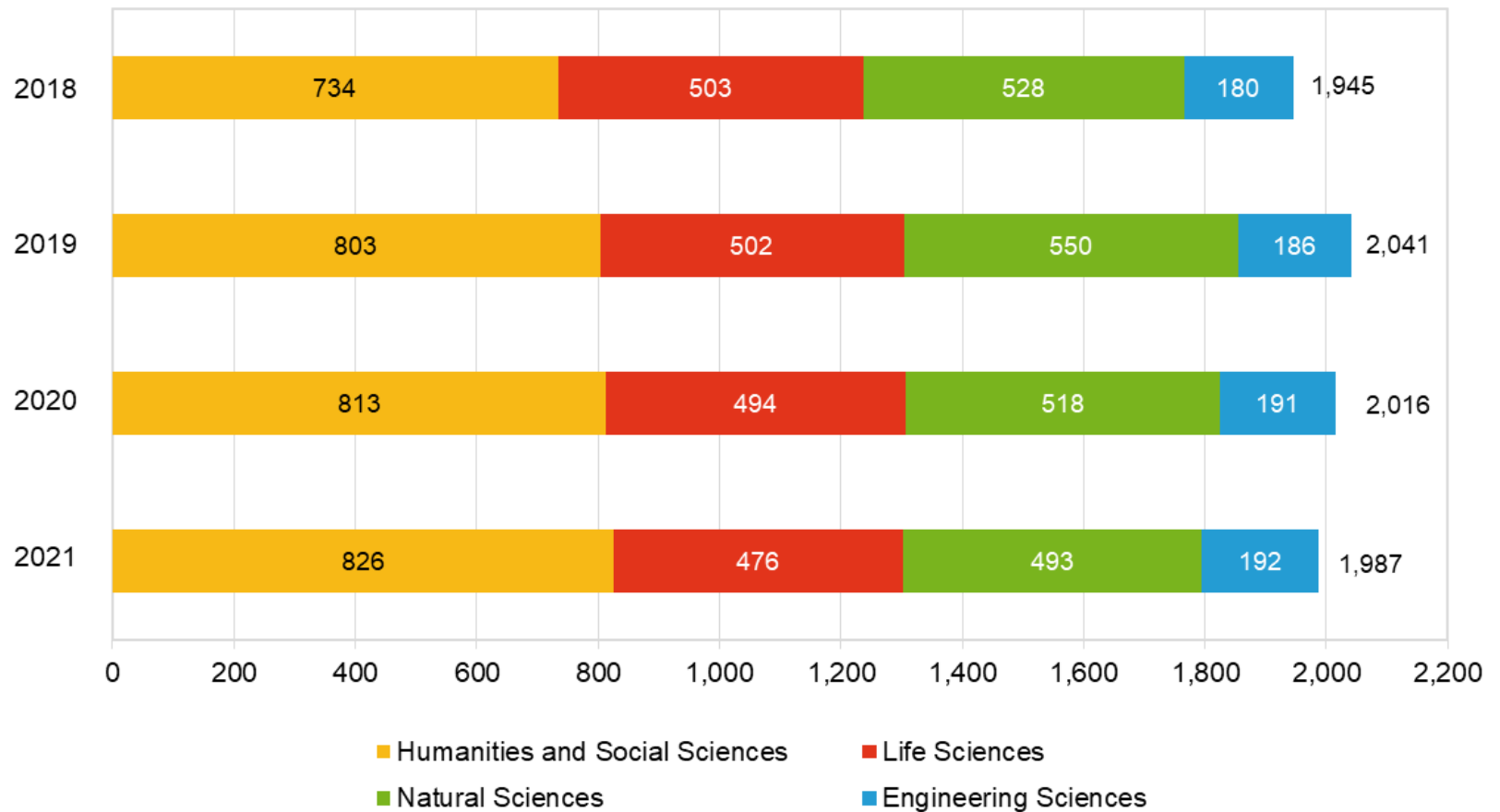
## Temporary Position for Principal Investigators (*Eigene Stelle*)



- ▶ For **postdoctoral** researchers
- ▶ Research in **Germany** → the host institution becomes the employer
- ▶ **Duration** of generally up to 3 years, extendable
- ▶ **Position** (E13 to E14 TVöD/TV-L) + project funds
- ▶ **Full-time commitment** to conduct the project mandatory. No other funding by the DFG or any other funders can be received!
- ▶ **Documented scientific independence** according to career stage often required by study section (not a set condition)

