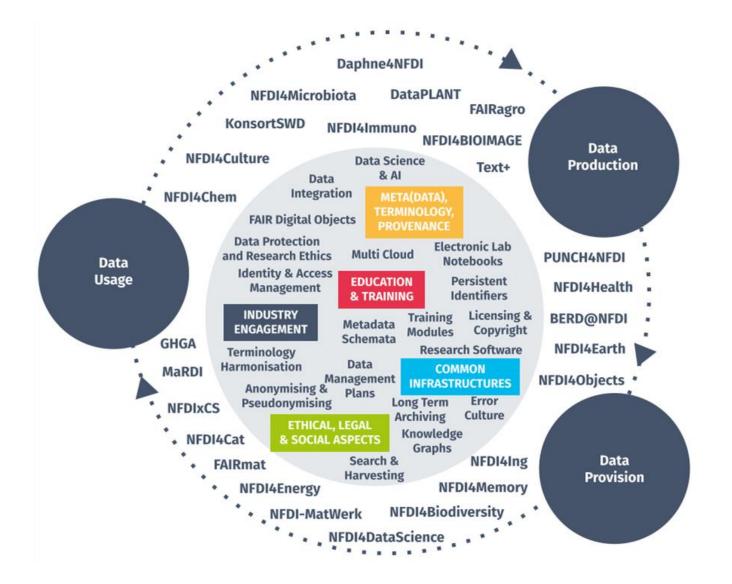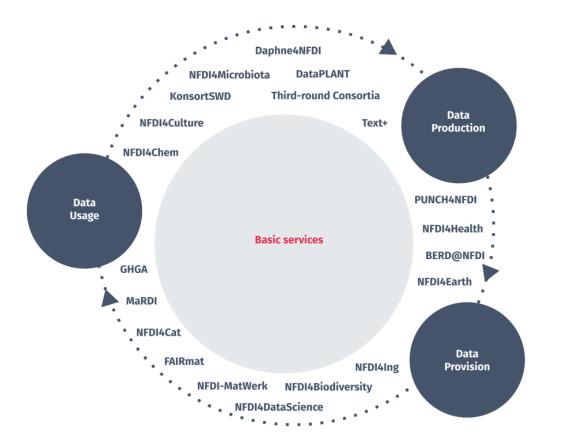# Presentation Materials

- This slide deck introduces all major elements of the Base4NFDI proposal.
- The slides are commented in the notes to help provide necessary context
- Illustrations are CC-BY-ND. Please use them as-is and do not modify.
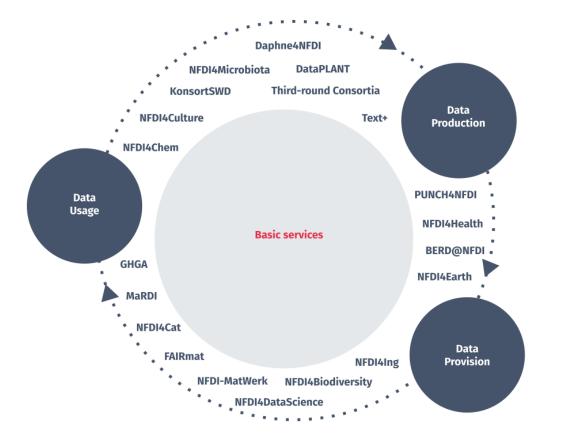
Base4NFDI
Basic Services for NFDI

Why NFDI needs Basic Services

- Consortia represent their **specific domains** and their infrastructural expertise including domain-specific basic-services
- Interoperability and cost-efficiency in NFDI however, requires **NFDI-wide basic services**

What is a Basic Service?

