

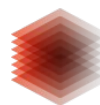


PID Konsortiumstag 2025

Dr. Torsten Kahlert, Dr. Stephanie Hagemann-Wilholt

TIB Hannover

In cooperation with



TIB LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK



Funded by

Deutsche
Forschungsgemeinschaft
German Research Foundation

Agenda

1. PID4NFDI im NFDI-Kontext
2. Vision: PID Coordination Hub
3. Praktische Tools
 - a. PID4NFDI Cookbook
 - b. PID Selection Tool
4. Training Ressourcen & Support

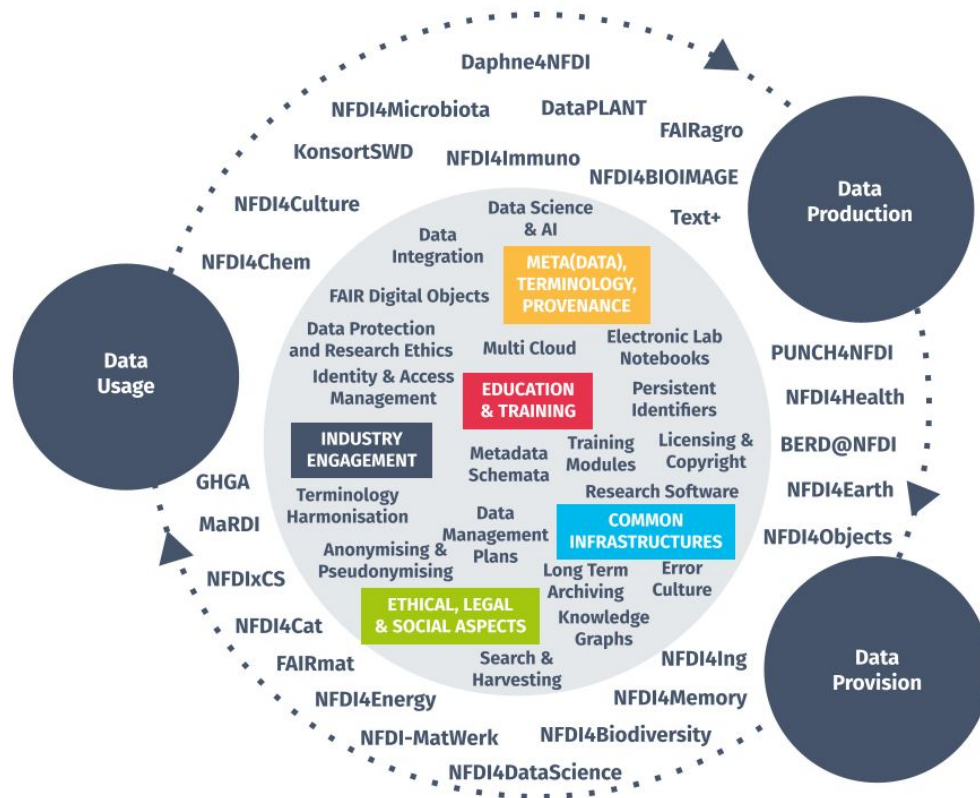
Basis Dienste innerhalb der NFDI

Base4NFDI ist eine gemeinsame Initiative aller 26 NFDI-Konsortien.

Ziel ist es, **verlässliche** Basisdienste für ein **FAIR**es Forschungsdatenmanagement aufzubauen.

Basisdienste sollen ...

- möglichst **einfach** von vielen Konsortien nutzbar sein,
- **interoperabel** mit internationalen Standards und Diensten, und
- **Synergien** zwischen bestehenden Lösungen nutzen.



Projekt Team und Partner Institutionen

Team

Project Team Members



Jana Böhm

Project team member



Sara El-Gebali

Project team member



Steffi Genderjahn

Project team member



**Stephanie Hagemann-
Wilholt**

Project team member



Torsten Kahlert

Project team member



Antonia Schrader

Project team member



Frederik Springer

Project team member



Sonja Sternkopf

Project team member



Markus Stocker

Project team member



HELMHOLTZ
Open Science

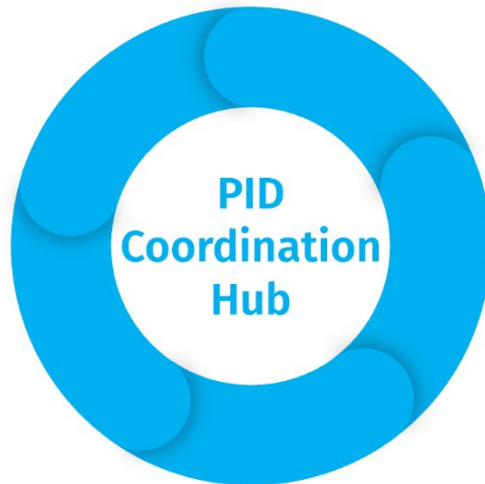
Our Vision - the PID Coordination Hub - a central entry point for all questions regarding PIDs

