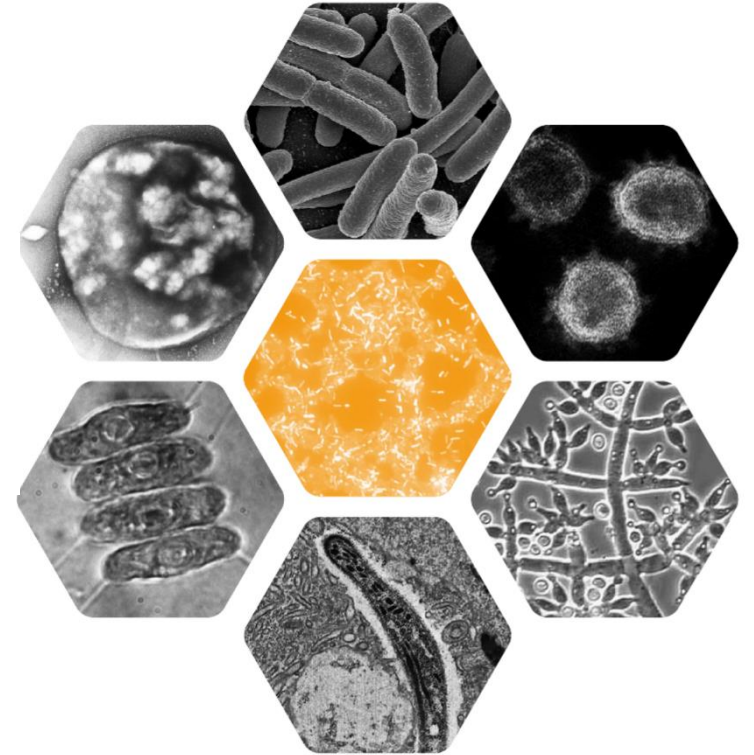


# NFDI4Microbiota

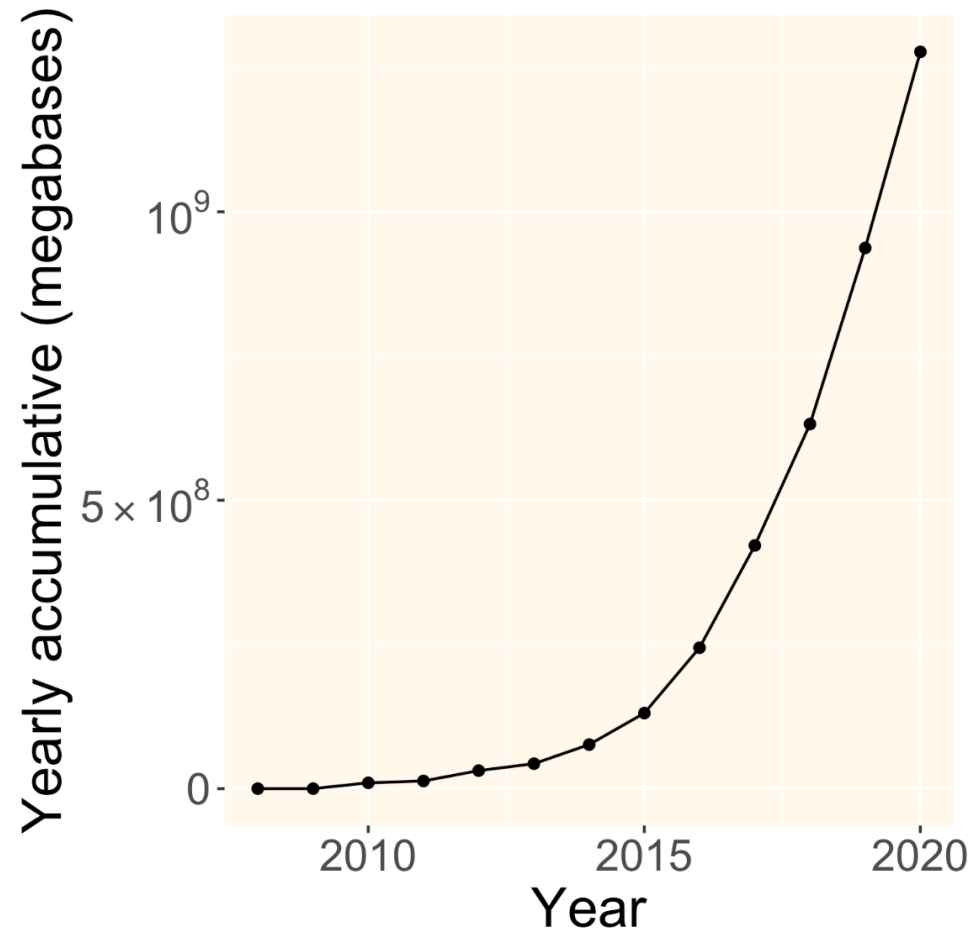
- Services to make data FAIR and Open

Barbara Götz (ZB MED)

