

# Guidelines

## for the Review of Proposals under the New Instrumentation for Research Programme



Disclaimer: The English translation of this document is provided for informational purposes. In the event of a discrepancy between the English and the German versions, the German text takes precedence.

**Deutsche Forschungsgemeinschaft**

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## I. Programme information

The DFG funds instrumentation and instrumentation-related projects at research institutions submitted to its Department of Scientific Instrumentation and Information Technology. Under the New Instrumentation for Research Programme (see Guidelines for Proposals under the New Instrumentation for Research Programme – DFG Form 21.6),

[www.dfg.de/formulare/21\\_6](http://www.dfg.de/formulare/21_6)

projects are funded with the aim of developing and testing technically and methodologically innovative research instrumentation.

The funds allocated to a project are initially to be used to set up a functional model in the laboratory that allows the new technology to be tested, ultimately enabling the key experiment to be carried out demonstrating the effectiveness of the novel method for use in research (so-called proof of principle). If this is successful, funding can be applied for to pursue a follow-up project involving the building of a practical demonstrator and a pilot project to produce initial research findings through application of the new technology. If a practical demonstrator has already been developed, it is also possible to submit a proposal for a project involving practical testing of the new instrumentation technology in application for the purpose of research

One focus of the programme is on interdisciplinary projects that cannot be easily categorised according to the DFG subject classification system, or where such categorisation is not possible at all. By supporting the development and construction of research instrumentation in one research area for use and application in another research area as well, the funding seeks to test novel approaches to solutions across disciplines, thereby finding exploratory ways to arrive at answers to open questions in research.

The proposal must convincingly demonstrate which new research approaches are to be enabled in the future using the novel research instrumentation and how new scientific knowledge may be gained through its use. As such, ideas for new research instrumentation should be as clearly differentiated as possible from instrumentation technologies already available on the market. This requirement is not met by mere improvements of existing technologies and instrumentation, e.g. in terms of accuracy, sensitivity, resolution, energy efficiency, user-friendliness, etc., nor do the continuation of known approaches or the gradual further development of existing instrumentation technology meet the criteria here.

The DFG Head Office prepares a decision proposal based on the reviews obtained. Subsequently, all documents are sent to the members of the Scientific Instrumentation and Information Technology Committee to reach a final decision about funding. The latter is a body elected by the DFG's Joint Committee: it is responsible for ensuring the quality of the review process and preparing the funding decision to be taken by the Joint Committee.

**Please note:**

- Please consider first whether you possess the specialist expertise required. If you do not believe this is the case, let us know as soon as possible. We would then be grateful if you could help us by suggesting other individuals who are qualified to carry out a review.
- General Guidelines for Reviews (DFG form 10.20) are available at:  
  
[www.dfg.de/formulare/10\\_20](http://www.dfg.de/formulare/10_20)
- If you have any questions regarding the proposal, please direct them solely to the DFG Head Office.
- If necessary, the Head Office will ensure that any points in need of clarification arising from your review are forwarded to the applicants and will ask you to submit your final review after a response to these questions has been obtained.
- Please limit your review to a maximum of two pages.

## **II. Outline of the Review**

### **1 Quality of the project**

- Assess the scientific quality of the research work carried out to date and the results achieved by the applicants. Assess how scientific expertise is incorporated in the development project. To what extent are the applicants particularly qualified to carry out this project? Do the applicant teams have a sound track record that is well suited to the project? Have preliminary investigations been carried out, or have initial patents even been granted as part of the technical development of the instrumentation?

- Does the project meet the requirements for the New Instrumentation for Research Programme? To what extent is the key experiment capable of validating the potential of the new method or novel procedure for use in research? Can the new method or novel procedure be expected to enable fresh approaches to research? If the new instrumentation to be subsequently developed were suitable for practical utilisation, could it be of use to other groups and give rise to new insights in other areas of science?
- How do you assess the degree of innovation or the novelty of the method or technology to be tested (in particular as opposed to the mere further development of known methods)? How do you assess the potential gain in knowledge for research through the use of the instrumentation to be developed? How high do you estimate the demand for such instrumentation in research? Assess the degree of complexity and the significance of the development from a technical and scientific point of view, also in relation to the costs.

## **2 Objectives and work programme**

- How realistic do you believe the objectives set out in the proposal to be? Are these objectives and the success criteria for the project plausible and measurable?
- Does the programme of work appear suited to achieving the stated objectives?
- Does it seem viable that the proof of principle can be validated within the duration of the project or that a practicable demonstrator can be developed that might even be used in a subsequent proposal for a research project, in collaboration with interested users?
- Do the programme of work and the duration of the project seem sufficient to adequately test and validate the novel technology or method?

## **3 Work and research environment**

- Please assess whether the staff, institutional and instrumental resources and facilities are adequate to successfully undertake the project.
- Assess the possibilities for participating research assistants to further their scientific and professional qualification.
- How do you rate the explanations on the handling of research data?

#### 4 Proposed scope of funding

- Does the envisaged development and the possible gain in knowledge justify the requested funds?
- Does the programme of work justify the proposed staffing requirements?
- Is the equipment requested necessary for the project as a supplementary resource or should it be provided under Core Support?
- What budget will be required for consumables, travel and other costs?

#### 5 Recommendation

Please provide a **clear recommendation** as to whether the proposal should be approved.