Support and Information

- Linking existing PID resources
- Display best practices
- Helpdesk and open hours
- Training

Target group-specific community engagement

- Repository managers
- Researchers
- Organizations
- Decision makers



Use Cases

Focus Groups

Outreach

Metadata and Interoperability

- Support for metadata quality assessment
- Guidelines for metadata harmonization
- Focus on resources from use cases

Services

- Prefix registration service for PID use-cases
- B2Inst
- Data Type Registry (EOSC)
- PID Metaresolver (EOSC)
- Compliance Assessment Toolkit (EOSC)

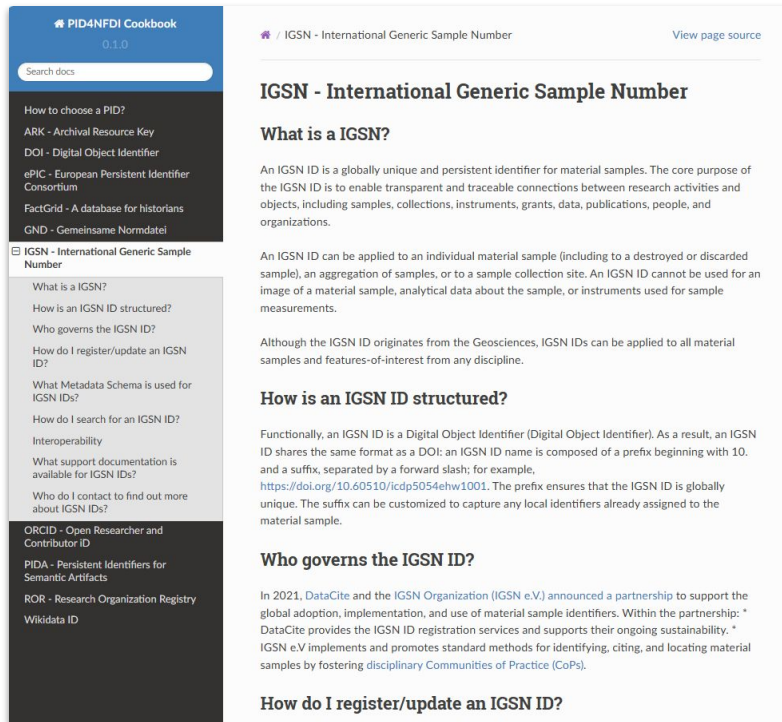
Governance

- Tool for PID provider selection
- NFDI-wide PID guidelines and compliance testing

Impact in der Integrationsphase

- Website-Besuche: 1.673 (30. September)
- Aufrufe/Downloads der Zenodo-Publikationen (30. September): 11.334 / 7.882
- Open Hours: 5
- Focus-Group-Meetings: 6 + 1 Präsenz-Workshop in Berlin
- Externe Veranstaltungen: 11
- Beratungen: 37

PID4NFDI Training



The screenshot shows the 'PID4NFDI Cookbook' website. The top navigation bar includes the title 'PID4NFDI Cookbook', the version '0.1.0', a search bar, and a 'View page source' link. A sidebar on the left lists various topics: 'How to choose a PID?', 'ARK - Archival Resource Key', 'DOI - Digital Object Identifier', 'ePIC - European Persistent Identifier Consortium', 'FactGrid - A database for historians', 'GND - Gemeinsame Normdatei', 'IGSN - International Generic Sample Number' (which is selected), 'What is a IGSN?', 'How is an IGSN ID structured?', 'Who governs the IGSN ID?', 'How do I register/update an IGSN ID?', 'What Metadata Schema is used for IGSN IDs?', 'How do I search for an IGSN ID?', 'Interoperability', 'What support documentation is available for IGSN IDs?', 'Who do I contact to find out more about IGSN IDs?', 'ORCID - Open Researcher and Contributor ID', 'PIDA - Persistent Identifiers for Semantic Artifacts', 'ROR - Research Organization Registry', and 'Wikidata ID'. The main content area is titled 'IGSN - International Generic Sample Number' and includes a sub-header 'What is a IGSN?'. The text explains that an IGSN ID is a globally unique and persistent identifier for material samples, used to enable transparent and traceable connections between research activities and objects. It also mentions that IGSN IDs can be applied to all material samples and features-of-interest from any discipline. A section titled 'How is an IGSN ID structured?' explains that it follows the format of a DOI, with a prefix '10.' and a suffix, separated by a forward slash. An example is provided: 'https://doi.org/10.60510/icdp5054ehw1001'. The text notes that the suffix can be customized to capture local identifiers already assigned to the material sample. A section titled 'Who governs the IGSN ID?' mentions a partnership between DataCite and the IGSN Organization (IGSN e.V.) announced in 2021, aimed at supporting the global adoption, implementation, and use of material sample identifiers. DataCite provides the registration services, while IGSN e.V. promotes standard methods for identifying, citing, and locating material samples by fostering disciplinary Communities of Practice (CoPs). The page concludes with a section titled 'How do I register/update an IGSN ID?'.