- *A service is a 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 shall create added value for the consortia and their users. Typically based on bundling existing services. It is characterized by scalability and sustainable operating models, which require a certain degree of technicality. A basic service must be effective over time and in terms of usage, and must be trackable by KPIs.*

Evolution of Base4NFDI

NFDI Expert Committee statement on basic services

Leipzig-Berlin Declaration on NFDI Cross-Cutting Topics

9 NFDI Consortia started (first round) addressing RDM needs of their communities

4 NFDI Sections established to address cross-cutting topics

NFDI Consortia Statement on Basic Services

NFDI Consortia join into Base4NFDI

9/2019 — **6/2020** — **8/2020** — **10/2020** — **4/2021** — **9/2021** — **10/2021** — **1/2022** — **2/2022** — **2/2022**

Berlin Declaration on NFDI Cross-Cutting Topics

NFDI cross-cutting topics workshop

NFDI cross-cutting topics workshop

10 NFDI Consortia started (second round) addressing RDM needs of their communities

NFDI Sections establish first WG on specific Topics

5

Why NFDI needs Base4NFDI
Who we are

9/2019 — 2/2022

Berlin Declaration on NFDI Cross-Cutting Topics

NFDI Consortia build Base4NFDI to deliver NFDI-wide Basic Services

KonsortSWD   NFDI4Ing

NFDI4Chem

PUNCH4NFDI

GHGA

Daphne4NFDI   Text+

NFDI4Culture

First and Second-round Consortia

BERD@NFDI

NFDI4Cat

FAIRmat   MaRDI

NFDI4Health

NFDI4Earth

NFDI4Biodiversity

NFDI4DataScience

NFDI-MatWerk

DataPLANT

NFDI4Microbiota

NFDI4BIOIMAGE   NFDI4Patho   NFDI4Mobility

NFDIxCS   **Third-round Consortia Initiatives**

NFDI4Objects

NFDI4Memory   NFDI-Neuro

TheoReS   METHODS

NFDI4Energy   FAIRagro

NFDI4Immuno

DeBioData

19 Consortia + **13** Consortia Initiatives = **1** proposal
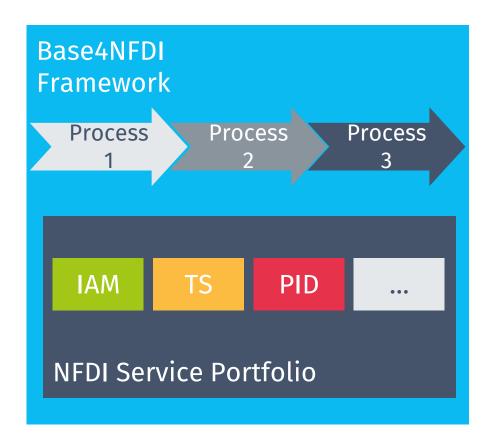
Why NFDI needs Base4NFDI
Basic Services across consortia

- Scientific domains are organised in the NFDI consortia

- Leading infrastructure providers are already part of these consortia

- NFDI Consortia in unique position to determine fit-for-purpose services for RDM support

- NFDI aims to integrate RDM across disciplines, data-types, infrastructure landscapes, … data cultures

- Common, interoperable basic services are core to deliver on promise of integration and long-term operational models

- Joined linkage into EOSC and further international infrastructures

What Base4NFDI will do
Key Deliverables

- **Framework** for user-driven and quality-assured basic service development

- **Agile process** to establish a NFDI-wide basic service portfolio

- **Establish basic services** starting with:
  - Identity and Access Management Service (IAM)
  - Persistent Identifier Service (PID)
  - Terminology Services (TS)

- **Building** on **existing solutions** and **complementing EOSC**

Base4NFDI
Framework

Process 1 → Process 2 → Process 3

IAM TS PID ...

NFDI Service Portfolio

What Base4NFDI will do
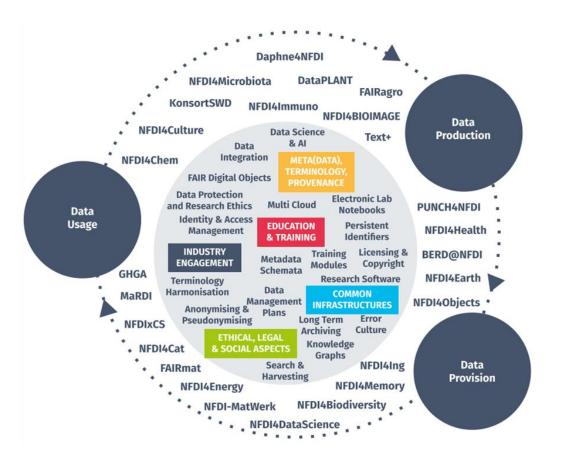## Translate needs & topics in basic services