21.06.2023 - Thüringer FDM-Tage 2023



# Situation in Microbiology – rapidly growing data production



## Types of data:

- Omics
- Imaging
- Taxonomic data
- Subdomain-specific data

Metagenomic sequencing data submitted to SRA (Sequence Read Archive (service by NCBI))

# SCIENTIFIC DATA

Amended: Addendum

OPEN

SUBJECT CATEGORIES

» Research data  
» Publication  
characteristics

## Comment: The FAIR Guiding Principles for scientific data management and stewardship

Mark D. Wilkinson *et al.*<sup>#</sup>

There is an urgent need to improve the infrastructure supporting the reuse of scholarly data. A diverse set of stakeholders—representing academia, industry, funding agencies, and scholarly publishers—have come together to design and jointly endorse a concise and measureable set of principles that we refer to as the FAIR Data Principles. The intent is that these may act as a guideline for those wishing to enhance the reusability of their data holdings. Distinct from peer initiatives that focus on the human scholar, the FAIR Principles put specific emphasis on enhancing the ability of machines to automatically find and use the data, in addition to supporting its reuse by individuals. This Comment is the first formal publication of the FAIR Principles, and includes the rationale behind them, and some exemplar implementations in the community.

Received: 10 December 2015

Accepted: 12 February 2016

Published: 15 March 2016


Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3, 160018 (2016). <https://doi.org/10.1038/sdata.2016.18>



Adapted from:

The Turing Way Community, & Scriberia. (2022). Illustrations from The Turing Way: Shared under CC-BY 4.0 for reuse. Zenodo. <https://doi.org/10.5281/zenodo.6821117>



 Deutsche  
Forschungsgemeinschaft

2022

X

Research Funding

Funded Projects

DFG in Profile

Home > Funding > Calls for Proposals - Information for Researchers > 2022 > Specification of Requirements Relating to the Handling of Research Data in Funding Proposals

**Information for Researchers No. 25 | 14 March 2022**

## Specification of Requirements Relating to the Handling of Research Data in Funding Proposals

**It will now be mandatory for proposals to include details**

One essential component of quality-oriented, compatible research is that the data a research project is based on or generates is handled in a way that is appropriate to the subject-specific discipline. The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) has now specified its requirements for the handling of research data in proposals for individual and collaborative projects and has made it mandatory to include details.

[https://www.dfg.de/en/research\\_funding/announcements\\_proposals/2022/info\\_wissenschaft\\_22\\_25/index.html](https://www.dfg.de/en/research_funding/announcements_proposals/2022/info_wissenschaft_22_25/index.html)

- ⦿ Following good scientific practice
- ⦿ Research Data Management
- ⦿ Data quality/Harmonization
- ⦿ Finding complementary/comparable data
- ⦿ Data processing and analysis
  - Skills
  - Databases
  - Tools/software
  - Computational infrastructure
- ⦿ Making data, software and models FAIR and Open



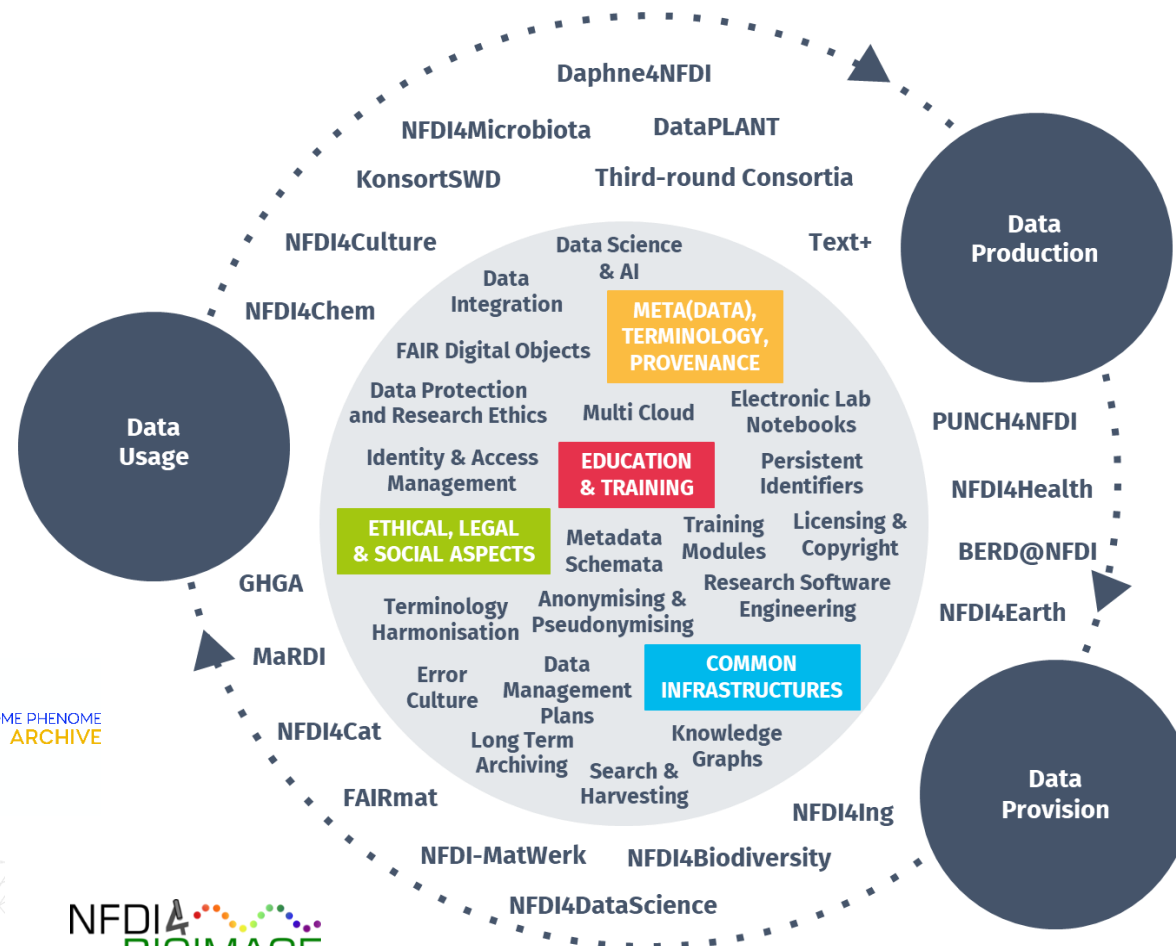
NFDI-wide collaboration, mostly with:

