Use Established and Sustainable PID Systems

Recommendation to use established, sustainable and interoperable PID systems for the identification of frequently referenced entities in research metadata.

Description

Status: 2026/08/14 09:53 Under development

Persistent Identifiers (PIDs) are an important building block of any FAIR data ecosystem. There are numerous PID types existing for a variety of diverse, but also similar applications. As such it is difficult to decide, whic PID type to adopt. This decision process should use transparent technical, organisational and community-related criteria and processe. Where an established PID system exists for a particular entity type, this system should be used instead of locally defined identifiers or unstructured textual descriptions.

This recommendation explains, what criteria can be employed to select PID types for particular applications.

[1] European Commission: A Persistent Identifier (PID) policy for the European Open Science Cloud (EOSC)

Motivation for this Recommendation:

[shortened from below]

Recommendation

[shortened from below]

[Format: Wer! macht was! wo! wann! unter welchen Voraussetzungen!]

Helmholtz Earth and Environment data providers and operators of research information systems should use established, globally unique and resolvable PID types whenever metadata refers to an entity type for which a suitable PID system is available. The PID system should be selected according to documented criteria concerning scope, community adoption, governance, sustainability, metadata, interoperability and technical operation.

Binding Convention:

	mandatory	conditional	optional
Helmholtz FAIR Principle			

Precondition for Implementation:

Related Recommendations

Parent:

Dependent:

Other: none

Contributors

Names of contributors to this recommendation

Content

1. Explanation of the Background and Benefits of the Recommendation

About

Defintion of PIDs

- A persistent identifier (PI or PID) is a long-lasting reference to a document, file, web page, or other object (from Wikipedia).
- PID registers typically store core metadata with the PID
- PIDs are used in data infrastructures to link to common information
- Harmonizing the use of PIDs may improve interoperability of datasets between data repositories

Criteria for the evaluation of PID Systems

1. PID is globally unambiguously registerable
2. PIDs are widely used, e.g. recommended by national and international organizations
3. PID registrar has a transparent governance
4. Handle system has stable funding
5. PID system is reliably available and maintained
6. PIDs have an adequate metadata set
7. PID registration is open to all (vs. paying users only)
8. PID is machine readable via API

9. Further developments are downward compatible (with previous updates, content and technical)
10. Also: What other PID systems capture the same types of data?

History and structure

Current Use of ...

Motivation

2. Possible alternative solutions

3. Consideration of the advantages and disadvantages of implementing the recommendation

(quality of content, limitations, interoperability, sustainability: expected future dissemination / technical availability / funding)

4. The Recommendation

[Format: Wer! macht was! wo! wann! unter welchen Voraussetzungen!]

5. Naming of communities that have already implemented the recommendation

6. Documentation of the test to validate correct implementation

7. Examples of Instances

8. Further Information

References

[1] European Commission: Directorate-General for Research and Innovation, EOSC Executive Board, Hellström, M., Heughebaert, A., Kotarski, R. et al., A Persistent Identifier (PID) policy for the European Open Science Cloud (EOSC), Publications Office, 2020, https://data.europa.eu/doi/10.2777/926037

Relevant Community Recommendations

9. History of this document

Subnamespaces:

U

- Use CrossRef for Literature Publications
- Use DataCite for Data Sets

U cont.

- Use IGSN for Samples
- Use ORCiD for Persons

U cont.

- Use PIDInst for Instruments
- Use ROR for Organizations

Pages in this namespace:

O

- Other PID Types

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