PID4NFDI

Survey on PID Practices

December 2022/January 2023

Main Results

With contributions of the members of the NFDI working group Persistent Identifier Services

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Objectives and results of the survey

Objective:

- Gathering feedback on status quo of PID usage, identifying gaps and further needs

Target group:

- Providers/managers of infrastructure services within NFDI

Duration:

- December 13, 2022, until January 15, 2023

Response rate:

- 44 complete answers from 23 consortia

Most commonly used (P)IDs

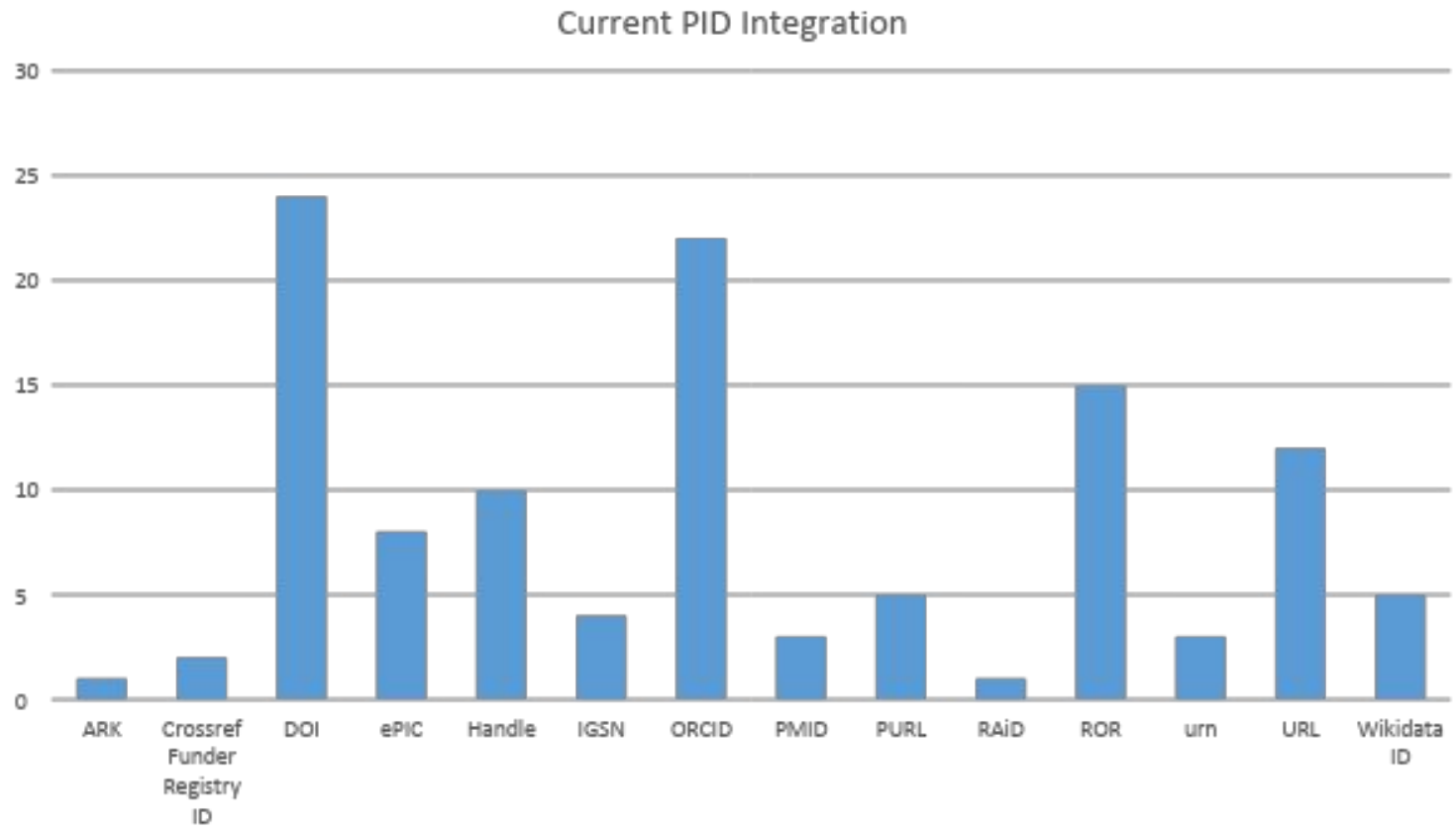
Which kind of identifier or PID do you integrate?