- Praktische Einstiegshilfe für PID-Registrierung und -Nutzung
- Für Einzelpersonen und Organisationen, die PIDs in Workflows integrieren
- Vermittelt Grundlagen zu PIDs + ihrer Bedeutung für langfristigen Zugriff & Zitierbarkeit
- Zeigt, wie PIDs Forschungsdaten und digitale Assets besser auffindbar und nutzbar machen
- Enthält konkrete Schritte, Beispiele und Best Practices

PID4NFDI Training

PID Selection Tool

- Unterstützt die Auswahl des passenden PID-Systems für einen konkreten Use Case
- Für Repository- und Infrastrukturmanager*innen sowie andere FDM-Verantwortliche
- Bewertet Anforderungen über 14 kurze Statements in vier Themenbereichen
- Vergleicht Antworten mit Expert*innenbewertungen
- Liefert eine visuelle Empfehlung, wie gut jedes PID-System zur eigenen Situation passt

<https://pid.services.base4nfdi.de/pidtool/>

PID Selection Tool

Persistence and Costs

1. It is important for us that the PID provider demonstrates a strong, long-term commitment to persistence. [More info](#)

1. Persistence is the core promise of a PID - but it's not guaranteed by the technology alone. It depends on long-term organizational and financial commitment. Systems like DataCite DOIs, ePIC Handles, and URN:NBN:DE are backed by stable institutions/organizations that explicitly commit to maintaining resolvability over time. ARKs can also support persistence, but this varies with the implementation, especially as ARKs need to be hosted by the assigning institution.

Don't need that

Somewhat important

Important

Very important

Clear

DataCite DOIs

ePIC Handles

URN:NBNs

ARKs

2. It is important for us that the PID system allows flexible PID lifecycles, including deletion or deactivation where appropriate. [More info](#)

Don't need that

Somewhat important

Important

Very important

3. The ability to assign PIDs at low cost is one of the most important criteria when choosing a PID provider. [More info](#)

Don't need that

Somewhat important

Important

Very important

Next

PID4NFDI Trainingskonzept

- Vorhandenes Trainingsmaterial **sammeln** und auswerten
- **Trainingsmaterial entwickeln**, um bestehende Lücken zu schließen
- Basierend auf einem modularen, mehrstufigen Trainingsansatz
- Ausgerichtet auf verschiedene **Zielgruppen** wie Repository-Manager, Forschende, Entscheidungsträger und Trainer

➔ Ziel: PIDs sollten kein „Add-on“ sein, sondern durchgängig in alle Schulungen zum Forschungsdatenmanagement integriert werden.