# DFG Funding Opportunities

## Temporary Position for PI: New Awards by discipline 2019 to 2022



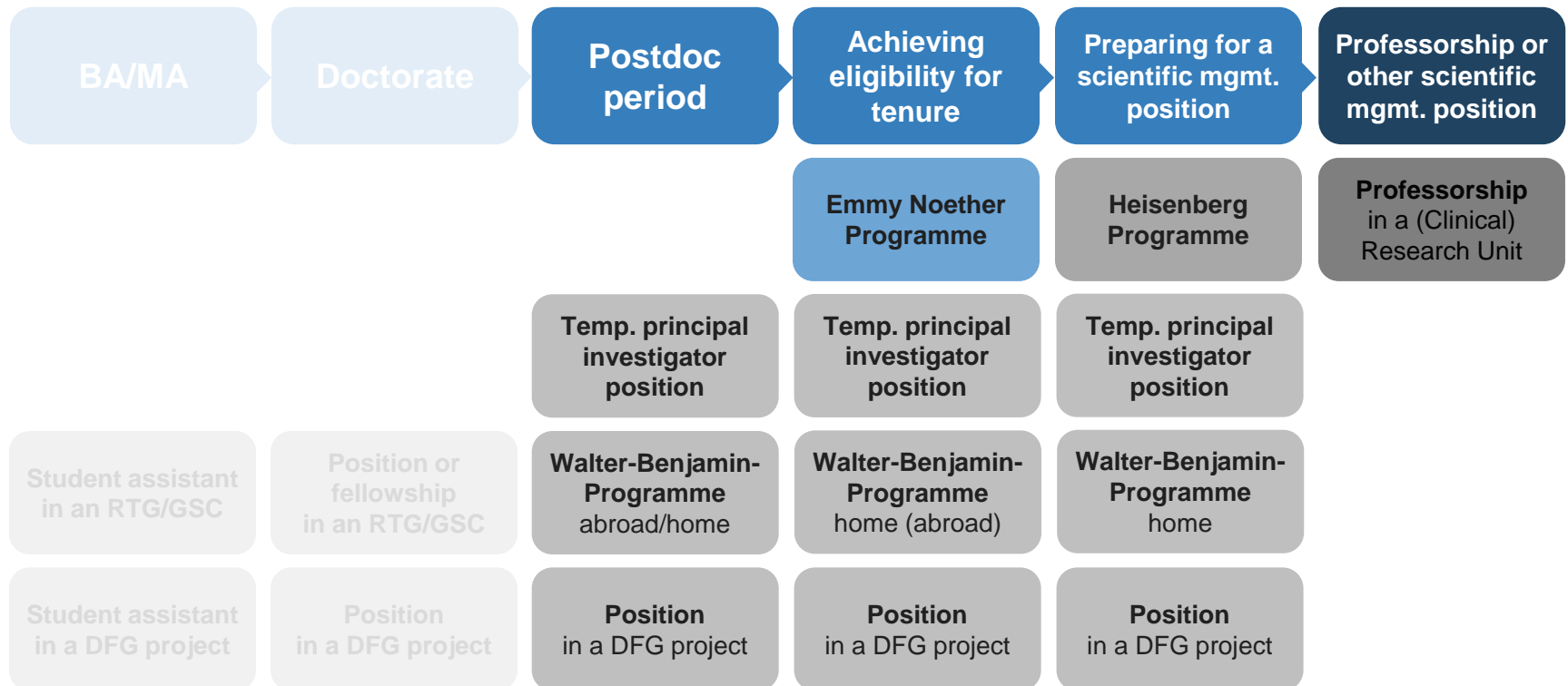
# Temporary Substitutes for Clinicians

## Protected Research Time

- ▶ **Clinicians may be given protected research time free of clinical duties when conducting a project**
  - The DFG will grant funding for personnel that takes over clinical duties whilst staff involved in the project conducts the work
  - Can be applied for in all DFG funding instruments
  - Can be partially applied for, as part time or for a percentile of the project duration, e.g. 12 months
  - **Details:** See guidelines „Module Temporary Substitutes for Clinicians“ (*Modulmerkblatt Rotationsstelle*)

# DFG Funding Opportunities

## For early career researchers



# DFG Funding Opportunities

## Emmy Noether Programme

### Emmy Noether Programme

- ▶ Path to early **academic independence**
- ▶ Eligibility for professorial appointment by leading own **independent junior research group**



### Formal requirements

- ▶ Postdoctoral **research experience** of at least 2 and max. 4 years (medicine: up to 6 years), +2/1 years per child ♀/♂
- ▶ Substantial **international** research experience required

