

Roles of PIDs in Research Outputs Connectedness

Bosun Obileye
bosun.obileye@datacite.org

26th of October 2023
UbuntuNet Connect 2023



[@datacite](https://twitter.com/datacite)



[@datacite@openbiblio.social](https://openbiblio.social/@datacite)
[@paul4kant@scicomm.xyz](https://scicomm.xyz/@paul4kant)



Persistent Identifiers

Understanding Identifiers

- ★ A long lasting reference to a digital resource (ORCID)
- ★ A unique long-lasting reference to digital objects of various types, and are a core element of open research. (Westminster)
- ★ PIDs are labels that locate, identify and share information about digital objects
- ★ A PID may be connected to a set of metadata describing an object rather than to the object itself.
- ★ Allow different platforms to exchange information consistently and unambiguously and thus provide a reliable way to track citations and reuse.

PIDs

What is a persistent identifier (PID)?



DOIs for research outputs and resources

<https://doi.org/10.5281/zenodo.3630248>



ORCID iDs for researchers

<https://orcid.org/0000-0001-6622-4910>



ROR IDs for research organizations

<https://ror.org/01y2jtd41>



PIDs for people, places and things

**PIDs for people (researchers)
include ISNI and ORCID**



<https://orcid.org/0000-0001-6622-4910>



**PID for places (research
institutions) include ROR**



<https://ror.org/01y2jtd41>



**PIDs for things (research outputs and
resources) include DOIs, handles, IGSN,
ARK and more**



<https://doi.org/10.5061/dryad.708gr>



Making research data FAIR With PIDs



Findable

(Meta)data are assigned a globally unique and persistent identifier



Accessible

(Meta)data are retrievable via an identifier using a standardized protocol
Metadata are accessible, even when the data are no longer available



Interoperable

(Meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.



Reusable

(Meta)data are richly described with a plurality of accurate & relevant attributes

Why are PIDs important?

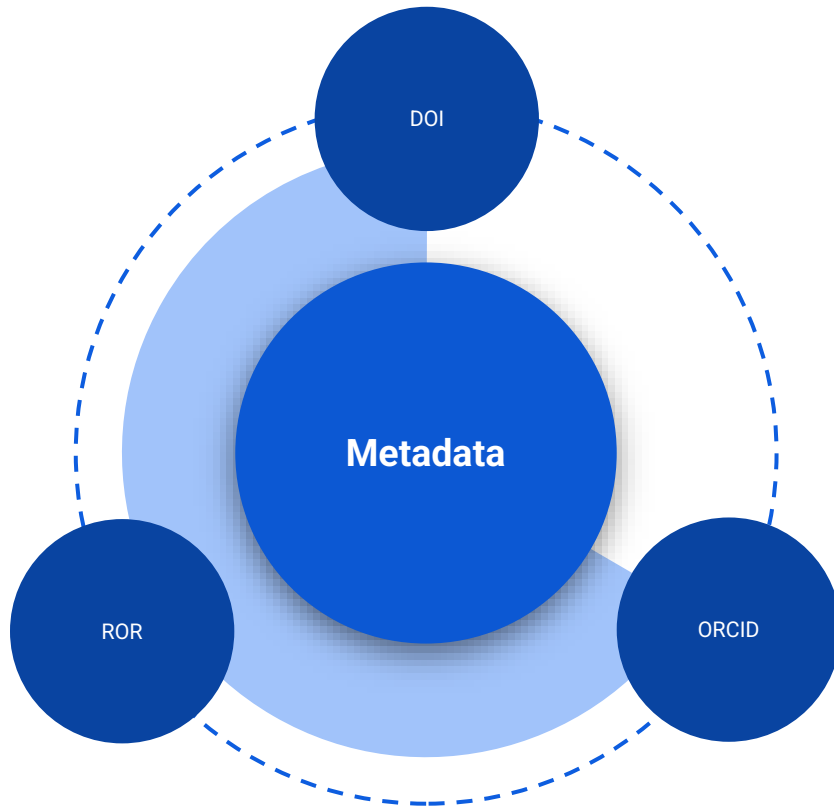
PIDs like DOIs, ORCID iDs y ROR IDs increase the **discoverability, access, citation, reutilization, and recognition** of research outputs and resources



