



NFDI 4
BIODIVERSITY

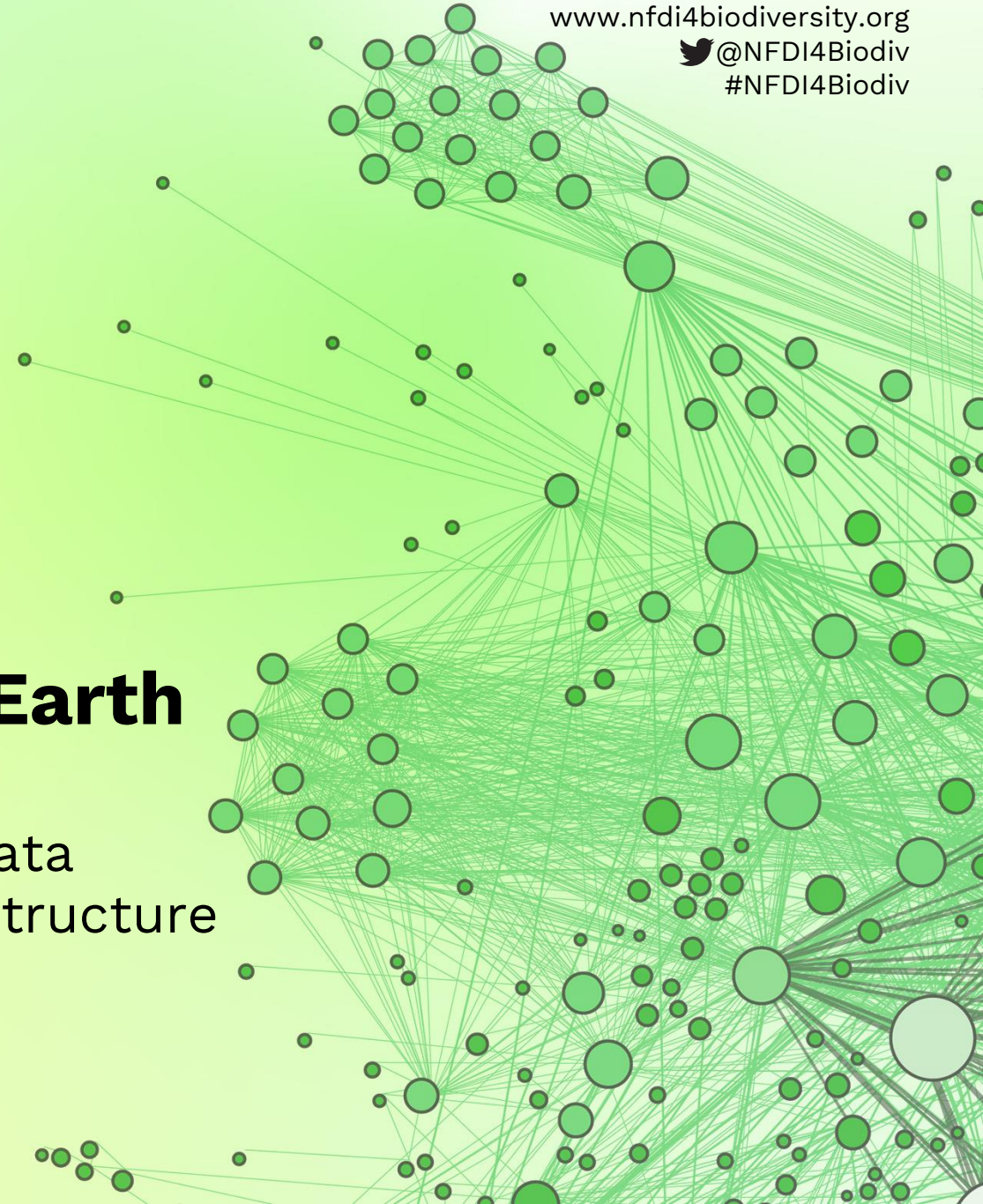
www.nfdi4biodiversity.org

[@NFDI4Biodiv](https://twitter.com/NFDI4Biodiv)
[#NFDI4Biodiv](https://twitter.com/NFDI4Biodiv)

NFDI4Biodiversity meets NFDI4Earth

Biodiversity, Ecological and Environmental Data
in the German National Research Data Infrastructure

2022-06-10



Facets of Biodiversity

Very specific data types – often combined with geospatial data. Time series, reference lists and taxonomies