# DFG Funding Opportunities

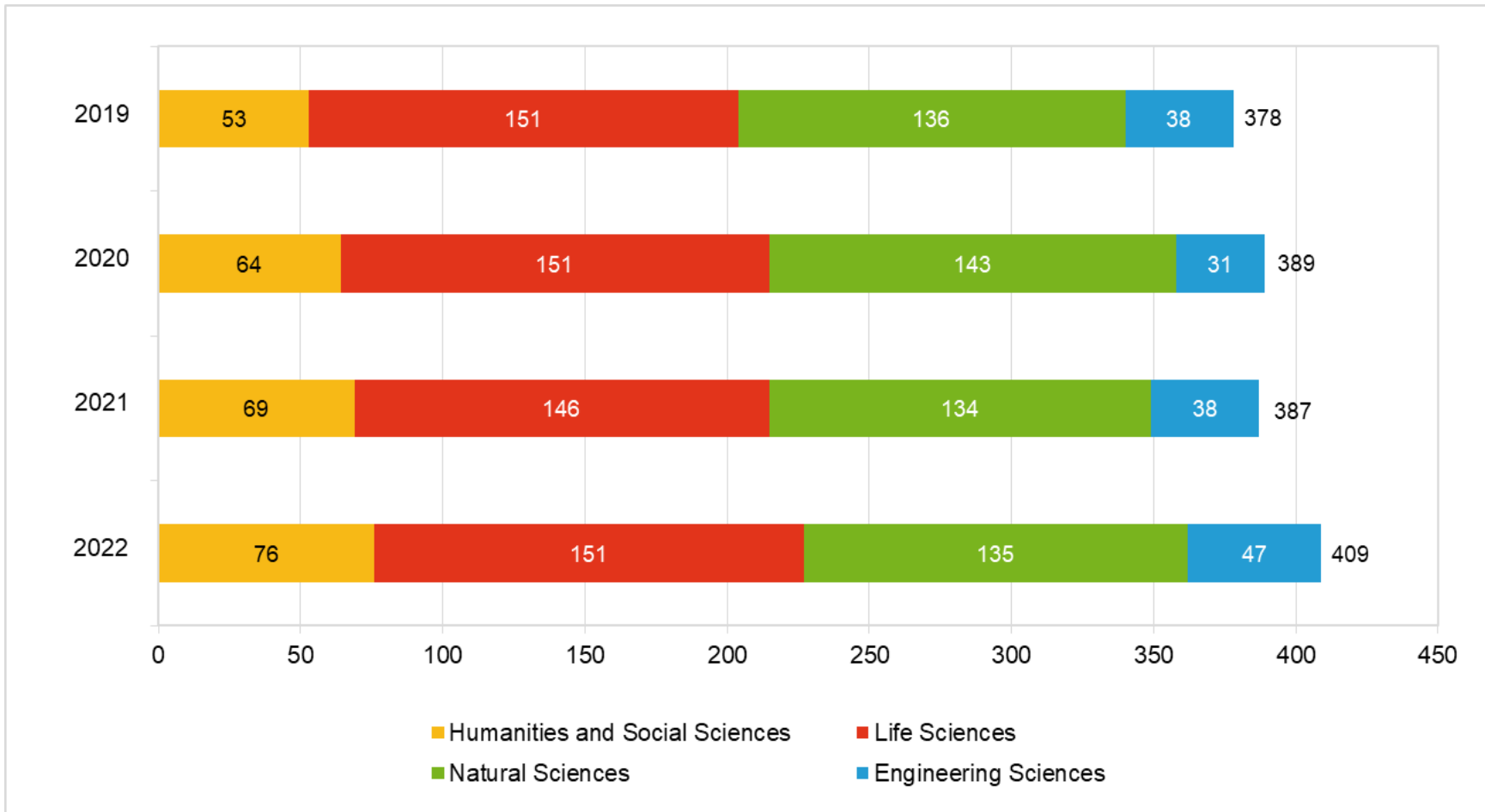
## Emmy Noether Programme



- ▶ For excellently qualified **postdoctoral** researchers
- ▶ Research in **Germany** → host institution becomes the employer
- ▶ **Duration** of generally 6 years
- ▶ **Position** (E15) + project funds – staff, consumables, equipment, experimental animals, travel...
- ▶ Position for temporary substitutes for **clinicians**

# DFG Funding Opportunities

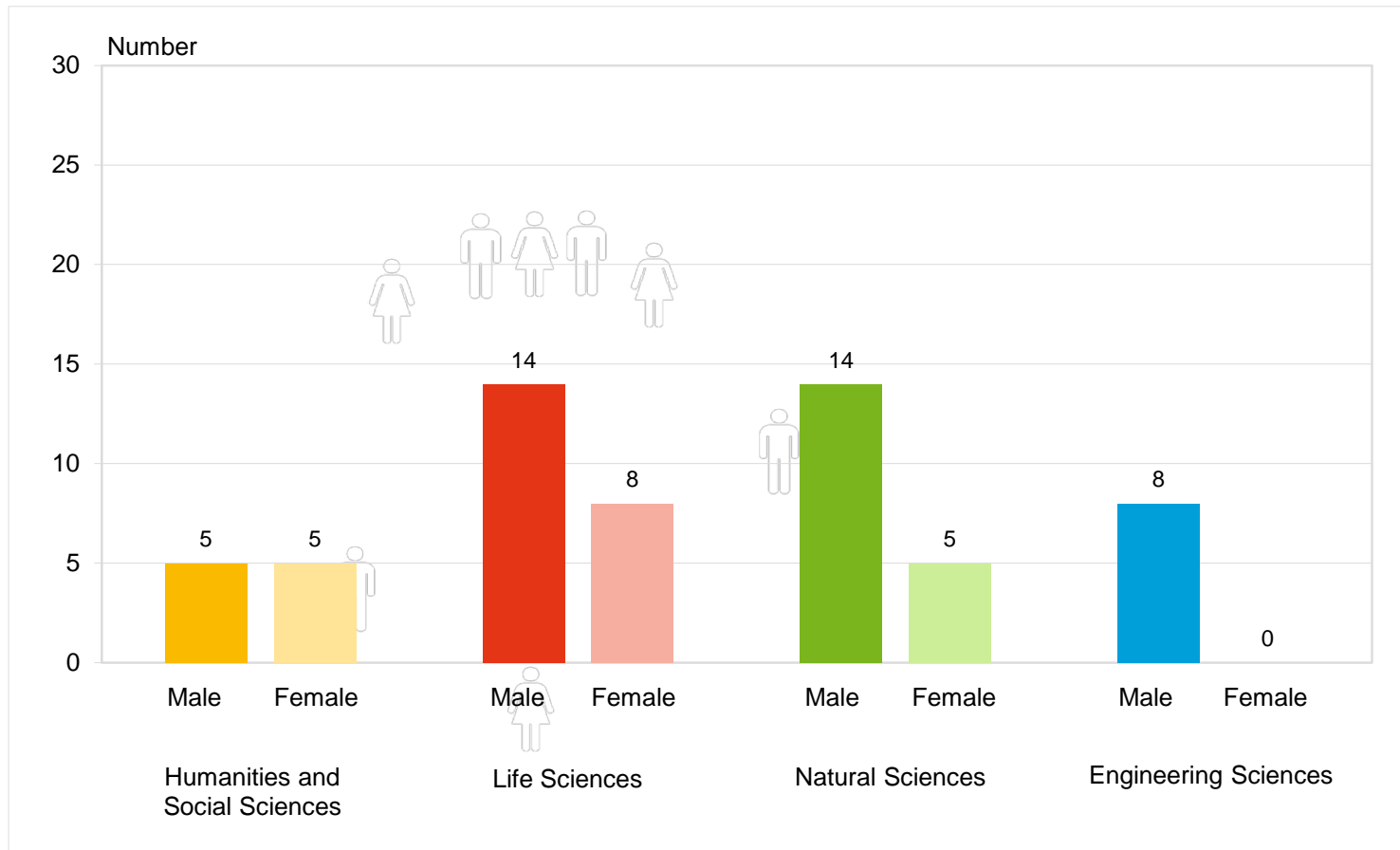
## ENP –New & Ongoing Groups by Scientific Discipline 2019 to 2022