VALUE

Connecting Research PIDs and Metadata

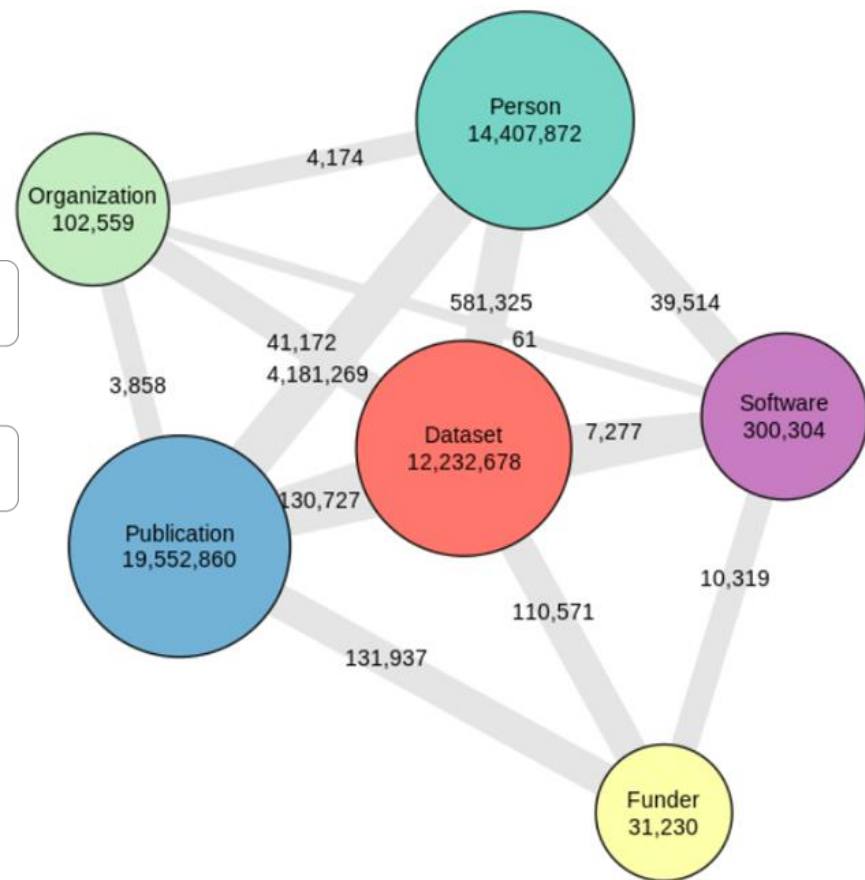
Find and connect Metadata



Research Impact

The PID Graph

Number of nodes and connections
(August 2022)



DataCite Commons: Work

[Add to ORCID Record](#)

[Download Metadata](#)

Cite as

DataCite Metadata Working Group. (2021). *DataCite Metadata Schema Documentation for the Publication and Citation of Research Data and Other Research Outputs v4.4*. <https://doi.org/10.14454/3W3Z-SA82>

APA

Share

Email

Twitter

Facebook

Filter Works

Type to search...

Creators & Contributors

- Burger, Felix 4
- White, Andrew 1
- Barluzzi, Luciano 1
- Mies, Thomas 1
- Layfield, Richard 1
- Barrett, Anthony 1
- Brena, Henry 1

DataCite Metadata Schema Documentation for the Publication and Citation of Research Data and Other Research Outputs v4.4

<https://doi.org/10.14454/3w3z-sa82>

7 Citations

Description Creators Contributors Registration

1 Introduction 1.1 The DataCite Consortium 1.2 DataCite Community Participation 1.3 The Metadata Schema 1.4 Version 4.4 Update 2 DataCite Metadata Properties 2.1 Overview 2.2 Citation 2.3 DataCite Properties 3 XML Example 4 XML Schema 5 Other DataCite Services Appendices Appendix 1: Controlled List Definitions Appendix 2: Earlier Version Update Notes Appendix 3: Standard values for unknown information Appendix 4: Version 4.1 Changes in support of software citation Appendix 5: FORCE11 Software Citation Principles Mapping

Version 4.4 of Documentation published 2021 in DataCite

Text English

<https://doi.org/10.14454/3w3z-sa82>

7 Citations

Publication Year

Year	Citations
2021	7

Work Types

29%

Work Type	Percentage
Audiovisual	29%
Dataset	0%
Journal Article	0%
Text	0%

Licenses

57%

License	Percentage
Missing	57%
CC-BY-4.0	0%
CC0-1.0	0%

Best Practices mit dem DataCite-Metadatenchema 4.4

<https://commons.datacite.org/doi.org/10.14454/3w3z-sa82>

DataCite Commons: Repository



[Go to Repository](#)

[Find Related Works](#)

