

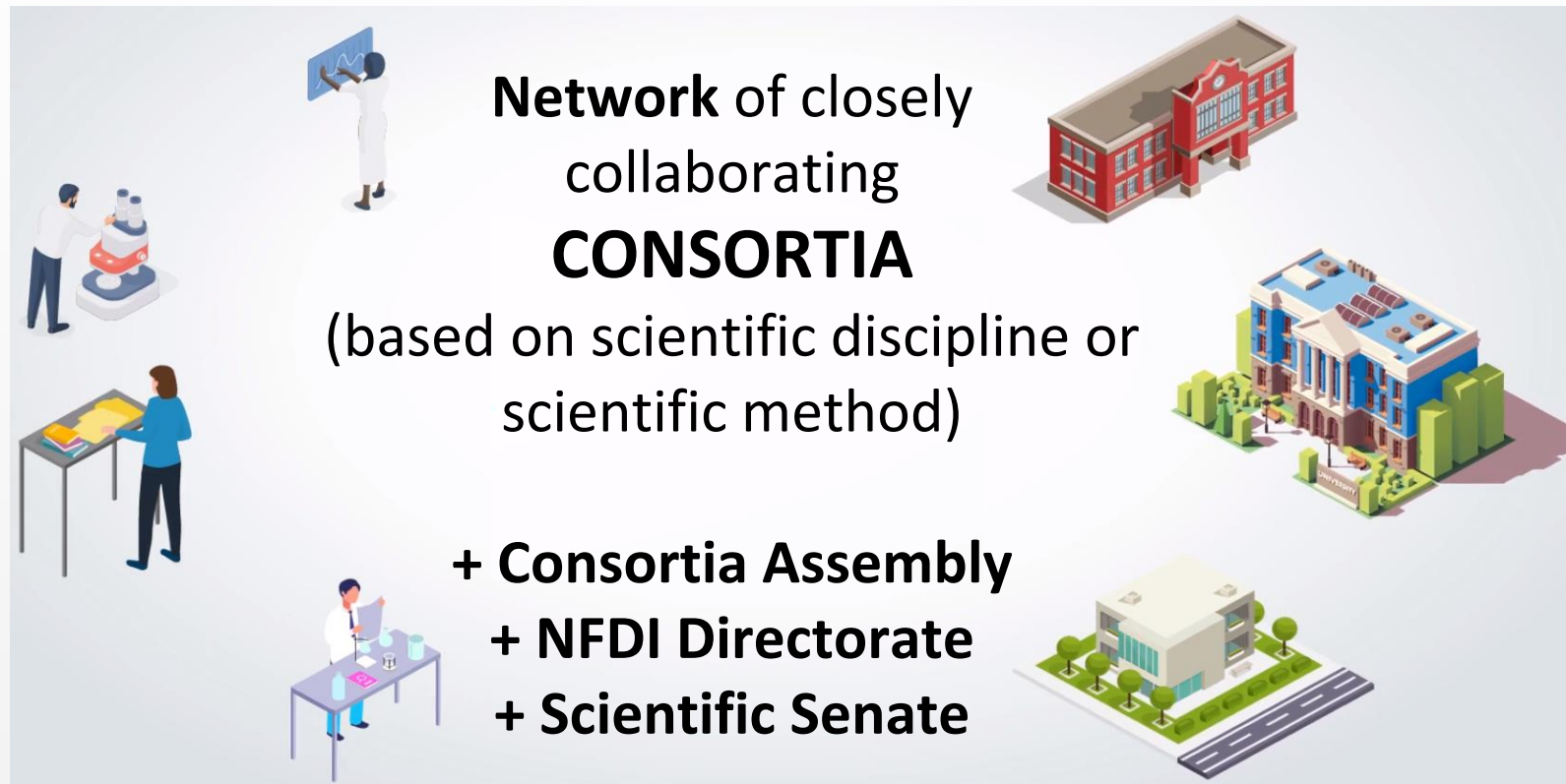
NFDI4BIOIMAGE Community Meeting 2021

Introduction to the National Research Data Infrastructure (NFDI)

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What is the NFDI?



Adapted from: <https://www.dfg.de/foerderung/programme/nfdi/informationmaterialien/index.html>, copyright: Deutsche Forschungsgemeinschaft

- Goal: *up to 30 consortia* after three rounds of applications (2019-2021)
- Total funding: **70 mio € / per year** (over 10 years)

“The aim (...) is to systematically manage scientific and research data, provide long-term data storage, backup and accessibility, and network the data both nationally and internationally.”

<https://www.dfg.de/foerderung/programme/nfdi/>

FAIR
principles

Wilkinson et al. (2016) Sci Data

The NFDI in a nutshell

- **Science-driven** (needs-based, bottom-up) solutions for RDM
 - “from the community for the community”
 - bring people together: scientists, IT-providers, librarians, etc...
- **Collaboration across all NFDI consortia** instead of competition (*one* NFDI)
 - especially on “cross-cutting topics”
 - contribute metadata standards
- **Connect with international activities**, become strong entity in the international landscape
- **“Invest into people, not into metal”**
 - Foster a culture of data sharing and open science



Establishing the NFDI in Germany



orchestrates
the process

- **science-driven**
- **bottom-up**



NFDI as non-profit
association

2019 NFDI
conference

2020 NFDI
conference

2021 NFDI
conference



Bund-Länder-
Vereinbarung
21.12.18

Sep. 2019:
22 applications

Sep. 2020:
17 applications

Nov 2nd, 2021:
3rd & last call for
applications

9 consortia
funded

10 consortia
funded



How is a consortium structured?

