

Guidelines

for Consortia

National Research Data Infrastructure (NFDI)



I The National Research Data Infrastructure – NFDI

Germany's federal and state governments are funding the establishment of a national research data infrastructure (NFDI). The aim of the NFDI is to systematically manage research data, provide long-term data storage, backup and accessibility, and network the data both nationally and internationally. The NFDI will bring multiple stakeholders together in a coordinated network of consortia tasked with providing data services to research communities over the long term. The "Agreement between the Federal Government and the *Länder* Concerning the Establishment and Funding of a National Research Data Infrastructure" of 26 November 2018 provides detailed information on the programme. The agreement defines the NFDI's objectives as follows: "Systematic and lasting access to digital resources is indispensable for generating new scientific findings and innovations in research and society. The data collected at various places using different methods must be made available in such a way as to also ensure easy and systematic access for third parties and enable the combination and analysis of such data across databases, disciplines and countries. Data management must be standardized for this purpose: In accordance with the FAIR principles¹, research data must be findable, accessible, interoperable and re-usable."

The overall structure of the NFDI consists of consortia, the Consortia Assembly, the Scientific Senate and the Directorate. Collaboration between the consortia and other NFDI bodies is essential to the development of the NFDI.

II NFDI Consortia

The objective of an NFDI consortium grant is to enable optimal long-term research data management within the community of interest. The term "community of interest" refers to subject- or method-based communities, involving both users and providers of data, that benefit from the activities of an NFDI consortium. The user community must be actively involved in all phases of the consortium, from the lead-up to proposal submission to its establishment. Existing structures (such as data repositories and services) should be integrated in the consortia. Consortia should also make use of established financial and organisational structures.

¹ FAIR stands for Findable, Accessible, Interoperable and Re-usable. The FAIR Data Principles; <https://www.force11.org/group/fairgroup/fairprinciples>

Consortia are organised according to research domains or research methods. Users and providers of data interact within a consortium. All stakeholders involved in a consortium need to agree on the objectives and milestones defined in the work programme.

An applicant institution and one or more co-applicant institutions represented by a spokesperson and co-spokespersons run a consortium. They jointly determine which of their institutions will submit the funding proposal and define regulations on managing the disbursement of funds within the consortium. Individual institutions can participate in more than one consortium.

The internal structure of consortia may differ significantly from each other according to the individual requirements of the consortia. However, consortia must comply with non-profit/public-benefit requirements and provisions.² Provided that they comply with these requirements, consortia may organise themselves in a way that suits their specific needs.

III Funding and Proposals

The following sections (III.1 and III.2) define formal proposal requirements. Please note that they apply to all consortia.

1 Eligibility Requirements and Funding Conditions

State-funded and state-recognized higher education institutions, non-university research institutions, departmental research institutions, academies, specialist societies, scientific/learned societies or associations and publicly funded information infrastructure facilities are eligible for funding.

To be eligible for funding, the institution or facility must either be a German legal entity or one operated by a German legal entity, both of which must comply with non-profit/public-benefit requirements. International institutions and facilities may be included as members if they are based in Germany.

As research data management is an intrinsic part of the research process, and research communities rely on the professional management of such, (co-) applicant institutions are expected to make an appropriate financial contribution to this area.

² Cf. Section 51 et seq. of the German Fiscal Code (Abgabenordnung) and the German Value Added Tax Act (Umsatzsteuergesetz).

2 Work Programme

The consortium's work programme is divided into task areas (Aufgabenbereiche), which consist of different measures (Maßnahmen).

In designing the work programme, consortia should take into account the following programme objectives, as referenced in the federal-state agreement:

- Establishment of data handling standards, procedures and guidelines in close collaboration with the community of interest
- Development of cross-disciplinary metadata standards
- Development of reliable and interoperable data management measures and services tailored to the needs of the community of interest
- Increased reusability of existing data, also beyond subject boundaries
- Improved networking and collaboration with partners outside the German academic research system with expertise in research data management
- Involvement in developing and establishing generic, cross-consortia services and standards in research data management together with other consortia

For the second funding period of NFDI consortia, the NFDI Expert Committee has additionally published a key points paper³. This states that the consolidation of the consortia is the overarching objective and specifies the funding criteria defined in the underlying agreement between the federal government and the federal states (BLV⁴). In the key points paper, the NFDI Expert Committee also highlights the need to increase networking within (and outside) the NFDI, achieve synergies and increase cross-consortia (re)use of data and service.

Use cases may be utilised to illustrate research data management strategies and can be part of the work programme.

