



Implementing FAIR Workflows

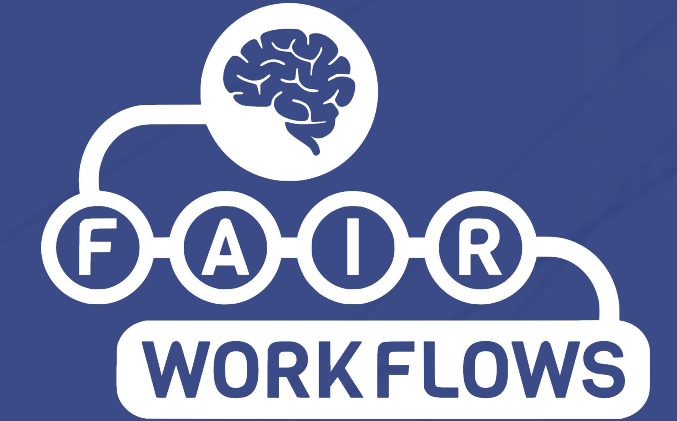
A proof of concept study in the field of consciousness

Xiaoli Chen

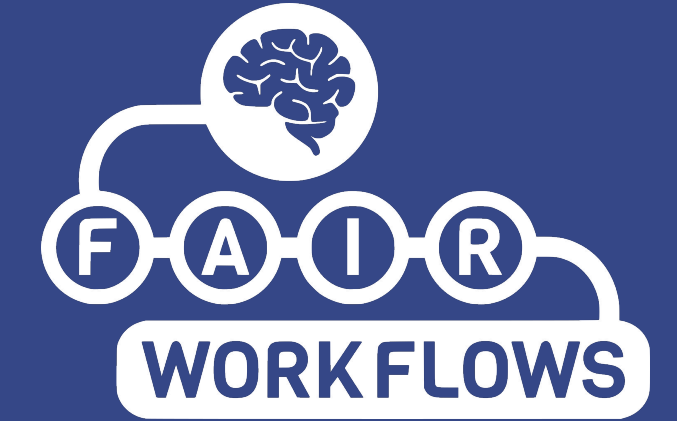
22nd June 2022

RDA Plenary - BoF - PIDs and Interoperability

Project motivation



- Papers are not enough
- Aggravating reproducibility problems
- Research infrastructure and tools exist but adoption fragmented
- Researchers need concrete examples