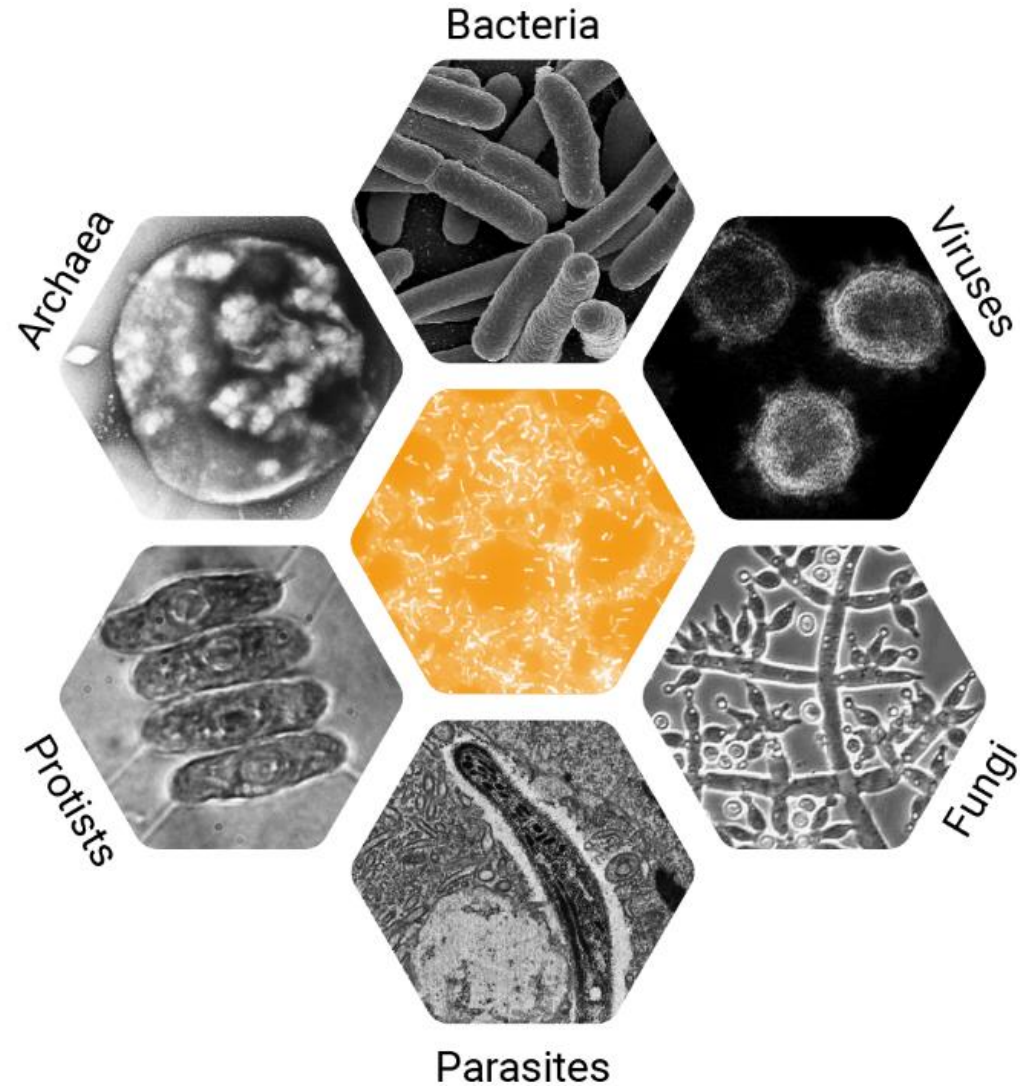


NFDI 4  
**BIODIVERSITY**  
BIODIVERSITY, ECOLOGY & ENVIRONMENTAL DATA



NFDI4  
**BIOIMAGE**

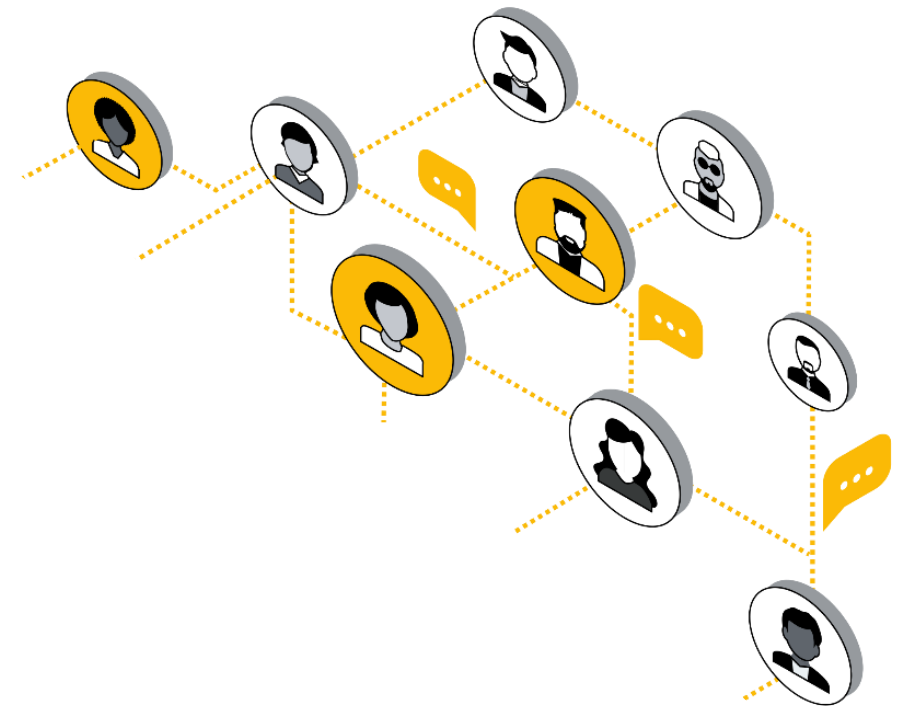


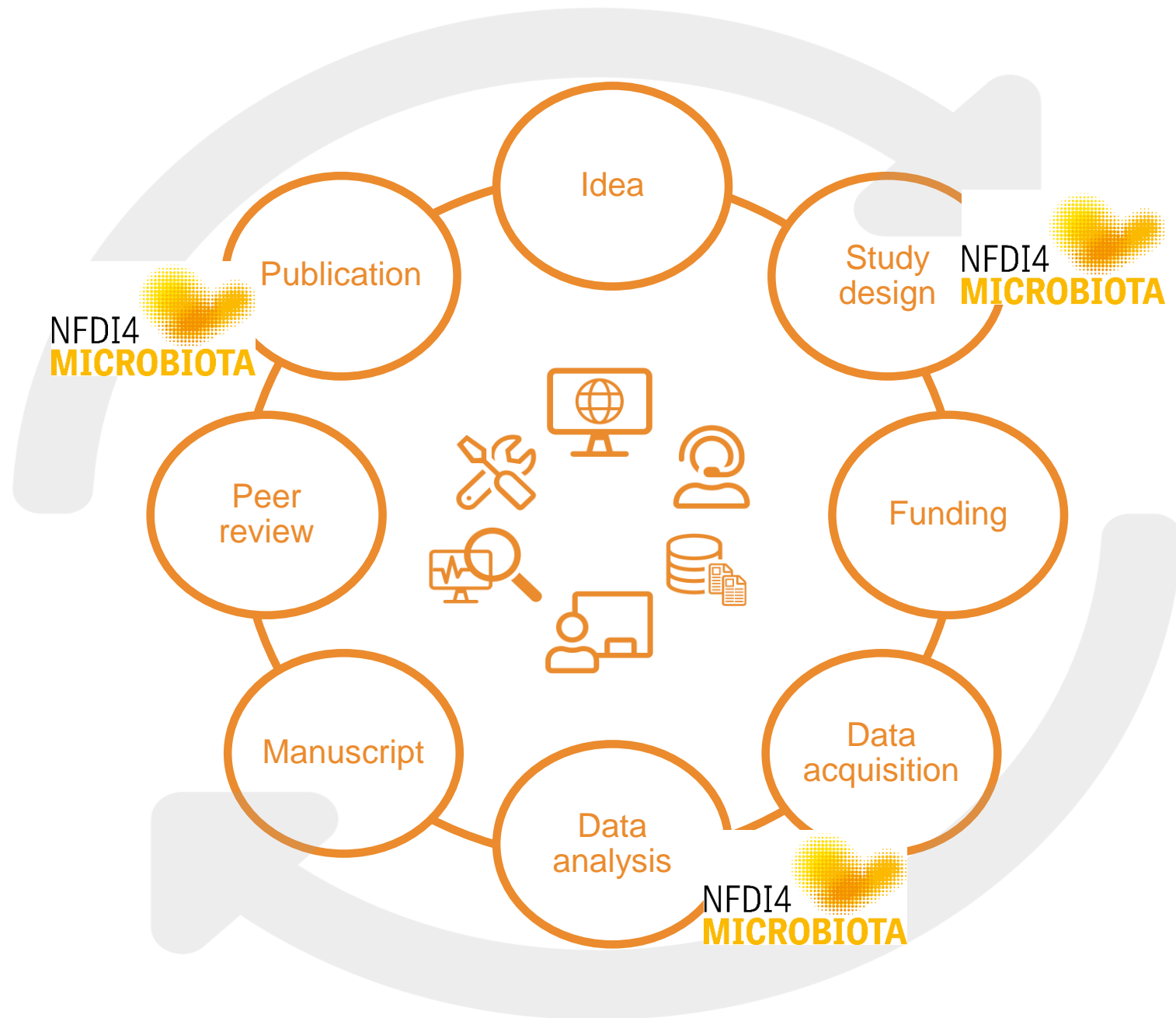




**Vision:** Enabling microbiologists to easily translate research data into a deep understanding of microbial species and their