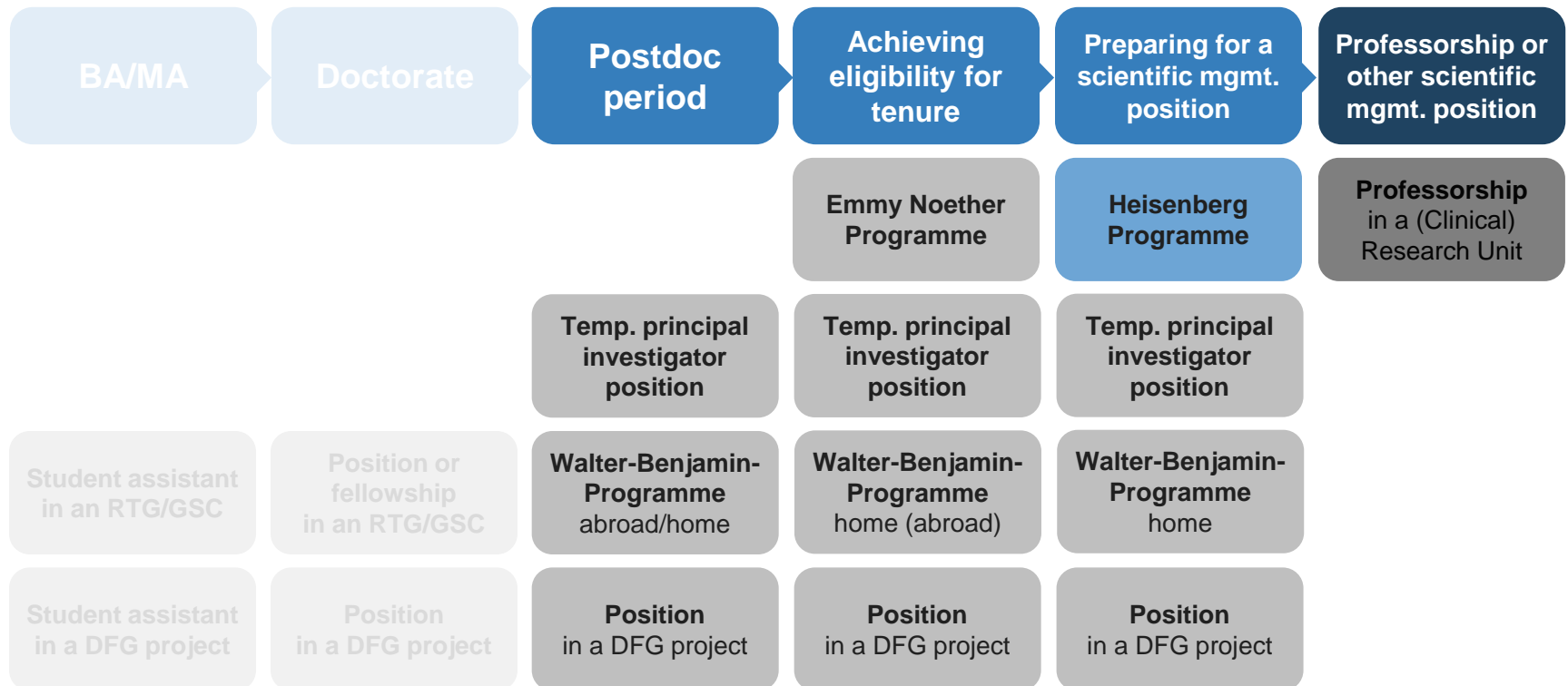
# DFG Funding Opportunities

## ENP: New Proposals Approved in 2018, by Scientific Discipline + Gender



# DFG Funding Opportunities

## For early career researchers



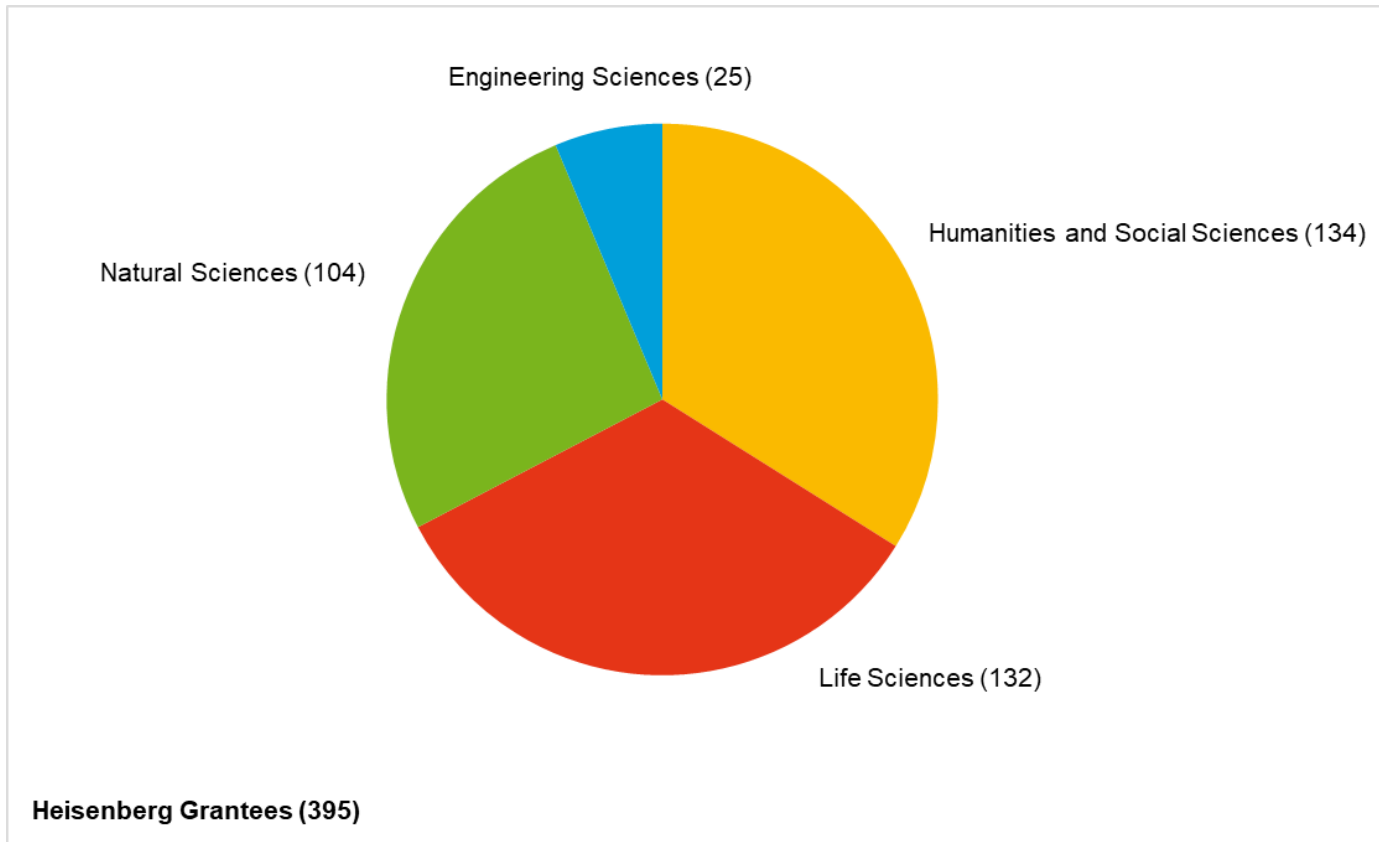
# DFG Funding Opportunities

## Heisenberg Programme

- ▶ For researchers eligible for **professorial appointment**
- ▶ **Duration** of max. 5 years
- ▶ Flexible **type of funding**
  - Fellowship
  - Position E-15 TVöD/TV-L
  - Position for temporary substitutes for clinicians
  - Professorship W2 or W3 → host university must establish permanent professorship