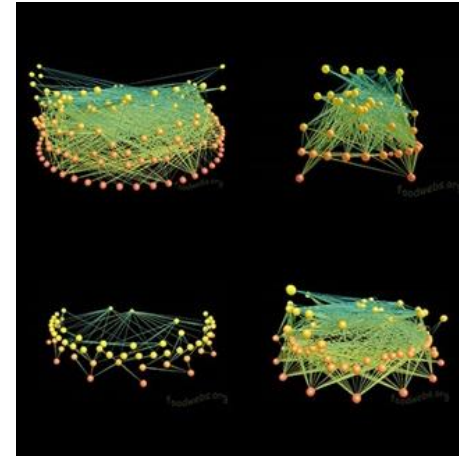
species



genes



functions



ecosystems



interactions

Data types and archives

Typical types of data our partners can handle:

- Occurrence Data
- Environmental data (e.g. temperature, rainfall, salinity)
- Trait data (e.g. seed number and mass)
- Molecular data (e.g. sequences)
- Experimental and laboratory measurements
- Multimedia (photographs, audio, video), e.g. of observed specimens
- Orthophotos produced using a drone
- Digital surface models produced using a drone and assigned software
- Model code
- Statistics

Data Centers specialized on Nucleotide, Plant and Environmental Data



Data Centers at Natural Science Collections



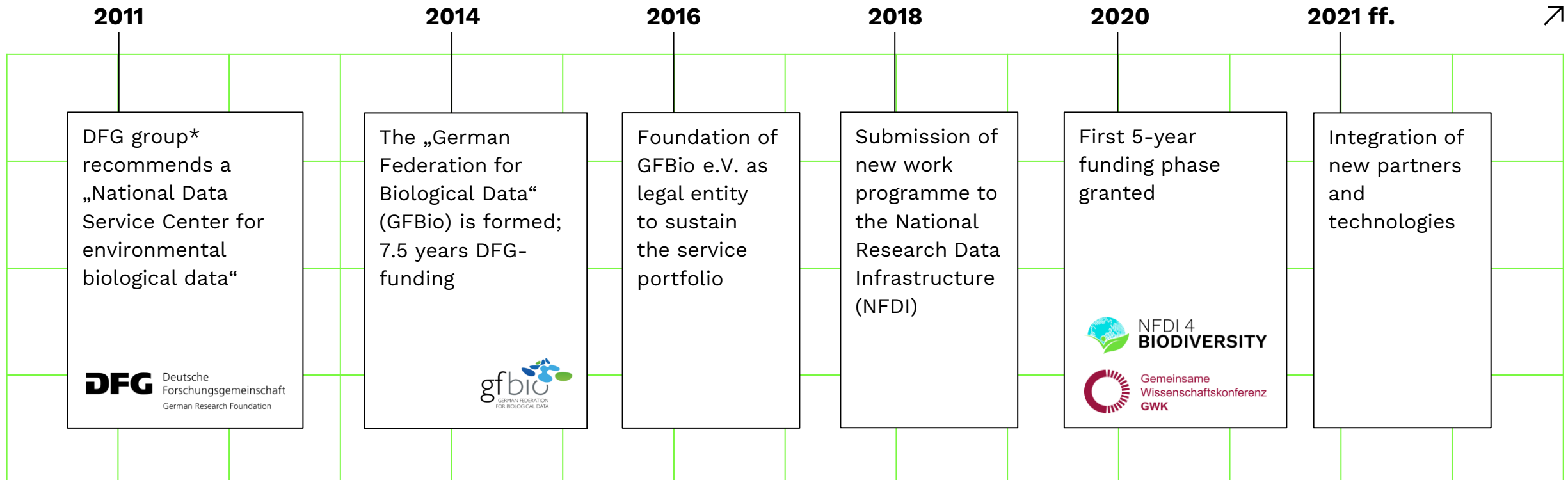
Core service portfolio for researchers

powered by GFBio, Bremen



Our roots

*AG Biodiversitätsdaten der
Senatskommission für
Biodiversitätsforschung



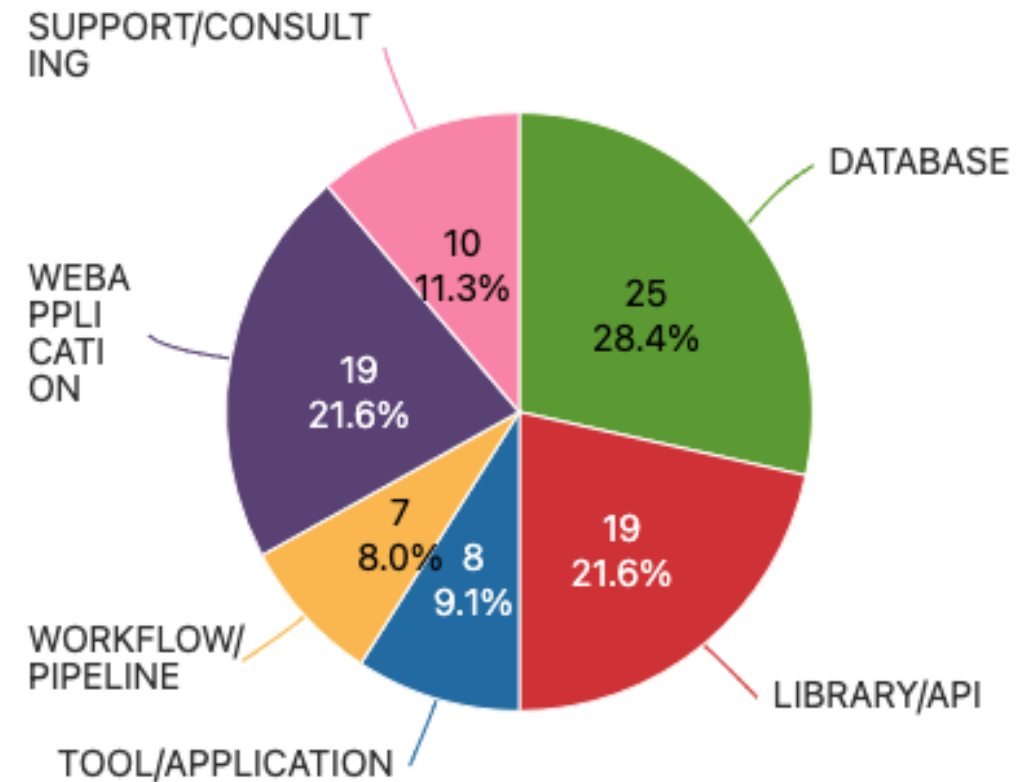
The Project



Funded through the National Research Data Infrastructure NFDI DFG Project No. 442032008		
Up to 13.6 Mio EUR funding for five years	Consortium of 50 partners Academia, Scientific service centers, State Agencies and Societies/Citizen Science	> 120 Active experts & staff