Base4NFDI provides the framework for

- defining potential basic services

- user-driven requirements analysis

- stepwise development for integrating and ramping-up basic service candidates

- setting up NFDI-wide basic service portfolio

- monitoring and evaluation

- transparent allocation of flexible funding

- consensus building

What Base4NFDI will do
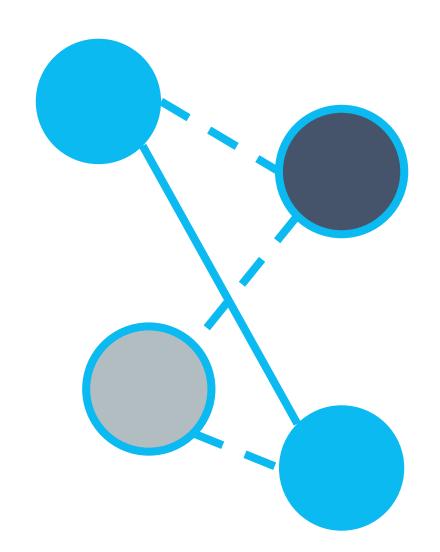Identifying researchers' needs

- Sections of the NFDI Association are the places to identify cross-cutting needs of consortia

- Combine infrastructural & technological expertise and domain knowledge

- Provide expertise, blueprints, and resources for development processes

- Act as incubators for continuously identifying potential basic services
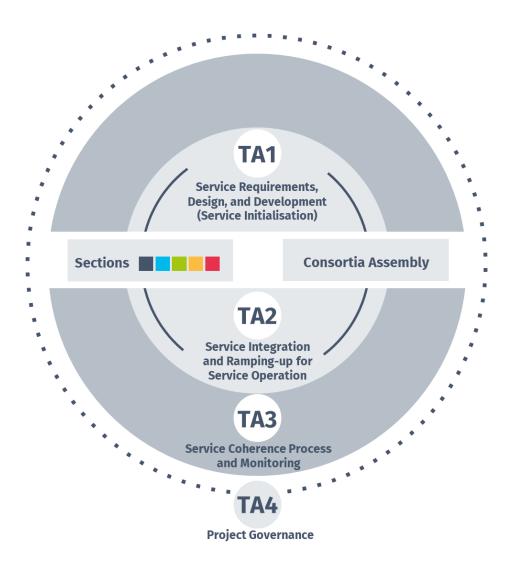
What Base4NFDI will do
One Example: IAM – Identity and Access Management

- Some consortia/communities **without any** solution for identity and access management

- Other communities with **established** but **different** systems (DFN-AAI, DARIAH-AAI, Life-Sciences-AAI)

- NFDI-wide solutions need to **integrate** and **complement** with **EOSC** solutions

- Federation and long-term operation as an organisational and technological challenge

What Base4NFDI will do
Work Program

- TA1: Service Requirements, Design and Development (Service Initialisation)