Contacts

curator@datadryad.org help@datadryad.org

Share

[Email](#)

[Twitter](#)

[Facebook](#)

DRYAD

151,900 Works	44,337 Citations	11,732,496 Views	1,870,668 Downloads
-------------------------	----------------------------	----------------------------	-------------------------------

DataDryad.org is a curated general-purpose repository that makes the data underlying scientific publications discoverable, freely reusable, and citable. Dryad is an international repository of data underlying peer-reviewed scientific and medical literature, particularly data for which no specialized repository exists. The content is considered to be integral to the published research. All material in Dryad is associated with a scholarly publication

Data Access
embargoed open

Persistent Identifier
doi

Certificates
none

Data Upload
restricted

Provider Type
serviceProvider dataProvider

humanities and social sciences social and behavioural sciences life sciences basic biological and medical research general genetics

bioinformatics and theoretical biology plant sciences plant ecology and ecosystem analysis zoology evolution, anthropology

biochemistry and animal physiology microbiology, virology and immunology microbial ecology and applied microbiology virology

agriculture, forestry, horticulture and veterinary medicine biology medicine agriculture, forestry, horticulture and veterinary medicine

natural sciences geology and palaeontology geosciences (including geography) fair interdisciplinary scientific and medical publications

biodiversity

151,900 Works

Publication Year

Year	Number of Publications
2010	~1,000
2011	~3,000
2012	~5,000
2013	~8,000
2014	~12,000
2015	~16,000
2016	~18,000
2017	~19,000
2018	~20,000
2019	~21,000
2020	~15,000

Work Types

Dataset 100%

Work Type	Percentage
Dataset	100%

Licenses

Missing 65%

License	Percentage
Missing	65%

<https://commons.datacite.org/repositories/nxrc8v>

A close-up, low-angle shot of a microscope's objective lens and eyepiece, rendered in a dark blue, semi-transparent style. The lens is the central focus, with the eyepiece visible above it. The background is a soft, out-of-focus blue.

Connecting Research Advancing Knowledge

DataCite

Beyond Internet Connection

Why we exist DataCite



We are a global community that share a common interest: to ensure that research outputs and resources are openly available and connected so that their reuse can advance knowledge across and between disciplines, now and in the future.

More than DOI

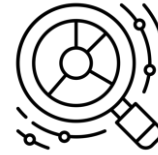
Create DOIs. Creation of persistent identifier (PID) metadata records. Make research outputs and resources discoverable and citable for the long term



Integrate workflows. Enhance research workflows and services through integration



Enable discovery. Enable discovery of research outputs and resources and reporting with advanced tools and analytics.



Promote reuse. Promote reuse with flexible, state-of-the-art tools and technology



Our community



2900+

Repositories



280+

Members



51

Countries



56m+

DOIs



1300+

Organizations

Partnering Community of communities approach

Our approach has always been to partner with communities (such as UbuntuNet Alliance, IGSN, RDA) to learn more about their needs, develop capacity and partner with a common vision.

Some key partners that may be of interest:



DataCite Membership



Direct



REPOSITORY



REPOSITORY



REPOSITORY

Consortium



(Also Consortium Lead Role)