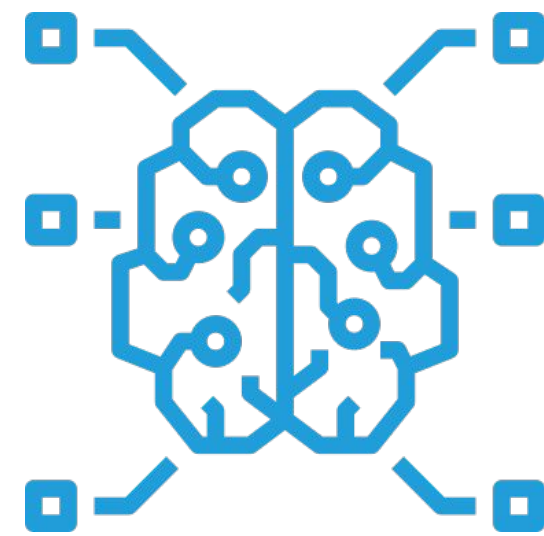


**To implement an exemplar FAIR
and Open workflow based on the
reality of an entire research
lifecycle.**

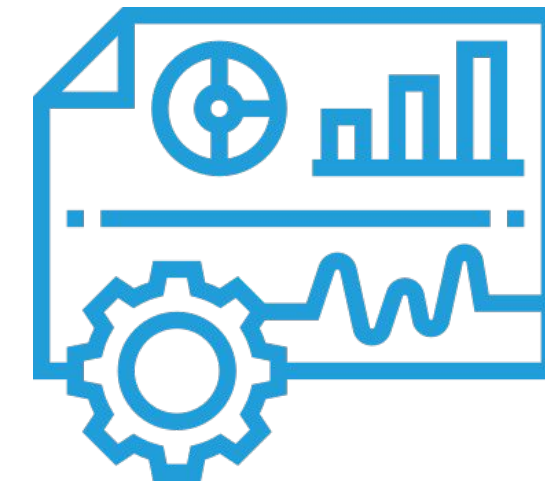
Project approach



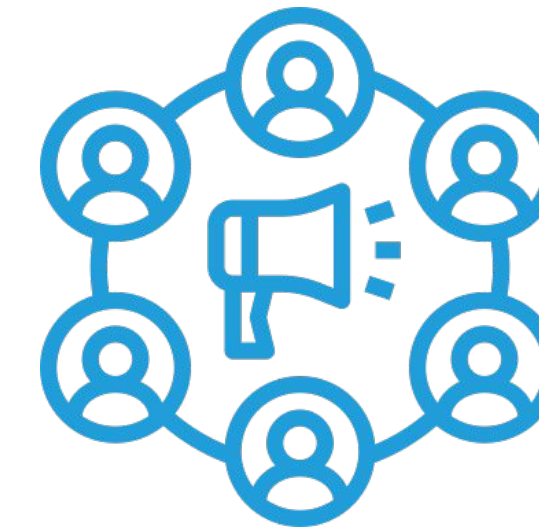
**Workflow
development**



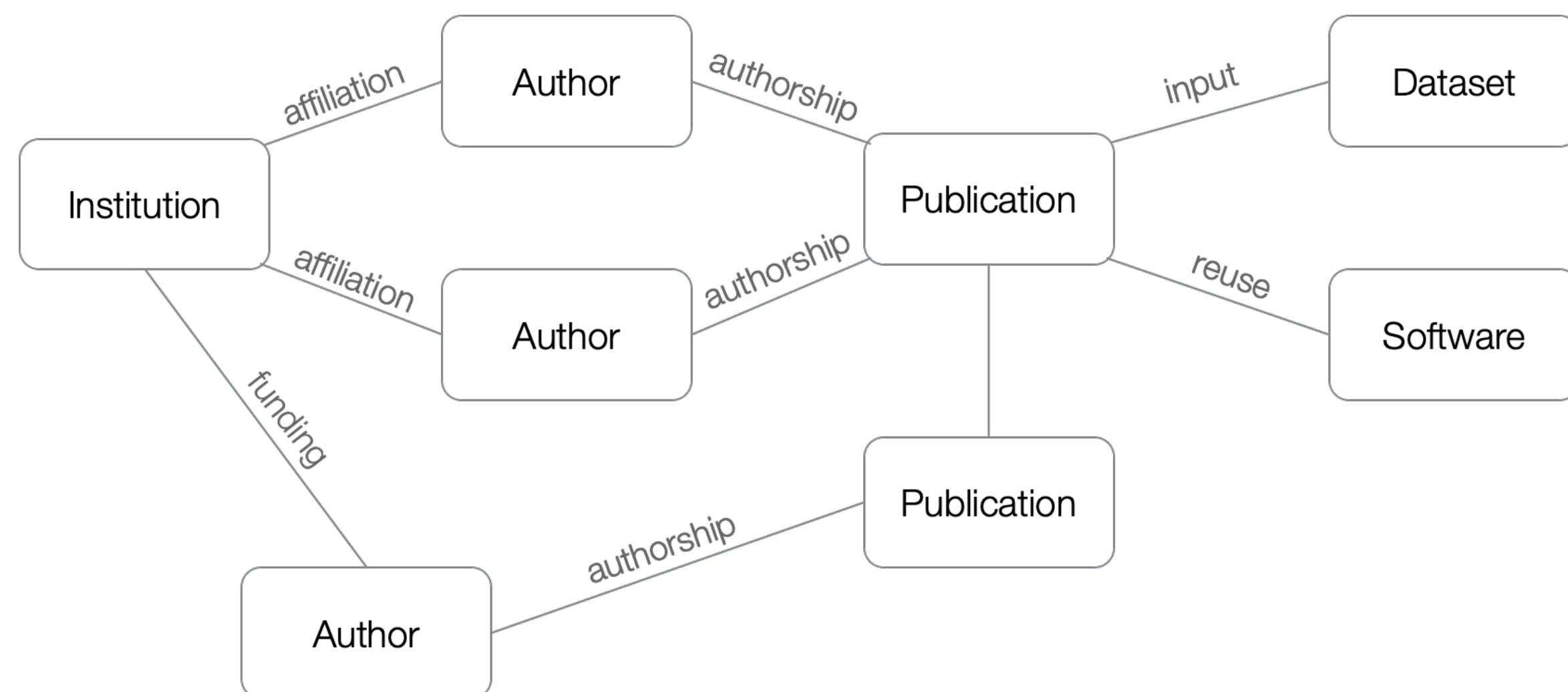
**Integration/
application**



**PID graph &
dashboard**