Pipeline of services

- Current work in TA3: categorisation of resources brought in by partners (n = 88, and rising)
- Planned: Profiling and guiding selected services to certification
- Goal: consolidation of tool and technical service backbone


























Mobilisation of data and services

Use Case Projects



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01  eLTER	02  Plants - IPK	03  AMMOD Hub	04  DE Barcode of Life	05  Marine Life	06  Land use/cover
07  DNAquaNet	08  Naturgucker	09  Insekten Sachsen	10  NFDI4Agri	11  MultiBase, LA	12  NP Bayer. Wald
13  MultiBase, LA (2)	14  AlgaTerra	15  GdO - Libellen	16  Ara-Ges - Spinnen	17  NetPhyD	18  Gfl - Fische
19  Viz Tools	20  NP Hunsrück	21  MultiBase, LA (3)	22  iDiv PlantHub	23  ALA-DE	...

NFD4Biodiversity meets NFDI4Earth

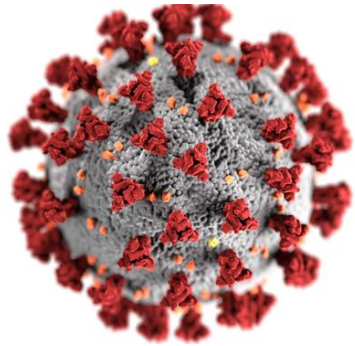
“Identify the most severe risks on a global scale over the next 10 years”

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological



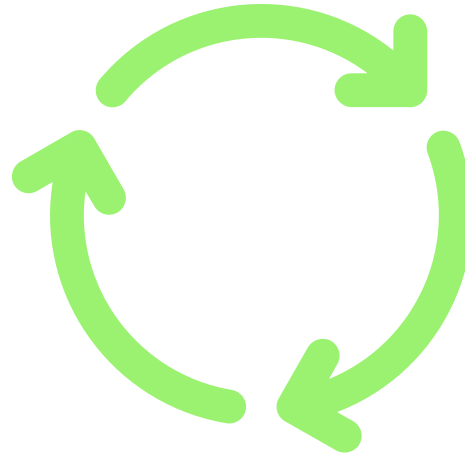
Source: World Economic Forum Global Risks Perception Survey 2021-2022