- ▶ Flexible **research funds**: € 12,000
- ▶ Fellowship and positions may be combined with research grant proposal
- ▶ Application for the Heisenberg Programme, decision on type of funding **after** approval

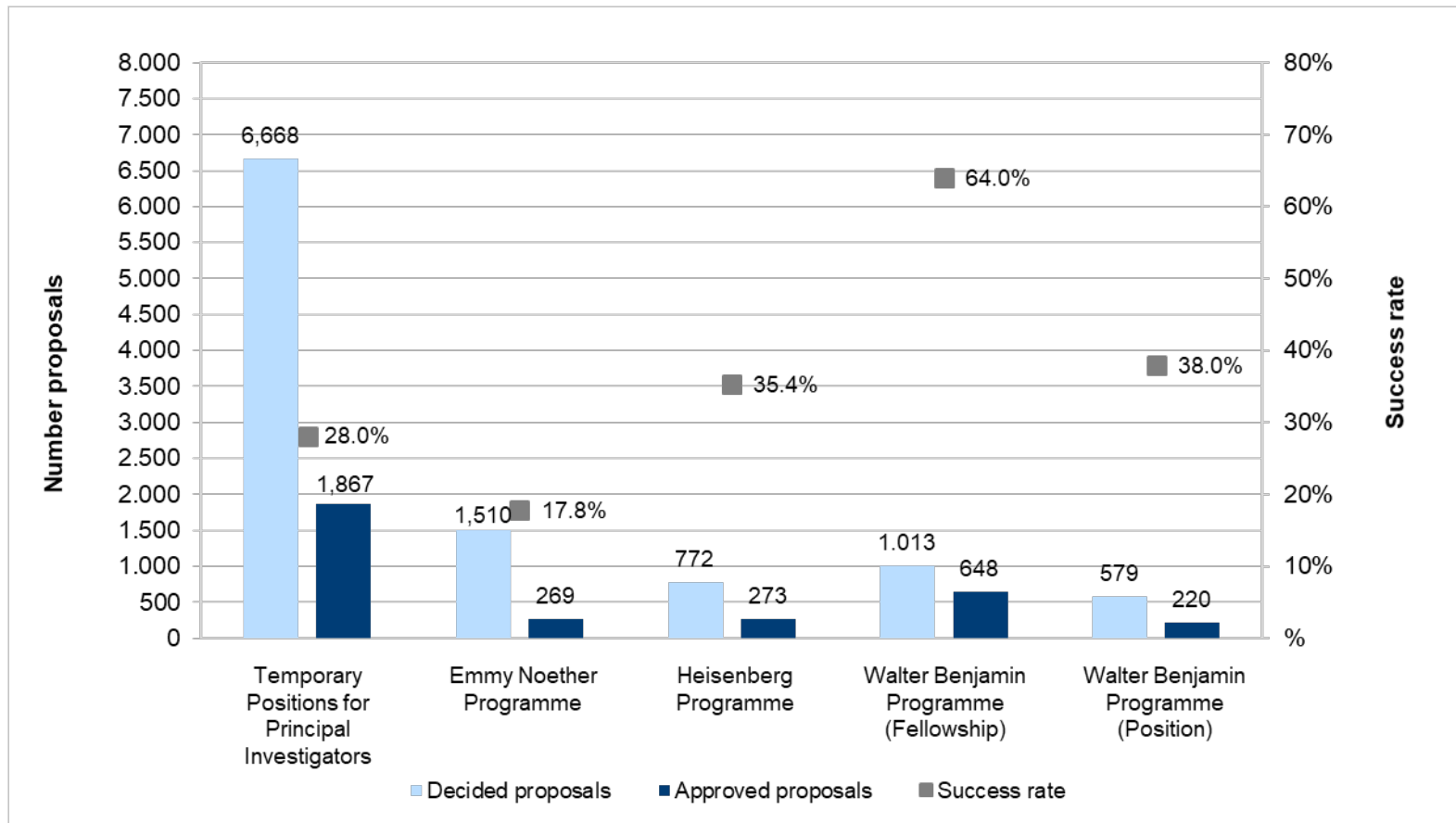


## Total Number of Heisenberg grantees\* by scientific discipline 2022



\* Following modifications to the Heisenberg Programme in 2018, grantees are able to select and switch between different grant types. These are not differentiated in the statistics.

# Numbers of proposals and success rates\* in programmes promoting Early Career Researchers 2019 to 2022



\* Based: New proposals.