PID4NFDI Training

Sammlung existierender Trainingsmaterialien

	A	B	C	D	E	F	G	H	I	J
1	Evaluation existing training material on PIDs (PID4NFDI)									
2	Authors	Organisation / Institution	Title	Source / Link	Community	Description	Discipline	Keywords	Language	LearningResourceType
3	use ORCID, where possible	use ROR, where possible	title of training material	PID, URL	Associated community(ies) of the resource who are		the discipline or university/college subject the learning	topics, e.g. Metadata, Technical Implementation, API Usage, Introduction,		
4	Kotarski et al.		Developing Identifiers for Heritage Collections	https://tanc-ahrc.github.io/	GLAM, Memory, Objects	This resource describes the different aspects of developing persistent identifiers (PIDs) in the context of Heritage Collections. Following consultation through May 2021, the			en	
5	Robinson, Carly * https://orcid.org/0000-0002-8523-147	United States Department of Energy: Washington D.C., US https://ror.org/01bj3aw27	The Power of PIDs: using persistent identifiers to enable connections throughout the research lifecycle	https://doi.org/10.5446/480 https://zenodo.org/record/5	general audience, US			introduction	en	
6			Collection /database of Training material for the Life Science collected by the the Elixir project	https://ess.elixir-europe.org/	life sciences				en	
7	Staiger, Christine https://orcid.org/0000-0002-6754-764	DTLS - Dutch Techcentre For Life Sciences https://ror.org/055d8gs64	Working with PIDs CURL	B2SAFE-B2STAGE-Trainin	general audience			technical implementation, API usage	en	
8	Staiger, Christine https://orcid.org/0000-0002-6754-764	DTLS - Dutch Techcentre For Life Sciences https://ror.org/055d8gs64	Working with Persistent Identifiers - Hands-on	B2SAFE-B2STAGE-Trainin	general audience	This lecture illustrates the use of PIDs, more specifically it shows how to employ handles using the B2HANDLE library		technical implementation, API usage	en	
9	Genderjahn, Steffi et al. https://orcid.org/0000-0002-8912-184	PID Network Germany	Online seminar on PIDs for instruments	https://www.pid-network.de * Event-DOI: https://doi.org	general audience interested in PIDs for Instruments	The "PID Network Germany" project hosted the online seminar "PIDs for instruments" on 7 May 2024. A combination of informative presentations on the areas of		metadata, introduction	en	
10	Kálman, Tibor	DARIAH-Campus	Introduction to Persistent Identifiers	https://campus.dariah.eu/re https://campus.dariah.eu/rd	Social Sciences Humanities	As part of the DARIAH Friday Frontiers in-house webinar series, Dr. Tibor Kálman (GWDG) gives an introduction to Persistent Identifiers. Why do we need them, how do we		introduction	en	
11	Jeffries, Neil	Royal Holloway University	Introduction to Persistent Identifiers							

PID4NFDI Training

Kuratierte Liste existierender Trainingsmaterialien

Kriterien:

- PIDs müssen zentrale Rolle spielen, enthält also keine generischen FDM Materialien
- derzeit grob strukturiert nach Themenbereichen
- filterbar über PID Type, Provider u.a.
- dient auch dazu Lücken auszumachen, die wir noch mit Trainingsmaterialien füllen werden

<https://pid.services.base4nfdi.de/resources/training-material>

PID Training Materials & Guides

This is a growing, curated collection of publicly available training materials, handbooks, cookbooks, documentation, and guides focused on persistent identifiers (PIDs) – both in general and for specific PID systems and providers.

The resources originate from various institutions and initiatives and are not maintained by us. As a work in progress, this overview will evolve to reflect the needs of the NFDI research communities. Suggestions are welcome.

🕒 Understanding PIDs: Concepts & Ecosystem

Fundamentals, significance, and an overview of the PID ecosystem. Includes beginner-friendly introductions, insights into governance, and the conceptual role of PIDs in research infrastructure.

- What are PIDs?
- Why are they important?
- How is the PID ecosystem structured?

Search title/desc... Type Provider Domain Language Year Clear 33 shown / 33 total

📖 PIDs 101: A Beginners' Guide to Persistent Identifiers

Intro Community EN

This introductory presentation offers a clear and engaging overview of persistent identifiers (PIDs) – what they are, how they work, and why they matter. It explains how PIDs uniquely and permanently identify people, places, and research outputs, supporting interoperability, discovery, and FAIR data. With practical examples from ORCID, ROR, DataCite, and Crossref, it shows how connected PIDs create a trustworthy and transparent research ecosystem (EN)

[Open resource ↗](#)

🔍 What lies beneath – A closer look at the PID ecosystem

Slides PID4NFDI EN

Workshop slides on the structure and governance of the PID ecosystem (EN)

[Open resource ↗](#)

📖 Persistent Identifiers: The Building Blocks of the Research Information Infrastructure

Guide Community EN

Article on the foundational role of PIDs in research infrastructure (EN)

[Open resource ↗](#)

🕒 Digital Presence Checklist

Guide Community EN

Checklist to assess and improve the digital visibility of research outputs (EN)

[Open resource ↗](#)

📖 Persistent Identifiers – CERN

Intro CERN EN

Overview of how PIDs are used at CERN (EN)

[Open resource ↗](#)

📖 Persistente Identifikatoren

Intro Community DE

Introductory article in German on persistent identifiers in research (DE)

[Open resource ↗](#)

📺 Video: Was sind PIDs?

Video Community DE

Introductory video (DE) – alt: former landing page via FDM NDS/HAWK

[Open resource ↗](#)

📖 PID4NFDI Zotero Group Library

Tool Community EN

Living collection of PID-related literature maintained by the PID4NFDI consortium (EN/DE)

[Open resource ↗](#)