Example: COVID-19



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BIODIVERSITY, ECOLOGY & ENVIRONMENTAL DATA

NFDI4HEALTH
NATIONALE FORSCHUNGSDATENINFRASTRUKTUR
FÜR PERSONENBEZOGENE GESUNDHEITSDATEN



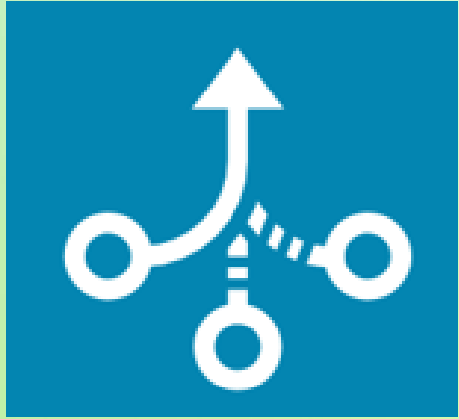
NFDI4Earth

KonsortSWD.
Consortium for the Social, Behavioural,
Educational, and Economic Sciences

NFDI e.V. Sections

Association members join forces and create synergies

<p>Common Infrastructures & Interoperability (Research Data Commons)</p> <p style="text-align: right;">↘</p>	<p>(Meta)data, Terminologies, Provenience</p> <p style="text-align: right;">↘</p>	<p>Training & Education</p> <p style="text-align: right;">↘</p>	<p>Ethical, Legal & Social Aspects</p> <p style="text-align: right;">↘</p>
<p>LEAD</p>	<p>LEAD</p>	<p>LEAD</p>	<p>LEAD</p>
<p>NFDI4Biodiversity (GFBio e.V.) & NFDI4Cat (Fraunhofer)</p>	<p>NFDI4Chem (TIB) & NFDI4Culture (HS Mainz)</p>	<p>NFDI4Ing (TU Darmstadt) & NFDI4Chem (RWTH Aachen)</p>	<p>NFDI4Culture (KIT) & NFDI4Health (Uni Göttingen)</p>





Task Area 3

,2Interoperate⁶



Stephan Frickenhaus, Claus Weiland, Dominik Hezel, Frederik Tilmann, Florian Ott,
Thomas Rose, Jonas Grieb



Slides modified from Stephan Frickenhaus

TA3 Overview

	<p>NFDI4Earth2Participate M1.1: Earth System Science Pilots * M1.2: Incubator Lab M1.3: Education and Training Materials and Services * M1.4: NFDI4Earth Academy *</p>	<p>Coordination H. Gödde M. Mahecha M. Sester C. Keßler</p> 	Task Area 1
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	<p>NFDI4Earth2Facilitate M2.1: OneStop4All M2.2: User Support * M2.3: Governmental Data * M2.4: Data in Long-Term Storage * M2.5: Advancing Tools</p>	<p>Coordination P. Braesicke M. Reichstein H. Thiemann</p> 	Task Area 2
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	<p>NFDI4Earth2Interoperate M3.1: Synthesis of a Sustainable NFDI4Earth Architecture * M3.2: Common Standards for FAIR ESS Data * M3.3: NFDI Commons * M3.4: International Networking & Embedding *</p>	<p>Coordination F. Tilmann S. Frickenhaus H. Marschall C. Weiland</p> 	Task Area 3
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	<p>NFDI4Earth2Coordinate M4.1: Coordination, Collaborative and Sustainable Governance of NFDI4Earth * M4.2: Towards a Cultural Change in ESS Research Data Management * M4.3: Central Support Services for the federated NFDI4Earth *</p>	<p>Coordination L. Bernard W. Nagel</p> 	Task Area 4
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Overarching Goal

Infrastructure Perspective:
Improve Interoperability by
Convergence & Integration