interactions on a molecular level

**Mission:** Becoming a central hub to support researchers from the German microbiology research community with data access, data analysis, (meta)data standards and training





# The consortium

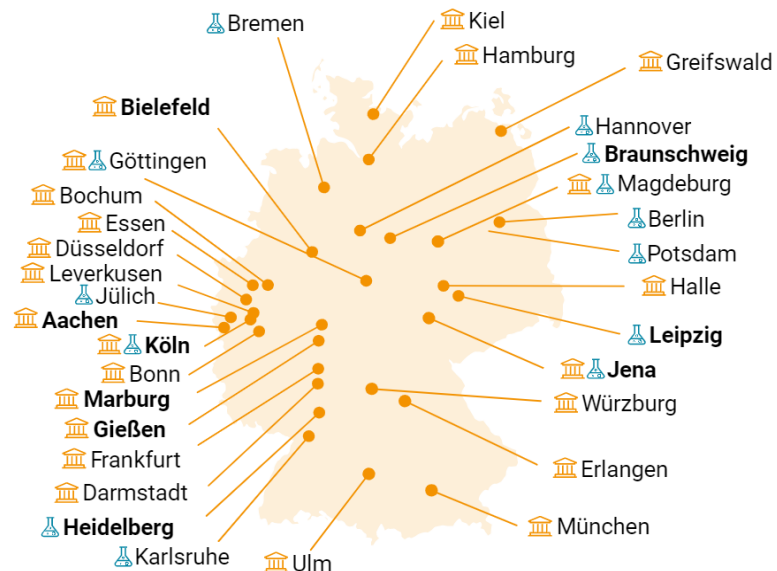
- 10 co-applicants and 59 participants
- 5 supporting societies and 22 international partners

