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# Research & Development funds distribution policy

## 1. Introduction

The Research & Development (R&D) program at the European XFEL is set with the purpose to suggest and follow novel trends in all areas of scientific, technical and technological fields in order to keep the facility at the forefront of research and innovations world-wide. The program is aimed at addressing vital and emerging challenges of the society in accordance with the mission of the European XFEL.

The Research & Development program is supported by dedicated funds that are included in the annual budget of the facility. The funds are allocated to individual proposals headed by any scientific or engineering staff members of the European XFEL or DESY employers participating in operation and/or development of the accelerator part of the facility. The following types of proposals are eligible for funding:

- Studies of new approaches both in scientific and technical areas including scientific software development that are expected to make breakthrough in the emerging field of the XFEL related research and technologies. Instrumentation upgrades and additions with already known solutions and designs are not part of the R&D program;
- “Proof-of-principle” experiments based on novel ideas and including relevant developments as well as instrument preparation;
- Design, construction and characterization of prototypes of advanced hardware for future implementation at the European XFEL.
- In all cases PhD thesis oriented topics related to the directions listed above.

Upon evaluation preference will be given to proposals dealing with specific topics named in a current call for proposals as well as to the applications that:

- Address present unique capabilities of the European XFEL;
- Relate to the plans for the short-, mid- and long-term upgrades of the European XFEL;
- Involve different groups of the European XFEL and/or DESY groups responsible for the operation of the European XFEL accelerator with the common goal to make use of synergy and in order to foster intergroup cooperation;
- Propose co-funding through specific European XFEL shareholder programs or industrial collaborations.

In cases requiring beamtime at the European XFEL, possibilities to perform these as part of the in-house research programs should be clarified with the responsible group leaders before application.

This document presents guidelines and describes rules and procedures for distribution of the R&D funds in order to facilitate their transparent and efficient use as well as broad participation of the European XFEL and DESY staff members in the R&D program.

## **2. Who is eligible for applications?**

All scientific or engineering staff members of the European XFEL and employees of DESY participating in the European XFEL project on the accelerator side are eligible for submission of applications as Project Leaders (PL's). In all cases, however, an endorsement by the respective group leader(s) is required and it is assumed that the goal of the application lies within the scope of the group of the PL. External collaborators from other than the European XFEL and DESY institutions are very much welcome to participate in the R&D applications. They are not eligible, however, to become beneficiaries of the European XFEL R&D funds and are expected to contribute matching resources to the cooperation.

### 3. Subject, duration and volume of R&D projects

Similar to the rules of other 3<sup>rd</sup> party funding agencies in Germany or other partner countries participating in the European XFEL project, the following costs can be financed from the R&D program of the European XFEL:

- *Funding for direct project costs including:*
  - (a) Equipment, software and consumables;
  - (b) Travels;
  - (c) Visiting researchers including those from the external collaborator groups applied for the project;
  - (d) Project-related trainings, workshops and retreats.
  
- *Funding for staff:*
  - (a) Doctoral researcher (PhD students or comparable) – This kind of positions is the important goal of the R&D funding that intimately related to the development of the PhD program at the European XFEL. Doctoral researches at European XFEL will get a maximum salary of 75% TvÖD 13, thereby pay level depends on experience of candidates. Every year, up to 4 new positions with maximum period of 3 years to be fully covered from the R&D funds are planned. If necessary, longer duration of doctoral researches work has to be financed by the budget of the corresponding PL or collaborator groups. In case external co-funding is available, the above annual number of the funded positions can be increased accordingly;
  - (b) Newly hired postdoctoral researcher or comparable – These are project-related regular positions that are funded only for the time of the project. In the case of the European XFEL employees, no possibility of their extension beyond the duration of the project is possible;
  - (c) European XFEL or DESY staff members that are temporarily assigned to R&D projects.

The initial funding duration of the R&D projects is 1 to 3 years and makes longer duration a well justified exception related, e.g. to specific long-term

goals that cannot be achieved otherwise. There are no prolongations (except for only very special cases) are possible.

The funding volume of the proposals is limited in size up to 500 kEUR per year. It is expected, however, that usually not more than 300 kEUR annually will be required. Higher volume proposals will be subject to special consideration. The present total annual volume of the European XFEL R&D funds ranges at 9.5 MEUR (12,3 % of the operation budget), but may be adapted due to strategic decisions or financial reallocation at the European XFEL starting from 2020.

#### **4. Projects application and selection procedure**

Once per year in the beginning of March the European XFEL Management Board (MB) will issue a call for the R&D proposals with deadline at the end of April. A template for proposals preparation will be provided. In the first half of May public presentations of submitted proposals will be organized. After these presentations, the Management Board will evaluate the proposals. If necessary external experts will be consulted. Final decision on funds allocation will be made by the Management Board in June and communicated to the applicants. The funding will start in January following year giving possibility to PL's for staff hiring.

About 85% to 90% of the R&D funds shall initially be distributed through this regular procedure. The remaining volume will be reserved as the MB contingency for covering overcosts of the already funded projects or setting and pushing strategic priorities that can rise up given rapid development of XFEL-related science and technologies. The latter proposals can be submitted any time after recommendation of the Management Board. The procedure of evaluation of this kind of proposals including public presentation will be similar to the one of the proposals submitted within the regular R&D calls.

## **5. Reporting results**

Annual public presentations will be required for each approved R&D project. After the end of the projects final reports describing in detail outcome of the funded research and development should be submitted. A template for project reports will be provided. It is expected that outcome of the projects will lead to publications in peer-reviewed journals, patents as well as attraction of third-party funding.

## **6. Concluding remarks**

The outlined in this document rules and guidelines will be evaluated and revised if appropriate after first years of experience.