For research resources:

- DOI (55%)
- URL (27%)
- Handle (23%)
- ePIC (18%)

Other entities:

- ROR (34%)
- ORCID (50%)



From 15 response options; Calculation based on number of all answers given: no consolidation by consortium membership

Most commonly used (P)IDs

For which kind of resource(s) and/or entities do you integrate identifiers?

Most frequent responses:

1. Datasets (50%)
2. Researcher (40%)
3. Metadata (32%)
4. Affiliations, Collections, Journal articles (25%)
5. Software/code (23%)

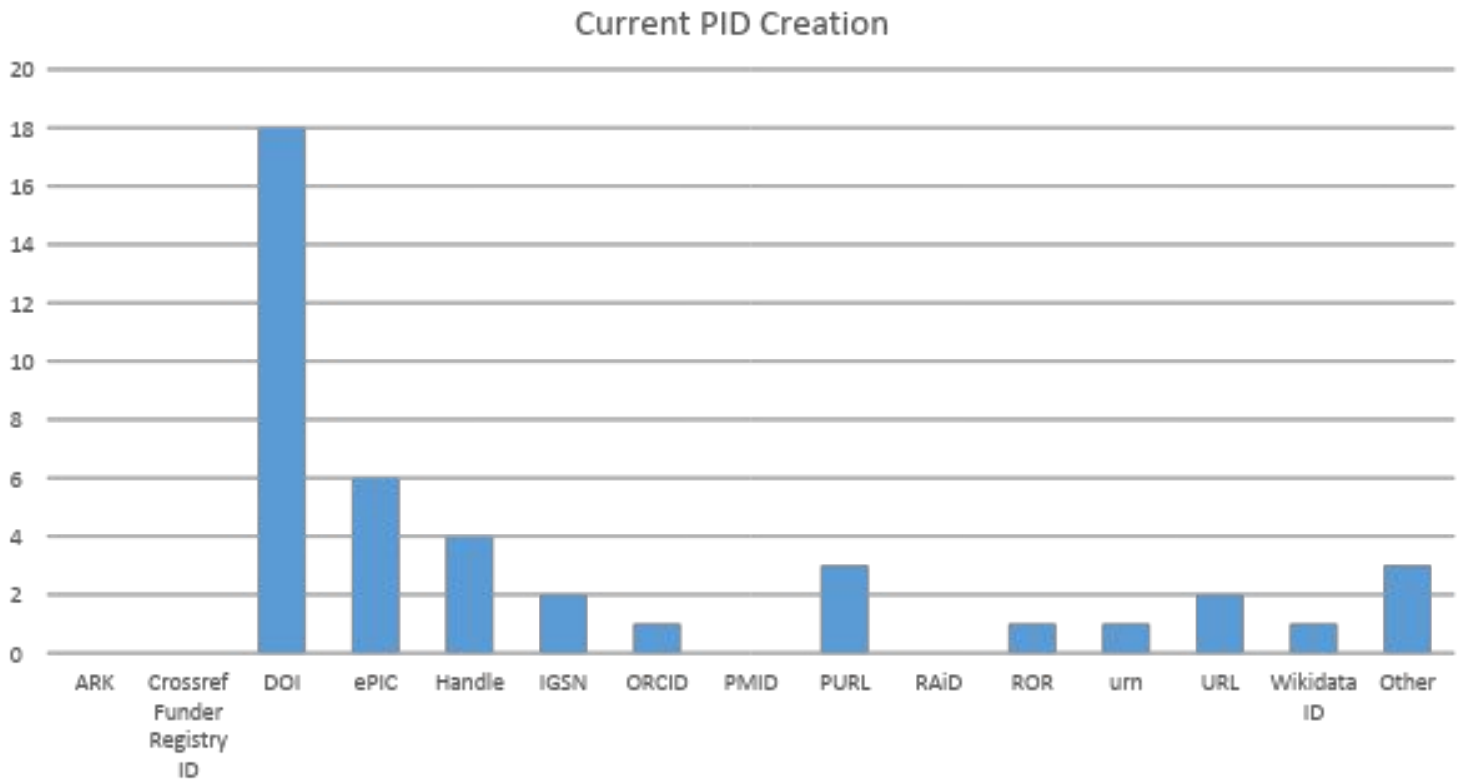
From 26 response options; Calculation based on number of all answers given: no consolidation by consortium membership

Most commonly used (P)IDs

Which kind of identifier or PID do you create?

For research resources:

- DOI (41%)
- ePIC (14%)
- Handle (9%)
- PURL (7%)



From 15 response options; Calculation based on number of all answers given: no consolidation by consortium membership

Most commonly used (P)IDs

For which kind of resource(s) and/or entities do you create identifiers?