**>50  
Participants**

**10  
(Co-)Applicants**

**5  
Associations**

VAAM  
GFV  
DGHM  
DGP  
DGfM

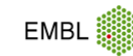


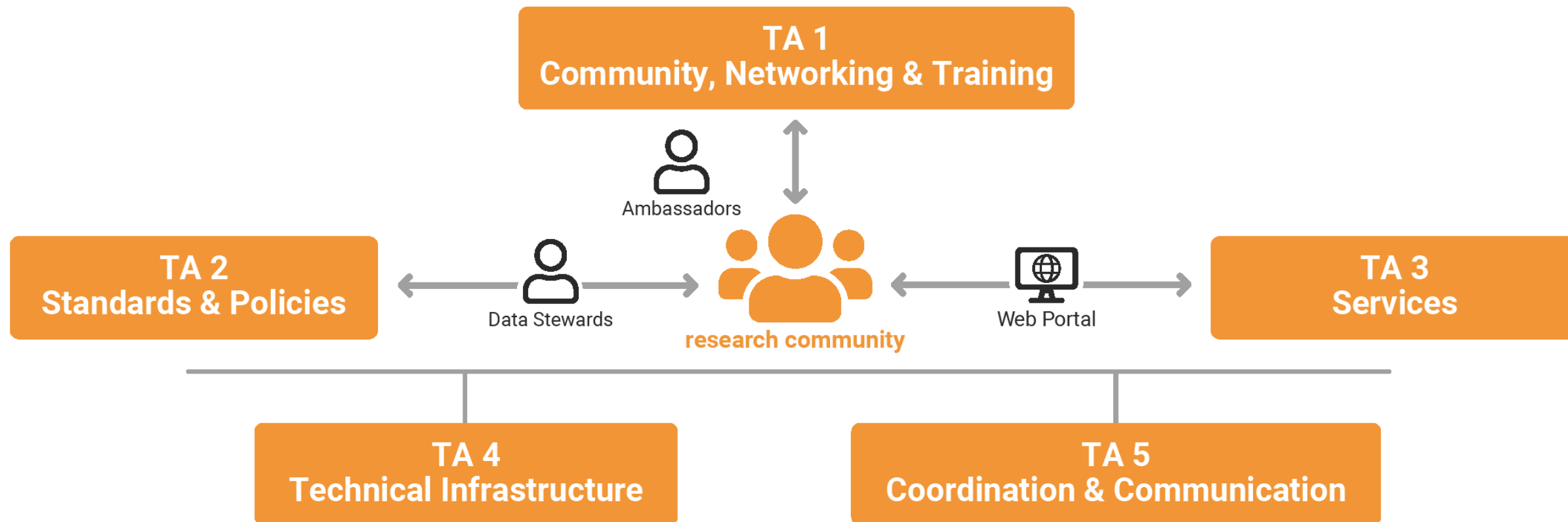
**9  
Research  
Consortia**

SPP 2330  
SFB 1221  
SPP 2141  
SFB 1371  
TRR 124  
SPP 2002  
EXC 2051  
SFB 1382  
Fraunhofer CIMD

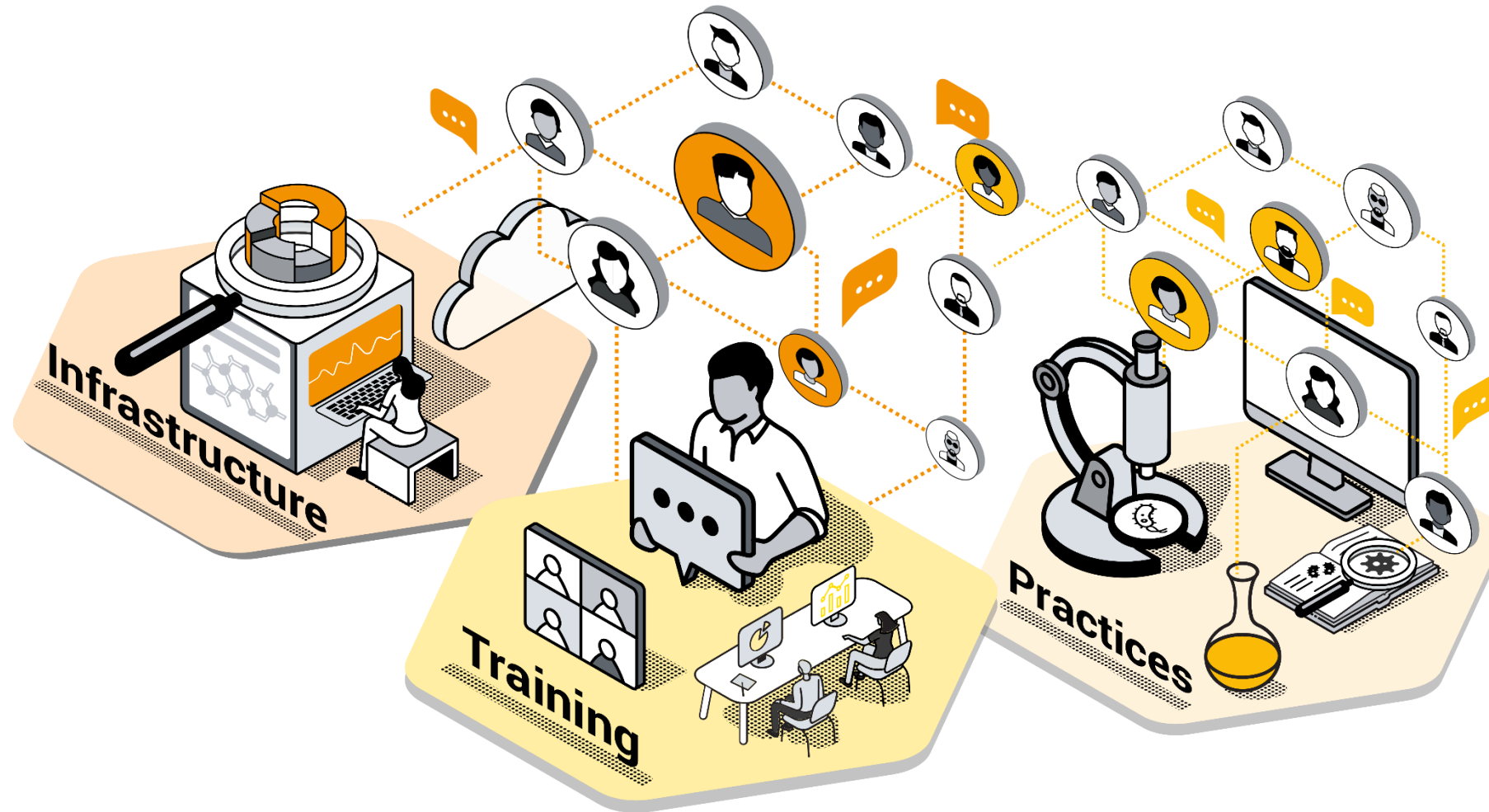
**Universities**

**Research  
Institutes**



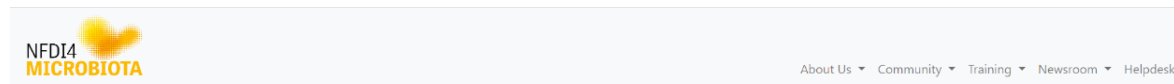


# National Research Data Infrastructure for Microbiota Research





- Training aimed for students and professionals in the field of microbiology
- Training Catalog:
  - FAIR Data / Research Data Management
  - General Programming / Data Science Fundamentals
  - Data Generation / Data Analysis
  - Infrastructure & Workflows
- Training announcement calendar