- TA2: Service Integration and Ramping-up for Service Operation

  - maintaining basic service portfolio

- TA3: Service Coherence Process and Monitoring

  - providing a framework

  - monitoring and evaluation

- TA4: Project Governance

  - transparent allocation of flexible funding

Base4NFDI
manage complexities of integrating and adapting services

- **Service Stewards** will **support the service development** process through all stages of the development (TA1 and TA2). They will ensure a smooth interplay between the Sections, participating consortia and partner organisations involved in the development of a service.
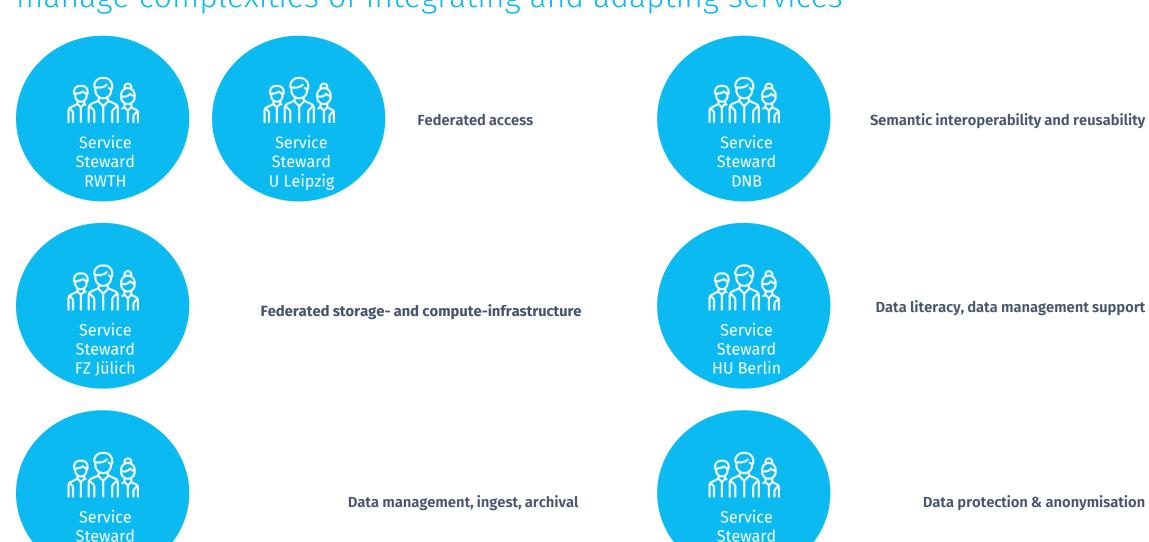
- **Section Liaison Officers** directly **support the work of the Sections** in matters directly related to preparing basic services development strategies, decisions and monitoring (TA3)
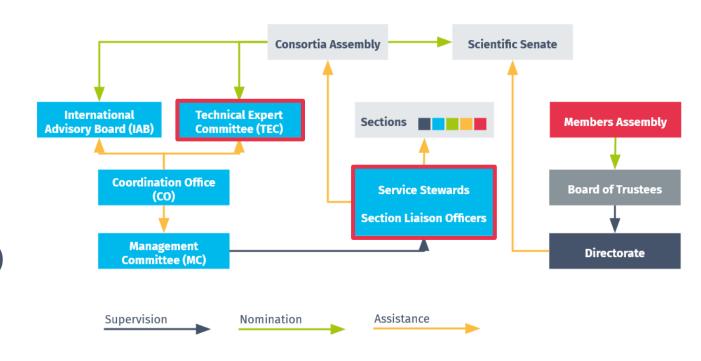
Section Liaison Officers

Service Stewards

Base4NFDI - Service Stewards
manage complexities of integrating and adapting services

Service Steward RWTH

Service Steward U Leipzig

Federated access

Service Steward DNB

Semantic interoperability and reusability

Service Steward FZ Jülich

Federated storage- and compute-infrastructure

Service Steward HU Berlin

Data literacy, data management support

Service Steward ZPID

Data management, ingest, archival

Service Steward U Mannheim
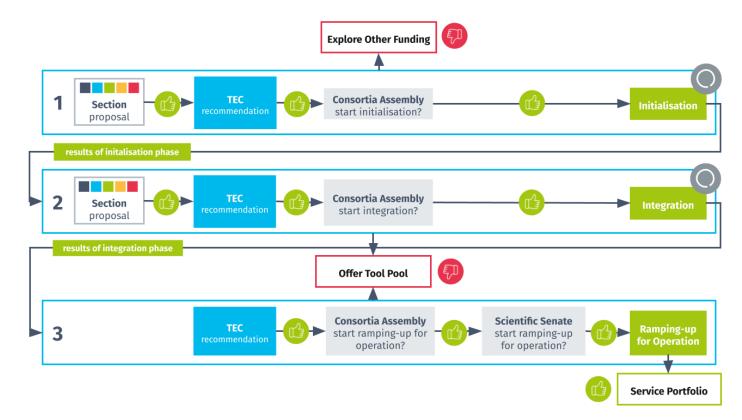
Data protection & anonymisation

How Base4NFDI will decide
Tightly embedded in the NFDI Association

- **Service Stewards** and
  Section Liaison Officers support
  coherence/consolidation
  and service uptake

