Base4NFDI - Basic Services for NFDI

Creating NFDI-wide basic services in a world of specific domains

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Abstract: NFDI is a German initiative to set up research data infrastructures across all disciplines. Within NFDI, Base4NFDI is a unique joint effort of all NFDI consortia to develop and deploy NFDI-wide basic services. In this talk, we will provide an overview of Base4NFDI, especially its structures and emerging work program, and inform about ways to participate and contribute ideas for potential basic services.

Keywords: cross-cutting topics, basic services, NFDI, Germany

1 NFDI and Base4NFDI

NFDI[1] is a German initiative to set up and consolidate research data infrastructures across all disciplines, covering Engineering Sciences, Humanities and Social Sciences, Life Sciences, and Natural Sciences. To ensure sustainability, it will integrate national with international activities.

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[1] www.nfdi.de

Building on activities by domain-specific NFDI consortia, Base4NFDI[2] represents a cross-disciplinary collaboration. It is a unique joint effort of all 26 NFDI consortia to develop and deploy NFDI-wide basic services. These services will be integrated into the emerging infrastructures at the European level, especially the EOSC. The target group for basic services is the wider NFDI-community and, in particular, operators of community-specific services. The resulting NFDI-wide basic service portfolio will be beneficial for all disciplines by facilitating core tasks in research data management. A service in this context is defined as technical-organisational solution which typically includes storage and computing services, software, processes and workflows, as well as the necessary personnel support for different service desks. A basic service is meant to add value for the consortia and their users typically by bundling existing services. It is characterized by scalability and a model for sustainable operation, thereby requiring a certain degree of technicality. It is meant to deliver effectiveness - measurable by KPIs - over time and regarding usage.
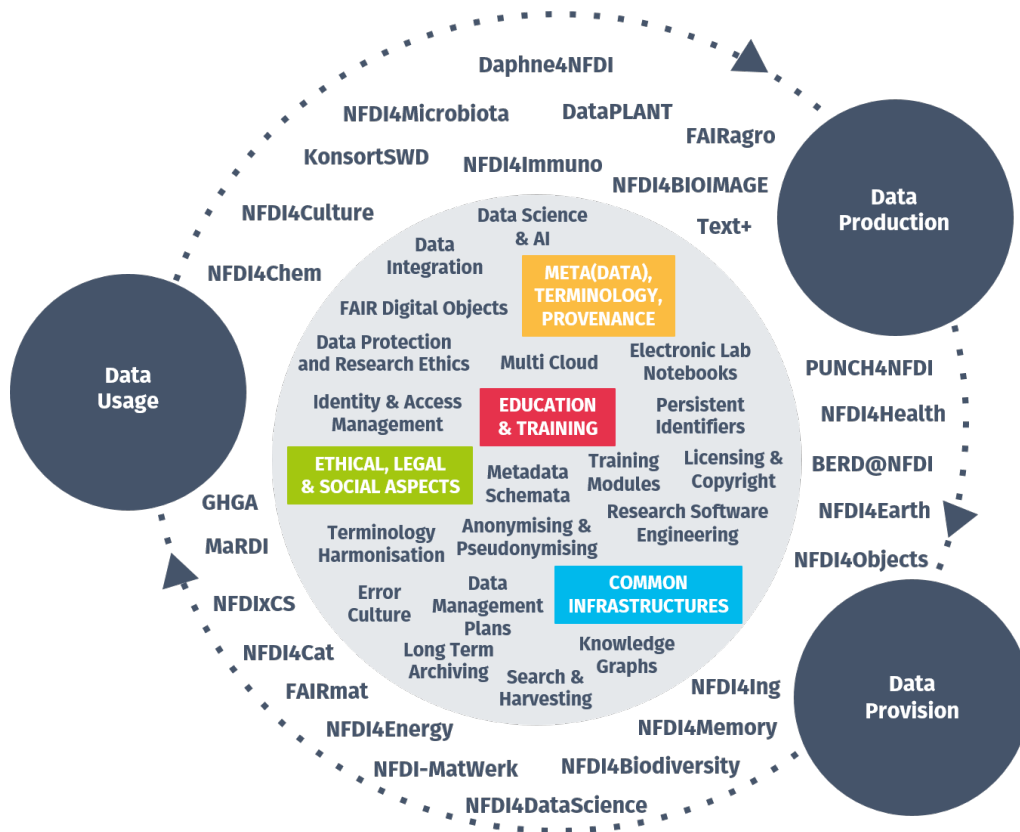

Figure 1. Cross-cutting topics within NFDI

Decisions on basic services are made by all consortia in the bodies of the NFDI Association. To generate proposals for basic services, Base4NFDI will draw on the expertise in NFDI's Sections. They are the loci for exchange between consortia on cross-cutting topics, provide infrastructural and technological expertise in combination with domain knowledge and act as incubators for identifying potential basic services. Potential basic services are thus identified in the Sections, each of which focuses on a topical area: 'Common Infrastructures', 'Education and Training', 'Ethical, Legal and Social Aspects', 'Metadata, Terminologies and Provenance', and the newly established Section 'Industry Engagement'. This broad approach to identifying ideas and needs for basic services reflects, that services relating to research data management must

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[2]www.base4nfdi.de

support a large number of use-cases also including non-technical but organizational ones and thus cover elements like staff for a helpdesk.

After two rounds of proposals in February and May 2023, development will commence with services for Identity and Access Management (IAM), Persistent Identifiers (PID) as well as Terminologies. The IAM Service aims to establish approved identities and organizationally defined access rights across service providers, which will be crucial for seamless data management workflows. The PID Service aims to build on established infrastructures and address challenges such as different levels of maturity in PID implementation across domains. The Terminology Service aims to standardise and harmonise terminology management within NFDI, thereby facilitating consensus-building and interoperability of services across disciplines.

For development, Base4NFDI relies on a three-stage process of 1) initialisation of basic services 2) integration of basic services and 3) ramping-up for operation and becoming part of the NFDI basic service portfolio.

The work program of Base4NFDI is clustered in four Task Areas. Task Areas 'Service requirements, design and development' and 'Service integration and ramping-up for operation' will accompany and support the basic services within the three phases of the process. Task Area 'Service coherence processes and monitoring' will overlook the whole process, and Task Area 'Project governance' will manage the project.

Within this talk, we will give an overview of Base4NFDI, especially its structures and the status of its emerging work program. We will inform about ways to participate and contribute ideas for potential basic services.

Competing Interests

The authors declare that they have no competing interests.

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