## Training

Within NFDI4Microbiota the support of the community by education and training is an important goal. Therefore, the consortium offers training on different topics and for different disciplines.

Show 10 entries

Search:

Title	Organizer	Host	Date(s)	Time	Type*	Event website / registration link
3-day Workshop on Nanopore Sequencing		Friedrich Schiller University Jena	2023-04-26 - 2023-04-28	09:00 - 16:00	Open	<a href="#">🔗</a>
Introduction to R		HZI	2023-05-15 - 2023-05-17	10:00 - 13:00	Open	<a href="#">🔗</a>
Workshop on Research Data Management		Martin Luther University of Halle-Wittenberg	2023-06-13 - 2023-06-14	09:00 - 13:00	Closed	<a href="#">🔗</a>
Workshop on Research Data Management		Carl von Ossietzky University of Oldenburg	2023-06-27 - 2023-06-29	09:00 - 12:30	Closed	<a href="#">🔗</a>
Workshop on BacDive, MediaDive and StrainInfo		Leibniz Institute DSMZ	2023-10-11 - 2023-10-11	14:00 - 16:00	Open	<a href="#">🔗</a>



## Knowledge Base (<https://nfdi4microbiota.github.io/nfdi4microbiota-knowledge-base/>)

- Information about the NFDI4Microbiota consortium
- Information / References for the microbiology community
- Information regarding Research Data Management & FAIR Data
- Guidelines on good practices and standards (workflows, SOPs)
- Glossary
- Training material
- etc.