Measure 3.3 NFDI Commons

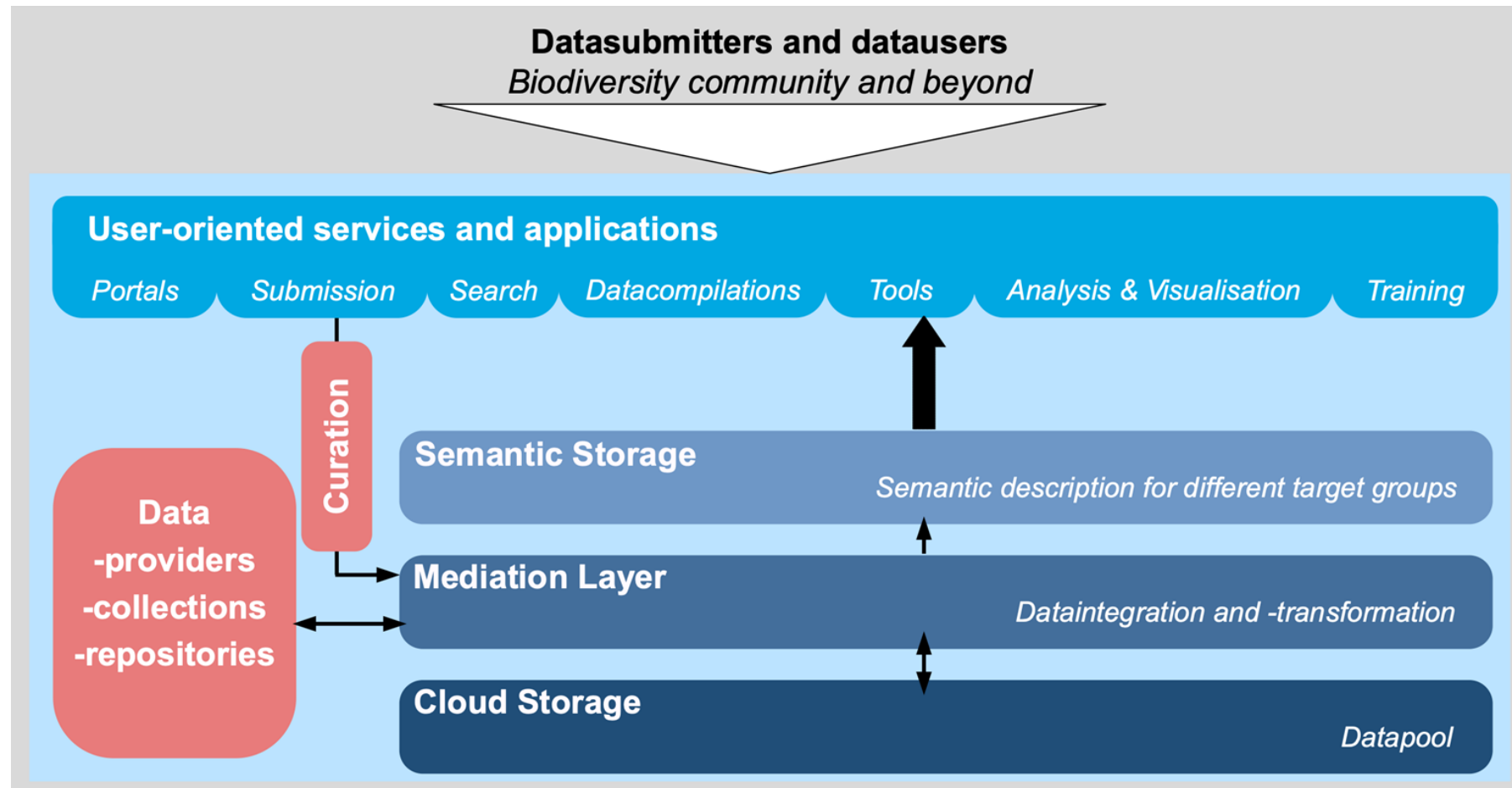
Contact & communicate with related organisations & initiatives within Germany

- Within the NFDI & State-FDIs
Exchange best practices with other consortia,
participation in NFDI sections (RDC, Metadata)
- With Authorities, Organisations & Initiatives
Geological/Weather/... Services, Rfll, RDA-de, ...
- Within Academia
Universities, Research Institutes, Meetings



RDC: Multi-Cloud-based technical platform

under development



Measure 3.3 NFDI Commons

Compiling, producing & editing the Living Handbook

- Drafting and defining templates & entry types
Database, Service, Software, Documentation, Best Practices, Architecture, Instructions, Manuals, Tutorials, ...
- Definition of user archetypes & user stories
User types, level of competence, application types
- Development of technical concept & implementation
Wiki, Docusaurus, ...



Thank you!



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