REPOSITORY



REPOSITORY



REPOSITORY

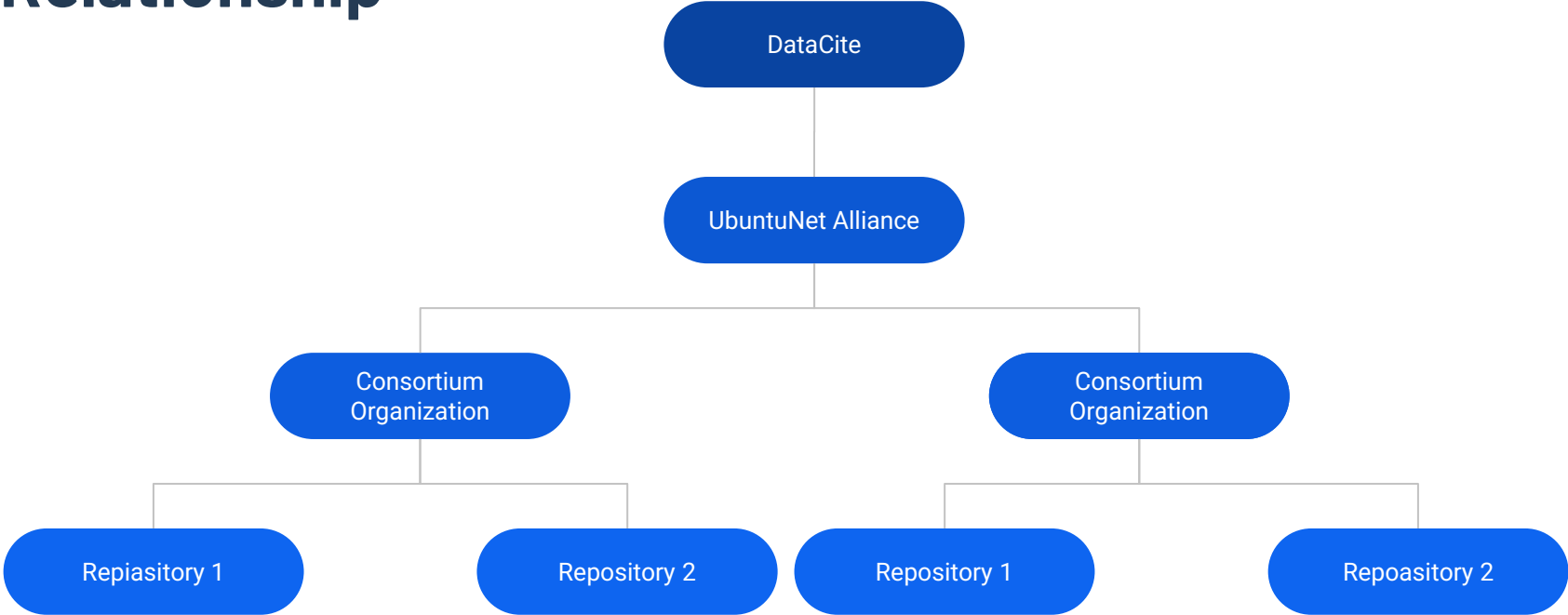


REPOSITORY



REPOSITORY

DataCite and UbuntuNet Alliance Relationship



Research outputs and resources

The research outputs and resources that we identify and connect currently includes:

Published Outputs

Book Chapter, Conference Paper, Conference Proceeding, Data Paper, Dataset, Dissertation, Journal Article, Preprint, Report, Text, Book, Journal, Event, Collection

Multimedia

Audiovisual, Image, Interactive Resource, Sound

Processes & Workflows

Model, Peer Review, Standard, Workflow

Physical Resources

Physical Object, Instrument

Code

Software, Computational Notebook, Service

Research inputs

Data Management Plans (DMPs)

DataCite
GAP and GAF

Global Access Program



DataCite has launched a global access program with support from the Chan Zuckerberg Initiative to promote greater equity in the global research ecosystem.

By expanding access to research outputs and resources in under-resourced regions, the program aims to support the participation of researchers in the global scholarly community and enable greater collaboration and innovation across borders.

Global Access Program

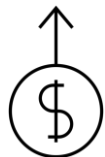
Building Capacity



- The program is focused on **building relationships** with organizations and individuals who are working to **support research and innovation in emerging and underrepresented communities**.
- By working together with these communities, DataCite hopes to **learn more** about their unique needs and perspectives, and to **develop new tools and resources that can help to meet those needs**.
- The program is also focused on **building capacity** within these communities, by providing training and resources that can help organizations to better manage and share their research outputs and resources.

Global Access Program

Three components



Funding. The program will provide the opportunity for communities to seek funding to support activities related to the program.



Technical infrastructure. Through partnerships with local and international stakeholders, the program will seek to support communities in building technical infrastructure per their needs (and design).



Capacity building. In learning from local community stakeholders, we seek to build better capacity to support emerging regions.

The Global Access Fund

- It aims to enable organizations worldwide to make their research outputs discoverable.
- Non profit orgs in Africa, Asia, Middle East and Latin America can apply.
- Funding categories:
 - **Outreach activities:** up to €10,000
 - **Infrastructure development:** up to €20,000
 - **Demonstrators:** up to €50,000
- Applications open Sep 1 - Oct 15
- **160** Applications from all GAP regions
- Projects will run throughout 2024
- Working towards 2024 GAF



Feel free to contact
Bosun Obileye



bosun.obileye@datacite.org

Regional Engagement Specialist - Africa (DataCite)



CONNECTING RESEARCH,
ADVANCING KNOWLEDGE



info@datacite.org



pidforum.org



datacite.org
blog.datacite.org



support.datacite.org
support@datacite.org



[@datacite](https://twitter.com/datacite)



[DataCite](https://www.youtube.com/DataCite)



[@datacite](https://www.linkedin.com/company/datacite)