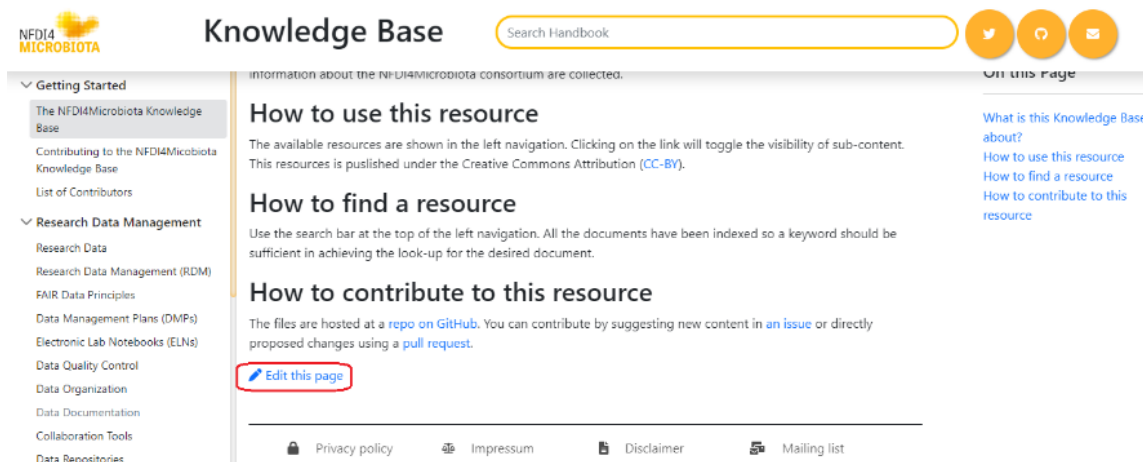


Contributions from the community are welcome

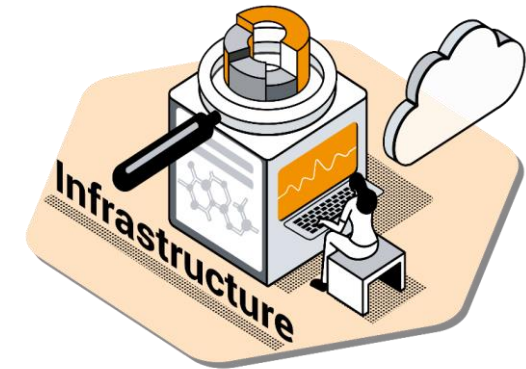
- Review process under development atm

## Metadata Standards (coming soon)

## More to come

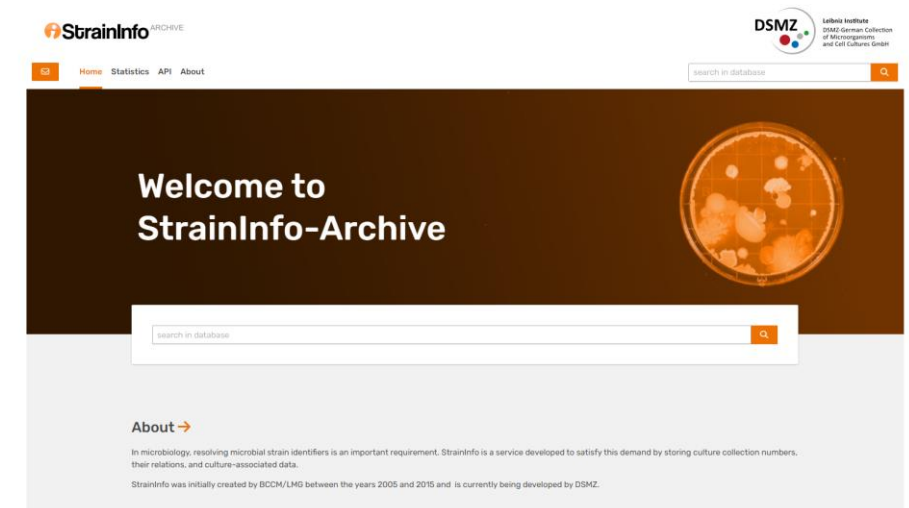


- Collected on our web portal ([www.nfdi4microbiota.de](http://www.nfdi4microbiota.de))
- Knowledge Base (<https://nfdi4microbiota.github.io/nfdi4microbiota-knowledge-base/>)
- Helpdesk (<https://nfdi4microbiota.de/contact-form/>)
- Newsletter
- Training



## Under development:

- First prototype of Virus Database (FSU Jena)
- Alpha version of StrainInfo-Archive (DSMZ)
- Metadata Standards and Workflows
- Data submission

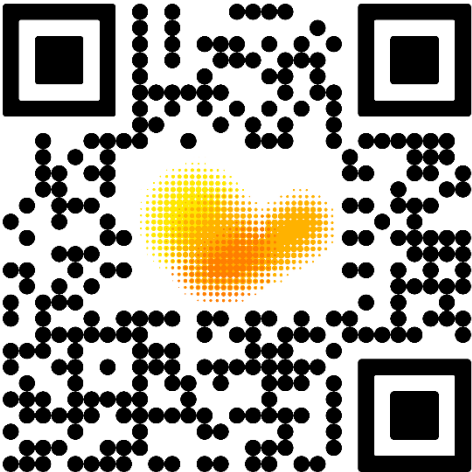


# Services: Web portal as a One-Stop-Shop

Democratize access to **microbiota** data and high-end computational analyzes

The mission of the NFDI4**Microbiota** consortium is to be the central hub in Germany for supporting the **microbiology community** with access to data, analysis services, data/metadata standards, and training.

Learn more



## Training

Our consortium offers different training courses on topics like RDM, several data analysis tools, etc...

All Training


## Events

All Events

- DEC 12** Extending the NFDI4Microbiota Knowledge Base [Details](#)
- NOV 07** NFDI4Microbiota Annual conference 2022 - internal [Details](#)
- OCT 20** Integrated Microbiome Research via standardisation with the NFDI4Microbiota [Details](#)

## News

All News

-  Wind of change - sharing is caring! How to improve research data and its benefits in the Life Sciences [Read more..](#)