- NFDI Consortia and NFDI Sections
  are complemented by a
  Technical Expert Committee (TEC)

  - TEC assures infrastructural
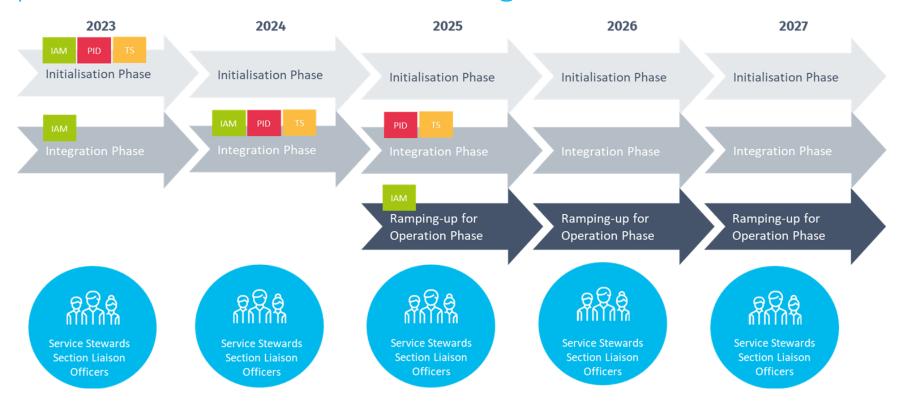   expertise and commitment

How Base4NFDI will decide
Tightly embedded in the NFDI Association

- Each development step is subject to evaluation and joint agreement on next steps

- Proposals are initiated and coordinated by NFDI Sections

- Proposals are evaluated by Technical Expert Committee (TEC), Consortia Assembly and Scientific Senate

How Base4NFDI will deliver
Development of basic services in a 3-Stage Process

- **Flexible Funds** allow to adapt to organisational/technical dynamics and technical complexities
- Will enable development and roll-out of substantial number of services
- Will help to ensure integration in diverse existing landscapes by supporting adoption

Base4NFDI
Who can apply, how, and for how much?

WHO

- A lead institution and further participating institutions
- All institutions need to be (or have a route to become) members of a DFG-funded **consortium**
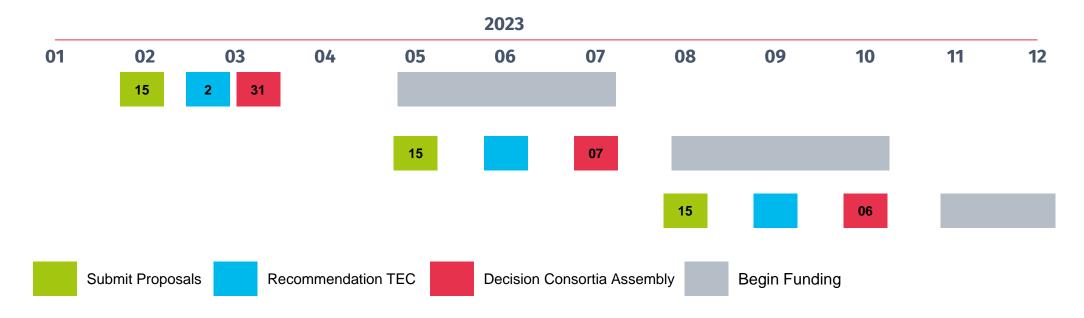
HOW