Most frequent responses:

1. Datasets (36%)
2. Metadata, Physical Objects, Instruments (16%)
3. Models, Software/code (14%)
4. Collections, Standards, Tables/charts (11%)

From 26 response options; Calculation based on number of all answers given: no consolidation by consortium membership

Plans to integrate and create PIDs

Which kind of identifier or PID do you plan to integrate/create for which resources?

(P)IDs		Entities	
Crossref Funder Registry ID	***ORCID****	Affiliations	Images
DOI*	PMID	Collections	Journal articles
ePIC	RAiD	***Datasets****	***Metadata****
Handle	***ROR****	Data papers	***Physical objects****
IGSN*	URL	Funding organizations	Researcher
		Grants	***Software/code****
		Instruments	Standards
			Workflows

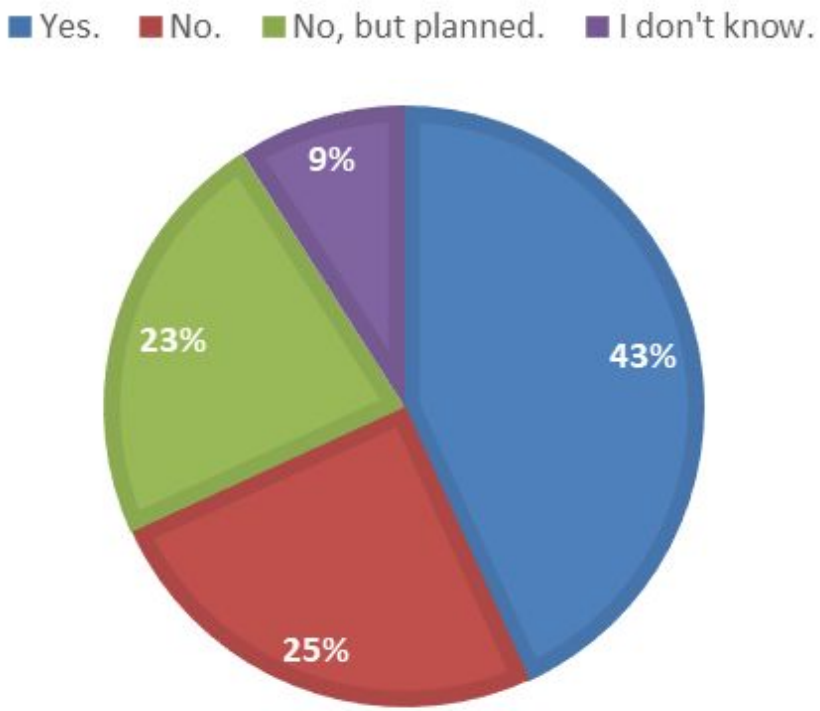
****most frequently mentioned***

Metadata standards in consortia

Natural Sciences	Engineering and Technology	Medical and Health Sciences	Agricultural Sciences	Social Sciences	Humanities
Access to Biological Collection Data (ABCD) (Bio)Schema.org Climate and Forecast (CF) Metadata Conventions CERN Open Data EasyDAB – Atmodat IEEE (customized): Learning Objects Metadata (LOM) IVOA (Astronomy) Nexus (Photon/Neutron community) Optimade OWL-based ontologies	ISO	AIRR Data Schema Image Data Resource (IDR) OMR Quarep-LiMi REMBI	MCPD MIAPPE	DDI 3.2 LC *(planned)*	Mets/Mods TEI
DataCite, DCAT, Dublin Core, RDF, schema.org					
Own, based on existing standards					

Self-defined Metadata Schemes

Are you applying a self-defined metadata schema to describe resources in your services?



63 % of these self-defined metadata schemes are extensible for researcher requirements.

74% are combining metadata standards with these self-defined metadata schemata as an extension of the standard.
Nine services are planning to.

Needs & requirements in PID4NFDI

Tasks for PID4NFDI that had been rated as most important:

1. **Collaboration** with international stakeholders & projects to ensure interoperability.
2. Provide **sustainable solutions** for PID services within NFDI to enable persistence.
3. Provide feasible **governance models** to enable PID registration for projects within NFDI to be as easy as possible.
4. Continue to promote the **linking of PIDs** for different entities to better leverage their added value: e.g. better discoverability and re-use of research resources, reduction of administrative overhead through metadata provision for different systems.
5. Enable **integration of PID systems** in a functional NFDI architecture.
6. Provide incentives for **metadata curation** to increase its completeness as an important factor for metadata quality.