# DFG Funding for Early-Career Researchers

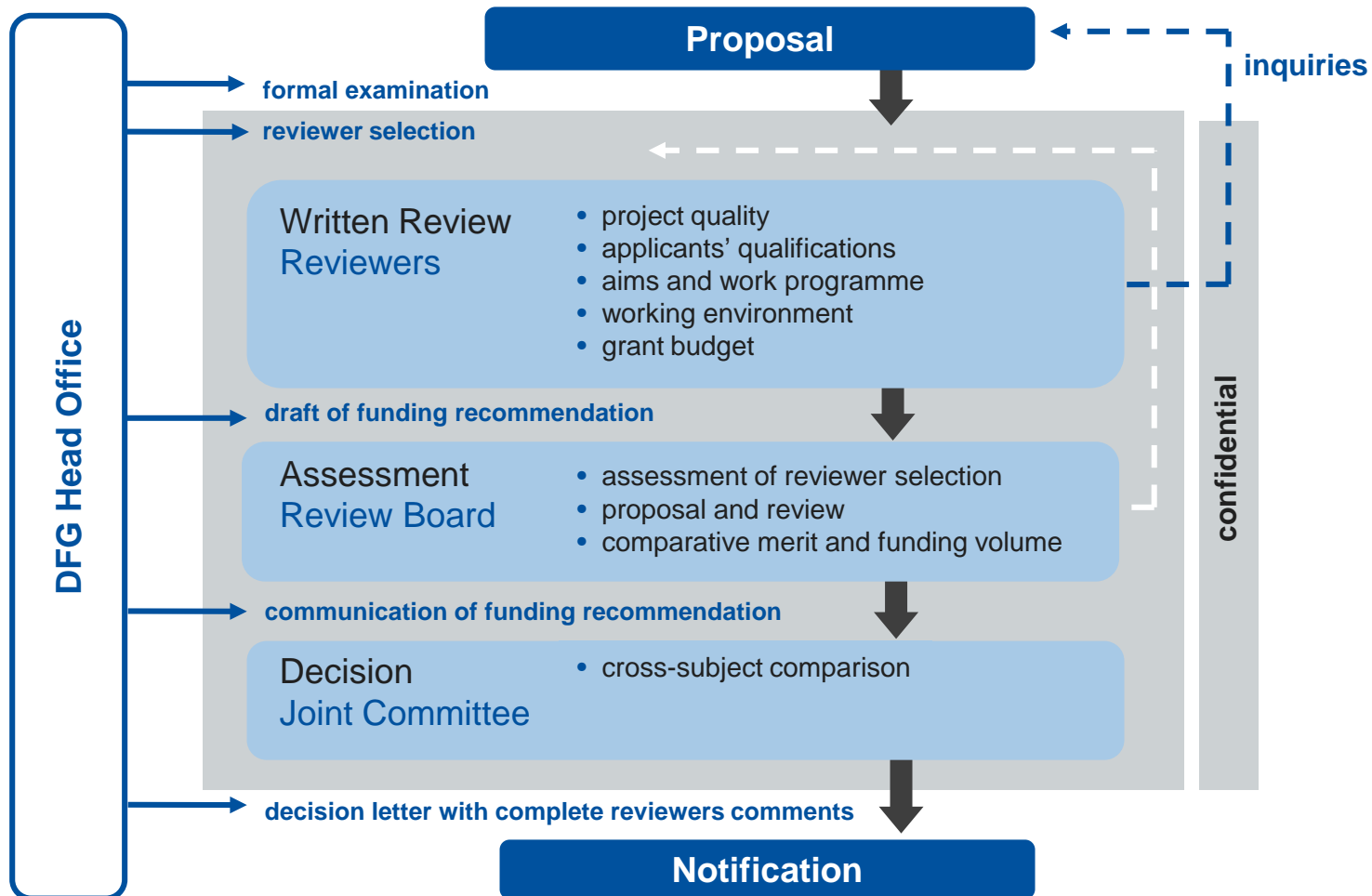
## Study *Forschungsförderung und Karrierewege* (2017)

### Study about DFG funding instruments and career paths

- ▶ Compares the career paths of more than one thousand applicants in 2007 and 2008 in funding programmes relevant to early-career researchers
- ▶ Early Career Researchers funded by the ENP or the HP were highly successful in gaining professorships



# Proposal and Review Process In the Individual Grants Programme



# Agenda

1. Some General Information on the DFG
2. Funding Instruments for Junior Researchers
3. **Do's and Dont's of Grant Writing**
4. Funding of Coordinated Grants



# Hallmarks of project funding

## The DFG funding philosophy

- ▶ 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
  - ▶ Importance of a topic is not sufficient for approval
- **Funds are exclusively granted to further the scientific progress (in accordance with the CoARA Agreement ( <https://coara.eu> ); highest impact of PI's papers does not win!**