3 Roles

The following roles apply to the proposal submission process:

- Applicant institution

³ www.dfg.de/download/pdf/foerderung/programme/nfdi/eckpunkte_zweite_foerderphase_en.pdf

⁴ Joint Science Conference (GWK). (2018). Bund-Länder-Vereinbarung zu Aufbau und Förderung einer Nationalen Forschungsdateninfrastruktur (NFDI) of 26 November 2018, URL: <https://www.gwk-bonn.de/fileadmin/Redaktion/Dokumente/Papers/NFDI.pdf>

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- Co-applicant institutions
- Spokesperson and co-spokespersons
- Participants

Applicant institution (Antragstellende Einrichtung)

One of the involved institutions with a significant role in the consortium applies for funding. This applicant institution is the institutional grant recipient responsible for the financial management of the award. It disburses the consortium's funds in accordance with the work programme and disbursement plan set out in the proposal. The applicant institution is also responsible for the proper use of funds vis-a-vis the funding organisation. The applicant institution must provide the organisational structure necessary to manage the funds and have significant experience in managing public third-party funds.

Co-applicant institutions (Mit Antragstellende Einrichtungen)

By managing task areas within the consortium, co-applicant institutions assume shared responsibilities with the applicant institution. Task areas may be led by one or more institutions. Co-applicant institutions receive their funds via the applicant institution; the co-spokespersons responsible for the task areas are employed at these institutions.

Spokesperson and co-spokespersons (Sprecherin/Sprecher und Co-Sprecherin/Co-Sprecher)

The applicant institution designates a spokesperson who has to be employed at the applicant institution. The spokesperson coordinates the proposal. If a grant is awarded, the spokesperson is responsible for coordination-related tasks during the funding period.

Furthermore, each co-applicant institution designates a co-spokesperson who has to be employed at the co-applicant institution. Co-spokespersons are responsible for an individual task area (see III.2 above).

The spokesperson and the co-spokespersons actively collaborate within the consortium. The group of spokespersons must adequately represent the researchers.

Participants (Beteiligte)

Participants are natural persons and/or non-profit legal entities who contribute significantly to the work programme on a sustained basis. In contrast to the co-applicant institutions, they are not involved in drawing up the work programme and do not assume responsibility

for a task area. Participants must be named and their contributions must be described in the proposal. The consortium can request funds for their involvement.

Please give appropriate consideration to diversity when composing the members of the consortium (regardless of the individual funding sources). Additional information can be found under

www.dfg.de/diversity/en

4 Proposal Submission

Proposals are submitted by the spokesperson and the head of the applicant institution.

Proposals are based on a plan developed jointly by the applicant and all co-applicant institutions and facilities. Each institution or facility is represented by its head and, in the case of the applicant institution, by the designated spokesperson, or for co-applicant institutions, by the designated co-spokespersons.

Proposals must be structured according to the Instructions and Template for Consortia Proposals (DFG form NFDI 110).

www.dfg.de/formulare/nfdi110

5 Funding Duration and Scope

5.1 2019 - 2028

From 2019 to 2028, the German federal and state governments are providing up to €85 million per year (including 22% programme allowances for indirect project costs) to fund consortia in the NFDI. The amount available to fund direct project costs thus totals approximately €70 million annually. As a rule, an individual consortium may receive between €2 million and €5 million, which includes the programme allowance for indirect project costs and €1.6 million to €3.9 million for direct project costs. After the conclusion of three rounds of calls for proposals in 2019, 2020 and 2021, there are now 26 subject-specific or methodological consortia and one consortium for the provision of basic services that are in receipt of funding in the NFDI. Based on these 27 consortia, an average of €2.6 million is available for direct project costs per consortium.

5.2 2029 onwards

The period from 2029 onwards is currently not covered by an agreement between Germany's federal and state governments. Consortia that plan to apply for a second five-year funding period are therefore asked to base their calculations for 2029 and beyond on the assumption that the total funds available per year for all consortia in the NFDI will be at a similar level as in the years 2019 to 2028. As a first step, the Joint Science Conference (GWK) will only make a funding decision for renewal proposals for the period that is covered by the current agreement between federal and state governments. The funds applied for by the consortia for 2029 onwards will be subject to further evaluation, as soon as it has been established how much funding is actually available.

5.3 Phase-out financing

According to the agreement between Germany's federal and state governments concerning the establishment and funding of a National Research Data Infrastructure (NFDI), a degressive phase-out financing of up to two years is envisaged for consortia that do not receive funding after the first funding period based on a negative evaluation of their proposal by the NFDI Expert Committee. In the first 12 months after the end of the first funding period, these consortia will receive up to 70% of the funds granted to them for the last full financial year; for months 13 to 24 they will receive up to 40% of this amount.