- **1 applicant institution** (HHU, spokesperson) (distributes funds)
representative within NFDI and to the community
formal responsibilities for funding, regulations, reporting, etc
in-kind contribution by applicant institution expected
- **Co-applicant institutions** (Co-spokespersons) (receive funds from applicant)
Leading Task Areas, contribute to consortium significantly;
in kind-contribution by co-applicant institutions expected
- **Participants (PTP)** (institution or person) (indirect funds via co-applicants)
collaborate with consortia on a sustained basis, minor work programme responsibility,
project-based contribution
- Informal role in NFDI4BI: **Community Use Cases** (CUC) (no funds, but tools and support)
Try out solutions, software, other deliverable, etc. - providing feedback.

The 19 funded NFDI consortia

Round 1 – starting October 2020

Titel	Link
DataPLANT - Data in Plant research (Biology)	http://nfdi4plants.de/
GHGA - German Human Genome Archive (Medicine)	https://ghga.dkfz.de/
KonsortSWD - Consortium for the Social, Behavioural, Educational, and Economic Sciences (Social Sciences)	https://www.konsortswd.de/
NFDI4BioDiversität - Biodiversity, Ecology & Environmental Data (Biology)	https://www.nfdi4biodiversity.org/
NFDI4Cat - NFDI for Catalysis-Related Sciences (Chemistry)	http://gecats.org/NFDI4Cat.html
NFDI4Chem - Chemistry Consortium in the NFDI (Chemistry)	https://www.nfdi4chem.de/
NFDI4Culture - Consortium for research data on material and immaterial cultural heritage (Humanities)	https://nfdi4culture.de/
NFDI4Health - National Research Data Infrastructure for Personal Health Data (Medicine)	https://www.nfdi4health.de/
NFDI4Ing - National Research Data Infrastructure for Engineering Sciences (Engineering Sciences)	https://nfdi4ing.de/

Round 2 – starting October 2021

Titel	Link
BERD@NFDI - NFDI for Business, Economic and Related Data (Social and Behavioural Sciences)	https://www.berd-nfdi.de/
DAPHNE4NFDI - DATA from PHoton and Neutron Experiments for NFDI (Physics)	https://www.sni-portal.de/de/daphne-nfdi/daphne-nfdi
FAIRmat - FAIR Data Infrastructure for Condensed-Matter Physics and the Chemical Physics of Solids (Physics)	https://www.fair-di.eu/fairmat/fairmat_/consortium
MaRDI - Mathematical Research Data Initiative (Mathematics)	https://www.mardi4nfdi.de/
NFDI4DataScience - NFDI for Data Science and Artificial Intelligence (Computer Science, Systems and Electrical Engineering)	No website yet
NFDI4Earth - NFDI Consortium Earth System Sciences (Geosciences)	https://www.nfdi4earth.de/
NFDI4Microbiota - National Research Data Infrastructure for Microbiota Research (Life Sciences)	https://nfdi4microbiota.de/
NFDI-MatWerk - National Research Data Infrastructure for Materials Science & Engineering (Materials Science and Engineering)	https://nfdi-matwerk.de/
PUNCH4NFDI - Particles, Universe, NuClei and Hadrons for the NFDI (Physics)	https://www.punch4nfdi.de/
Text+ - Language and Text Based Research Data Infrastructure (Humanities)	https://www.text-plus.org/

Topics of cross-disciplinary interest, collaborative work across consortia, e.g.:

- Overarching (meta)data standards and formats
- Interfaces & interoperability (e.g., APIs)
- Sustainability (incl. long-term storage)
- Access management (e.g., AAls)
- Common vision of the NFDI and its strategy
- Training, education, new job profiles
- User integration
- Ethical and legal considerations
- etc.

NFDI expert committee defined two categories:

Topics addressed by different groups, e.g.

- governance
- reputation mechanisms
- recruitment of qualified personnel

Basic services

- Avoid parallel & disparate solutions for, e.g.,
 - authorization and authentication interfaces
 - standardized description of software, etc.

The development of the National Research Data Infrastructure (NFDI), Second statement of the NFDI Expert Committee, November 2020, https://www.dfg.de/download/pdf/foerderung/programme/nfdi/stellungnahme_nfdi_201112_en.pdf

in 2021:

- Basic services can apply as individual consortia
- The NFDI association starts building the first four „sections“
on cross-cutting topics

Leipzig-Berlin-Erklärung zu NFDI-Querschnittsthemen der Infrastrukturentwicklung, June 2020,

<http://doi.org/10.5281/zenodo.3895209>

NFDI-Verein: Übersicht und Perspektiven

Plenarvortrag NFDI-Konferenz, York Sure-Vetter, NFDI-Konferenz 2021, 08.07.2021

https://www.dfg.de/download/pdf/foerderung/programme/nfdi/nfdi_konferenz_2021/nfdi_vortrag_sure_vetter.pdf

Read more

Original „Bund-Länder Vereinbarung“ to establish the NFDI (in German)

<https://www.gwk-bonn.de/fileadmin/Redaktion/Dokumente/Papers/NFDI.pdf>

Introduction, Overview and all relevant documents on the NFDI, provided by the DFG:

https://www.dfg.de/en/research_funding/programmes/nfdi/index.html

NFDI directorate in Karlsruhe:

<https://nfdi.de>

NFDI conference 2021:

https://www.dfg.de/en/research_funding/programmes/nfdi/conference_2021/index.html

NFDI4BIOIMAGE website

<https://nfdi4bioimage.de>

Thank you!

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