- **Templates** for applications are available through *base4nfdi.de*

€

- Funds will be allocated based on "**building blocks**" per phase
- Using these building blocks proposals need to **specify** how many or which share of a building block they request
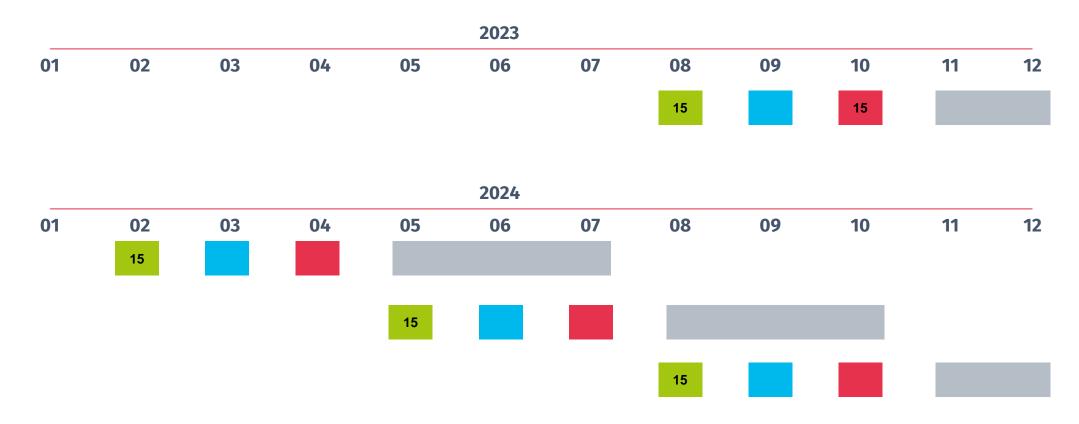
Base4NFDI looking Forward
Dates for 2023

2023

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |

Timeline markers:
- Row 1: **15** (green, Feb), **2** (blue, Mar), **31** (red, Mar), gray bar (May–Jul)
- Row 2: **15** (green, May), blue box (Jun), **07** (red, Jul), gray bar (Aug–Oct)
- Row 3: **15** (green, Aug), blue box (Sep), **06** (red, Oct), gray bar (Nov)

Legend:
- 🟩 Submit Proposals
- 🟦 Recommendation TEC
- 🟥 Decision Consortia Assembly
- ⬜ Begin Funding

- Three Base4NFDI Calls in 2023 (no need to rush!!)
- All potential services first submit **proposals** for the initialization phase
- The **Technical Expert Committee** will be completed in January 2023
- Binding decisions on funding to be made by the **consortia assembly**

Base4NFDI's Filter Model
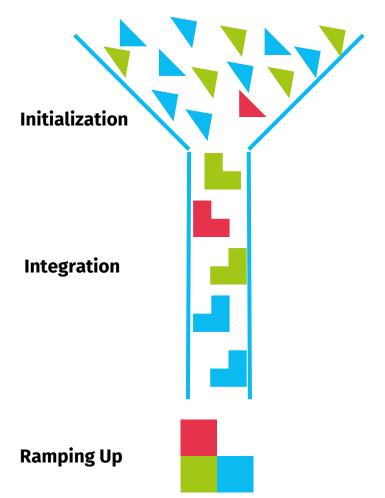## Sukzessive Konkretisierung von Vorhaben bei härteren Kriterien

Initialization

Integration

Ramping Up

- Tragfähige aber ggf. noch reifebedürftige Anträge werden durch Marktanalyse und detaillierte Vorplanung in der Initialisierung konkretisiert

- Anträge in Integrationsphase bauen darauf auf und erfüllen höhere Anforderungen

- Nur Anträge, die auch ein ausverhandeltes Betriebsmodell bieten, erreichen die Ramping Up Phase

Base4NFDI's Filter: Criteria

Initialization

25%   TRL 3-4   Concept   SWOT

Integration

50%   TRL 5-6

Calculation   Interop.   Internat. integration

Ramping Up

75%   TRL 7-8

Sustainable   -> TRL 9

Base Proposals and Services under Development

2023: Round 1
- 6 proposals
- 1 funded

- IAM4NFDI

2023: Round 2
- 2 proposals
- 2 funded

- PID4NFDI
- TS4NFDI

2023: Round 3
- 4-5 announced
- ? funded

- ...

Base4NFDI
Mitglieder des TEC

- Bungartz, Hans-Joachim
- Fuhrmann, Patrick
- Grimm, Christian (Co-Vorsitz)
- Konrad, Uwe
- Laure, Erwin
- Lipp, Anne
- Nagel, Wolfgang

- Razum, Matthias
- Rehm, Simone (Co-Vorsitz)
- Senst, Henriette
- Streit, Achim
- Thiemann, Hannes
- Yahyapour, Ramin (Co-Vorsitz)

Thank You !
Questions ?