# Proposal and Review Process

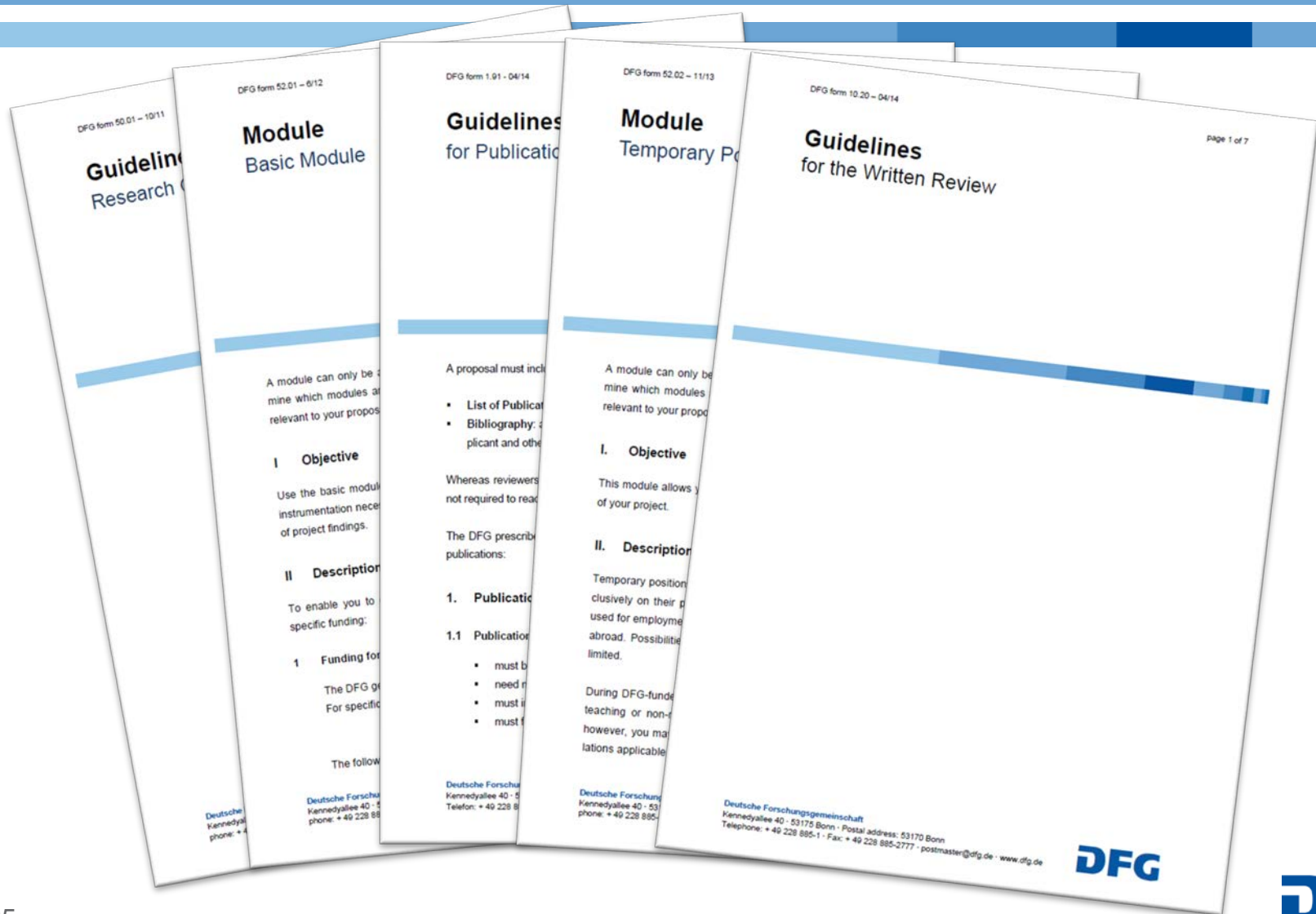
## Basic Advice

- ▶ Carefully review and follow the guidelines and proposal *instructions in their latest versions*; changes are made frequently
  - Relevant information can be found on the DFG website
- ▶ Contact us if you have any questions
- ▶ Put yourself in the reviewers' position
- ▶ Seek honest criticism from colleagues
- ▶ Start with smaller projects
- ▶ Plan a feasible timeline: On average, the time to decision is over six months (and rising!)



# Proposal and Review Process

Modular Funding Opportunities – Read the guidelines!



# The review process

## Criteria for funding decisions

### Relevant Criteria:

- ▶ Scientific quality and originality
- ▶ Hypothesis & experimental strategy
- ▶ Quality of preliminary work
- ▶ Qualification of scientists involved
- ▶ Working environment

### Irrelevant criteria:

- ▶ Age, Gender, Nationality
- ▶ Previous DFG-record
- ▶ h-Index of PI (or other metrics)

# 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*“ when recycling previous (unsuccessful) proposals



## 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!!*)

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

## Core virtues:

**Hypothesis:** *Exactly* what do you want to prove, falsify, find out? Generating data to develop a hypothesis is usually not approved; that is considered a prerequisite

## Work plan / strategy:

- Is the work program as core of the application appropriate, original, novel, but not overloaded? Discuss why strategies chosen by others may not have worked!
- 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:** Expensive 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 by taxes*. Propose a project for the next 3-6 years, not your lifetime

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

Follow the proposal preparation instructions (form 54.01)

### Project description section (2.x):

- **Data handling (2.4):** how will you publish your results? Data must be supplied to publically accessible data bases even if not published yet; **your data belong to the public who have paid for the project**, so they must be able to find them (intellectual property notwithstanding)
- **Relevance of sex & gender (2.5):** State whether the sex or gender of your ***study material*** is potentially relevant for results; *do not* describe the composition of your lab or that you will preferably hire women or staff from underprivileged societal groups

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

Follow the proposal preparation instructions cont. (form 54.01)

### „Supplementary information on the research context“ (4.x):

- **Ethical deliberations and clearance (4.1.1/4.1.2):** You must keep repercussions on your human study subjects as low as possible AND provide ethical clearance by your local ethics committee on the explicitly named project
- **„3R concept“ (4.1.3):** You must keep repercussions on your sentient animal study subjects as low as possible. Describe how you will **replace** animal studies, **reduce** animal numbers and **refine** the experiments to reduce stress on animals. Legal approval must be obtained, but does not need to be uploaded with your proposal.
- **„Convention on biological diversity“ (4.1.4):** If you work with material obtained from foreign countries, you must obtain permission from the authorities of those countries



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

Follow the proposal preparation instructions finale (form 54.01)

### „Supplementary information on the research context“ (4.x):

- „Dual use / Research of concern“ (4.1.5): If your project may have potential safety related aspects, this must be discussed. This includes increasing pathogenicity of an infectious agent, but also weaponization of results or undermining the free will of individuals.
- „Thematical demarcation“ (4.11): If you have any other ongoing publically funded projects, you must demarcate those in your proposal. You cannot receive funding for a project twice (**leads to legal repercussions!**). You may submit your project to various funders at the same time, but must decide and inform if funded more than once.

Please answer all those questions. Failing to do so will lead to the DFG head office requesting you to provide those answers or revise the proposal, i.e. losing you time. If „not applicable“, a short explanation is welcome.

## 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!



### Instead:

- Discuss other peoples´ data – this might be inspiring to the reviewer and shows you contribute your own ideas to the research field
- cite as in PubMed, including title, mark shared authorships by asterisks; **highlight** your name (helps reviewers!)

# Proposal and Review Process

If at first you don't succeed...