-  Workshop by NFDI4Microbiota at the 1st Biohackathon Germany [Read more..](#)
-  Feedback from NFDI4Health, GHGA and NFDI4Microbiota on the positions and recommendations of the German Council of Science and Humanities - Digitization and data use for health research and care. [Read more..](#)

# How to get in touch

- Present at a wide variety of microbiology-focused conferences (VAAM, DGHM, etc.)
- Helpdesk (<https://nfdi4microbiota.de/contact-form/>)
- Twitter ([@nfdi4microbiota](https://twitter.com/nfdi4microbiota))
- Mastodon (<https://nfdi.social/@NFDI4Microbiota>)
- Ambassador program
- Training

A screenshot of the NFDI4Microbiota website's contact form and FAQ section. The contact form includes fields for "Full Name", "Contact Email Address", "Issue type" (a dropdown menu), and a "Message" text area. There is also a "Security question" dropdown and a checkbox for agreeing to the privacy policy. The FAQ section lists several questions with dropdown arrows. A black arrow points from the "Issue type" dropdown in the contact form to a separate window showing the "Issue type" dropdown menu with options: "Select", "Training", "Use Cases", "Research Data Management", "Software", "Services", "Ambassadors", "Collaboration & Outreach", and "Others".



- Metadata Standards, SOPs + Workflows published
- Data submission via web portal
- Community engagement:
  - more Use Cases (6 active atm)
  - community events like our annual community workshop or our annual conference (end of 2024)
  - ambassador program
  - community contribution to Knowledge Base

# Thank you!



[www.nfdi4microbiota.de](http://www.nfdi4microbiota.de)  
[@nfdi4microbiota](https://twitter.com/nfdi4microbiota)