6 Type of Funding

Within the framework of an NFDI consortium, funding may be used to cover staff expenses, direct project costs incurred in conjunction with implementing and running the consortium, including costs for e.g. upscaling, merging, migrating, user-friendliness of services, as well as operating costs and expenses for project-related third-party contracts. In addition, applicants may request funds to coordinate activities within the consortium and/or with other consortia. Instrumentation can only be funded in exceptional circumstances. In justified individual cases, direct administrative costs incurred by the applicant institution may be covered. When calculating your budget, please take into account that (co-) applicant institutions are expected to contribute to the resources necessary to run the consortium (financial and in-kind contributions). Please provide sufficient justification for the amounts requested.

IV Review and Decision-Making Process

Proposals for consortia can only be submitted in response to specific calls, stipulating proposal deadlines along with further terms and conditions.

Funding decisions are made by the Joint Science Conference (Gemeinsame Wissenschaftskonferenz, GWK). Only if the evaluation by the NFDI Expert Committee results in a clear funding recommendation can a consortium receive funding. The NFDI Expert Committee was appointed by the DFG's Joint Committee in consultation with the GWK.

The NFDI Expert Committee will base its recommendations on the consortium's convincing embedding in the community of interest, the adequate involvement of all relevant stakeholders, the interoperability of proposed services on an international and national level, a sound research data management strategy, the structural relevance of the consortium within the framework of the NFDI and a sound organisational and operating model.

The following general funding criteria apply:

- Readiness and relevance of the consortium
- Consortium structure and viability
- Research data management strategy

The list of funding criteria for NFDI consortia, supplemented by short explanatory notes, can be found in DFG form NFDI 120.

www.dfg.de/formulare/nfdi120

The initial assessment of (renewal) proposals for NFDI consortia is carried out by review panels and involves in-depth exchanges between reviewers and applicants. This stage may involve presentations by the designated spokespersons and other representatives of the consortia.

Together with the recommendations from the review panels, the proposals are then forwarded to the NFDI Expert Committee, which conducts a comparative evaluation of all proposals and makes funding recommendations to the GWK. The final funding decisions are made by the GWK. Following the decisions made by the GWK, the DFG awards the grants.

In accepting the grant, the applicant institution agrees to ensure that any source codes produced within the consortium be disclosed and made available via open source on a suitable platform to

be explained by the consortium; note that this includes comprehensive documentation. Wherever possible, unambiguous licences will specify the scope of reusability of software or publications.

All DFG-funded content that is available via the internet, including software developments, must be processed, indexed and marketed in such a way as to ensure maximum findability and accessibility. Corresponding metadata must meet information infrastructure standards and be suitable for integration in international and national subject-specific and information infrastructure reference systems.

V Obligations

In submitting a proposal to the DFG, the applicant and co-applicant institutions confirm that the participating researchers and infrastructure providers will adhere to the rules of good scientific practice. The principles of good scientific practice include, among others: maintaining professional standards, maintaining strict honesty with regard to one's own contributions and those of third parties, documenting results and rigorously questioning all findings. The principles of good scientific practice are presented in detail in the DFG Code of Conduct *Guidelines for Safeguarding Good Research Practice*.

The DFG's Rules of Procedure for Dealing with Scientific Misconduct (Verfahrensordnung zum Umgang mit wissenschaftlichem Fehlverhalten – VerfOwF – DFG form 80.01) apply to individuals with a high level of scientific responsibility in funding proposals submitted to the DFG by higher education institutions and non-university institutions (in this case, spokespersons and co-spokespersons). Scientific misconduct is defined as the intentional and grossly negligent statement of falsehoods in a scientific context, the violation of intellectual property rights or impeding another person's research work. The circumstances of each case will be considered on an individual basis. In cases where scientific misconduct has been established, the DFG may impose one or more of the following sanctions in accordance with its rules of procedure, depending on the nature and severity of the scientific misconduct:

- issuing a written reprimand to those involved;
- exclusion from the right to apply for DFG funds for a period of one to eight years, depending on the severity of the scientific misconduct;
- revoking funding decisions (full or partial termination of the grant contract, demanding repayment of funds spent);

- demanding that those concerned either retract the discredited publications or correct the falsified data (in particular by publishing an erratum), or appropriately indicate the DFG's retraction of funding in the discredited publications;
- exclusion from serving as a reviewer for a period of one to eight years, depending on the severity of the scientific misconduct;
- exclusion from membership in DFG bodies and committees for a period of one to eight years, depending on the severity of the scientific misconduct;
- denying voting rights and eligibility in elections for DFG statutory bodies and committees for a period of one to eight years, depending on the severity of the scientific misconduct.

By accepting funding, recipients agree to

- use the grant exclusively and in a targeted manner to realise the funded project. The use and accounting of funds must conform to the relevant regulations of the DFG.
- submit progress reports on the research according to the dates specified in the award letter and to present financial accounts to the DFG detailing the use of funds.

The DFG expects that the findings of the NFDI consortia be made available to the public.

Further Information

www.dfg.de/nfdi/en

www.gwk-bonn.de/en