- ▶ Don't be discouraged
- ▶ Take reviewer comments seriously but not personally: You are not reviewed as a person, it's all about your proposal!
- ▶ Consult the DFG Head Office if you need advice or feel that you have been treated unfairly
- ▶ Read reviewer comments meticulously – they will give you essential advice for revising your proposal to be more successful
- ▶ If you disagree with critique in the reviews, discuss it in the revision; a rebuttal letter may be included



# Advice for Applicants

## Research career

- ▶ Develop your own and independent research profile
- ▶ Publish independently (if possible)
- ▶ Be flexible – find the best environment for your research
- ▶ Build networks of collaboration partners
- ▶ Develop alternative plans
- ▶ Take advantage of advice and information services



# Advice for Applicants

## Your CV

- ▶ **Follow the NEW guidelines (form 53.200)**
- ▶ Structure it clearly
- ▶ Include prizes, fellowships and awards
- ▶ Include time away from research (relating to family or illness, dependent care, etc.)
- ▶ List up to 10 of your most important publications



# Advice for Applicants

## Grant budget

- ▶ No upper limits, *but:*
- ▶ Needs to be realistic and justified by the project
- ▶ Supplemental, project-specific needs vs. existing resources at the higher education institution
- ▶ Talk to others or seek advice from other grant applicants, recipients, institutions/organisations
- ▶ Information on staff salaries provided on the DFG website and automatically calculated upon proposal upload; tariff increases will adjust funding volume automatically

# Advice for Applicants

## From a reviewer's perspective

- ▶ Is the project important regarding its *scientific* impact?
- ▶ Is the project idea timely and original?
- ▶ Will the project result in significant findings? What new knowledge will be generated – what gaps in current knowledge would be filled?
- ▶ Is the applicant (or team of applicants) suitably qualified to carry out the project successfully?
- ▶ Are the proposed methods up to date and suitable for addressing the research question?
- ▶ Can the work programme be completed within the proposed timeframe?

# Advice for Applicants

## 10 golden rules for submitting a proposal

1. The proposal follows the guidelines and instructions and does not exceed the maximum allowable length.
2. The proposal is clear, precise, well structured and understandable to a non-expert audience.
3. The project idea is original and contributes considerably to our understanding of scientific (and social) questions.
4. The scientific aims are focused on central questions, theses and hypotheses, embedded in the broader context.
5. The descriptions of the current state of research are up to date and relate directly to the project's objectives.



# Advice for Applicants

## 10 golden rules for submitting a proposal

6. The preliminary work and personal track record reflect the qualifications and academic/scientific independence of the applicant.
7. The work programme is clear and follows a realistic timeline.
8. The methods are tailored to address the issues at hand and utilize state-of-the-art or even novel techniques
9. The proposed budget is consistent with the work programme.
10. Information relevant to the proposal, such as unpublished manuscripts are discussed and written agreements with significant cooperation partners are included.

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## Research units (FOR)

- ▶ **Proposal by the applicants**, represented by a spokesperson
- ▶ Small Consortium of 6-10 projects along the rules for individual grants
- ▶ Focused Research Question
- ▶ Local or distributed consortium; well-justified international participation possible
- ▶ Intense synergy must be demonstrated
- ▶ Duration of 2x4 years
- ▶ 2-stage application procedure:
  - Draft proposal externally reviewed and discussed by study section; highly promising proposals invited to submit a full proposal
  - Full proposal reviewed on-site
  - Final decision by DFG grants committee
- ▶ Important: Temporary position for a principle investigator can be applied for

## Clinical Research units (KFOR)

- ▶ Very similar to Research Unit, differences:
- ▶ Local consortium
- ▶ Clinical Research Topic
- ▶ Representation by spokesperson, scientifically headed by a research coordinator
- ▶ Clinical Rotation positions are frequently applied for

# Collaborative Research Center (CRC - SFB/TRR)

- ▶ **Application of the university, 3x4 years of funding**
- ▶ Focused Research Topic
- ▶ Local (SFB) or distributed (TRR) consortium
  - (Local) CRC may have up to 30% of external projects (i.e. outside applying university)
  - CRC-TRR may apply with up to three universities, additionally 25% of projects may be proposed by non-applying universities
- ▶ Typically 15-20 projects and additional technology platform(s)
- ▶ Two-stage application:
  - draft proposal stage: mandatory “consultation” discussion, recommendation of consultants transmitted to CRC-senate committee, invitation of best drafts to submit full proposals (25-30%); decision not binding (yet?)
  - Full proposal stage: on-site review, CRC-grants committee decides on funding, 70-80% funded
- ▶ Important: only scientists funded by the university can lead projects

# Research Training Group (GRK / IGRK)

- ▶ **Application of the university**, 2x4,5 years of funding
- ▶ Focused Research Topic
- ▶ Local (GRK) or international (IGRK) consortium
  - IGRK partner must provide funding of their part (some flexibility how this can be achieved)
- ▶ Typically 10-12 projects
- ▶ Structured training concept essential
- ▶ Two-stage application:
  - Draft proposal externally reviewed and discussed by study section; highly promising proposals invited to submit a full proposal ( ~ 40% success rate)
  - Full proposal reviewed on-site
- ▶ Final decision by GRK grants committee (~ 70% success rate)
- ▶ Important: only scientists funded by the university can lead projects

# Priority Program (SPP)

- ▶ **Application of a group of “initiators”**
- ▶ Establishment of an **emerging research field** in Germany as a central goal
- ▶ Typically five initiators represented by a spokesperson
- ▶ **Anyone can apply** once established
- ▶ Consortium members distributed all over Germany, foreign participation possible
- ▶ Interdisciplinarity essential
- ▶ Concepts for training junior scientists to help them to establish themselves in the emerging field; tools for creating collaboration recommended
- ▶ Two-stage application (after **highly recommended** consultation meeting):
  - Concept proposal (15<sup>th</sup> of October deadline); members of several study sections recommend top proposal(s) to the DFG senate; 20-25% of proposals are established
  - On-site review panel of typically 25-40 proposals and additional technology platform(s), final decision by DFG grants committee, follows recommendations of panel

# DFG

## Thank you very much for your attention... ... any questions?

[Find your responsible program officer on the DFG website!](#)

**For more information...**

- ▶ on the DFG: [www.dfg.de/](http://www.dfg.de/)
- ▶ on DFG-funded projects: [www.gepris.dfg.de/en](http://www.gepris.dfg.de/en)
- ▶ 2018 Funding Atlas: <http://www.dfg.de/sites/foerderatlas2018/>
- ▶ on over 30,000 German research institutions: <http://www.gerit.org/de>



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