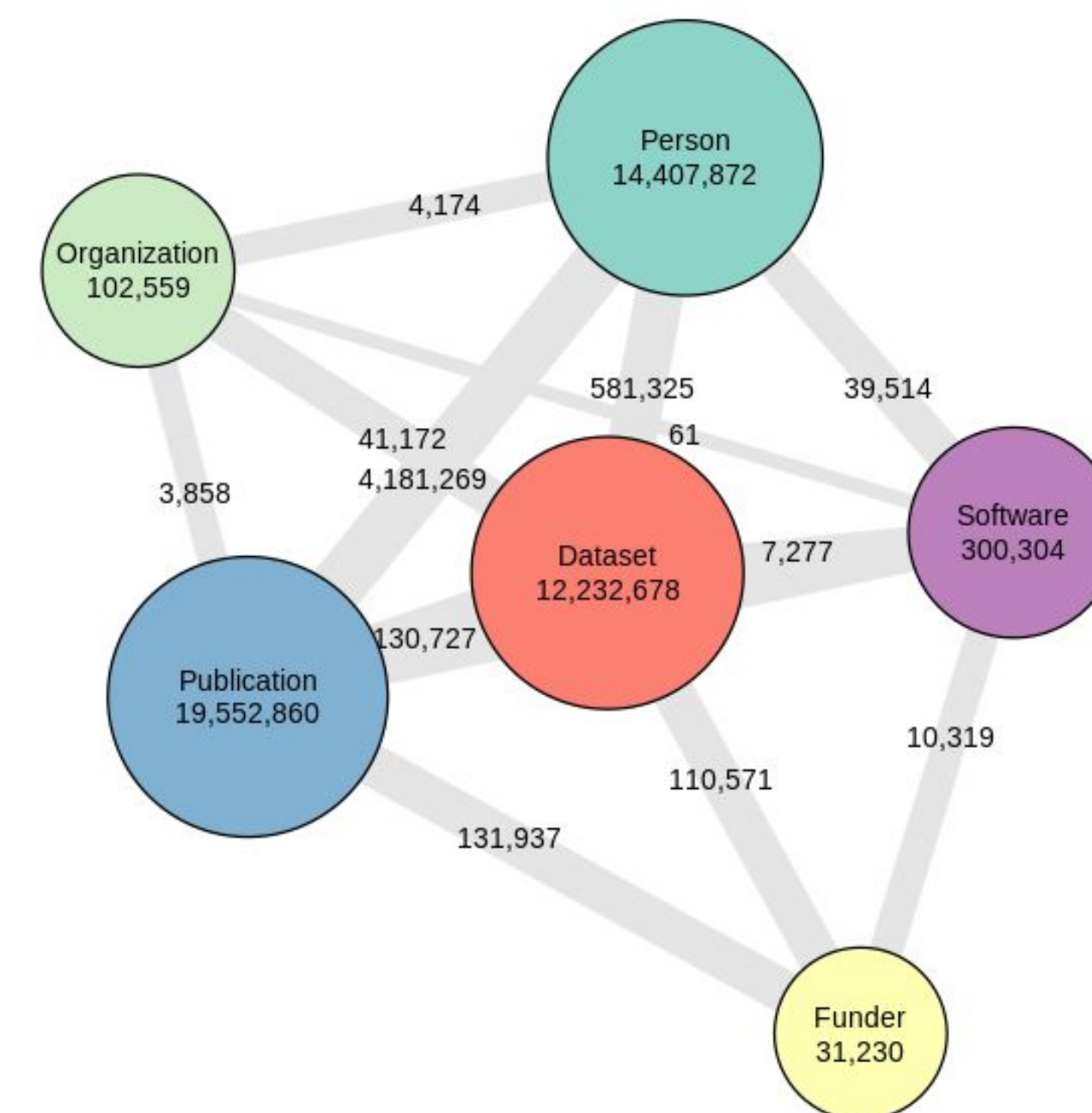


**Adoption &
dissemination**



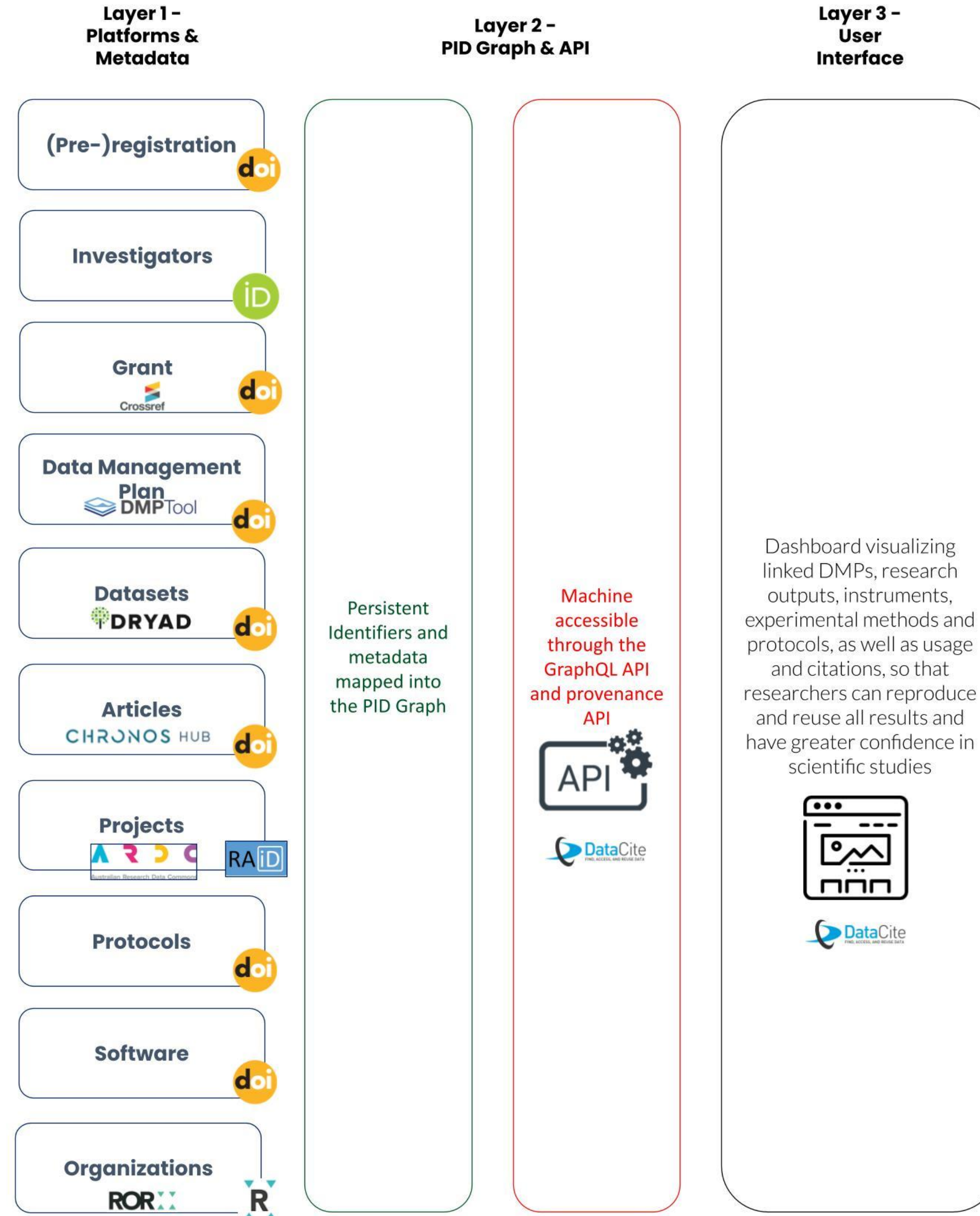
Metadata properties

and their relations



PID Graph

Numbers of nodes and connections (June 2022)

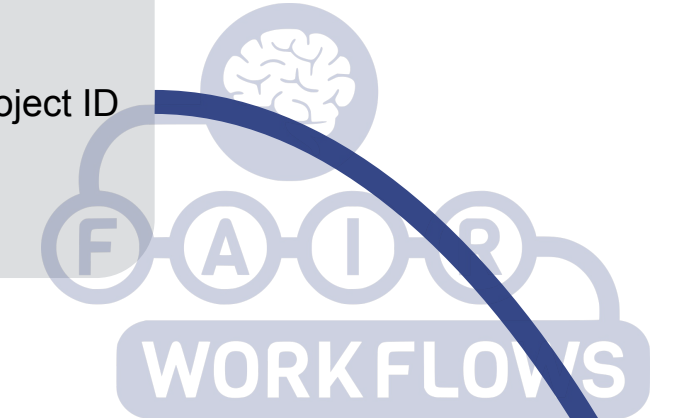


FAIR Workflows Project

Potential workflow



Project ID

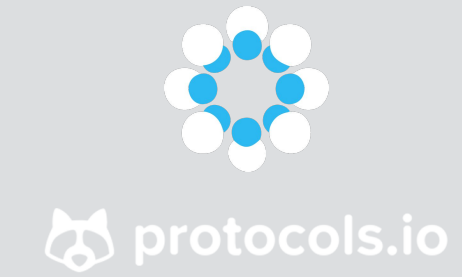


4. Research



CEDAR Domain metadata template

5. Protocols and research methods



OSF Pre-registration Preprint
Protocols.io Experiment protocols

3. Submit Data Management Plan



DMPTool Data management plan

6. Research data, instruments deposited



Dryad Datasets and software/ code

2. Application Approved



Crossref Grant ID

7. Research article published



ChronosHub Manuscript

1. Grant Application

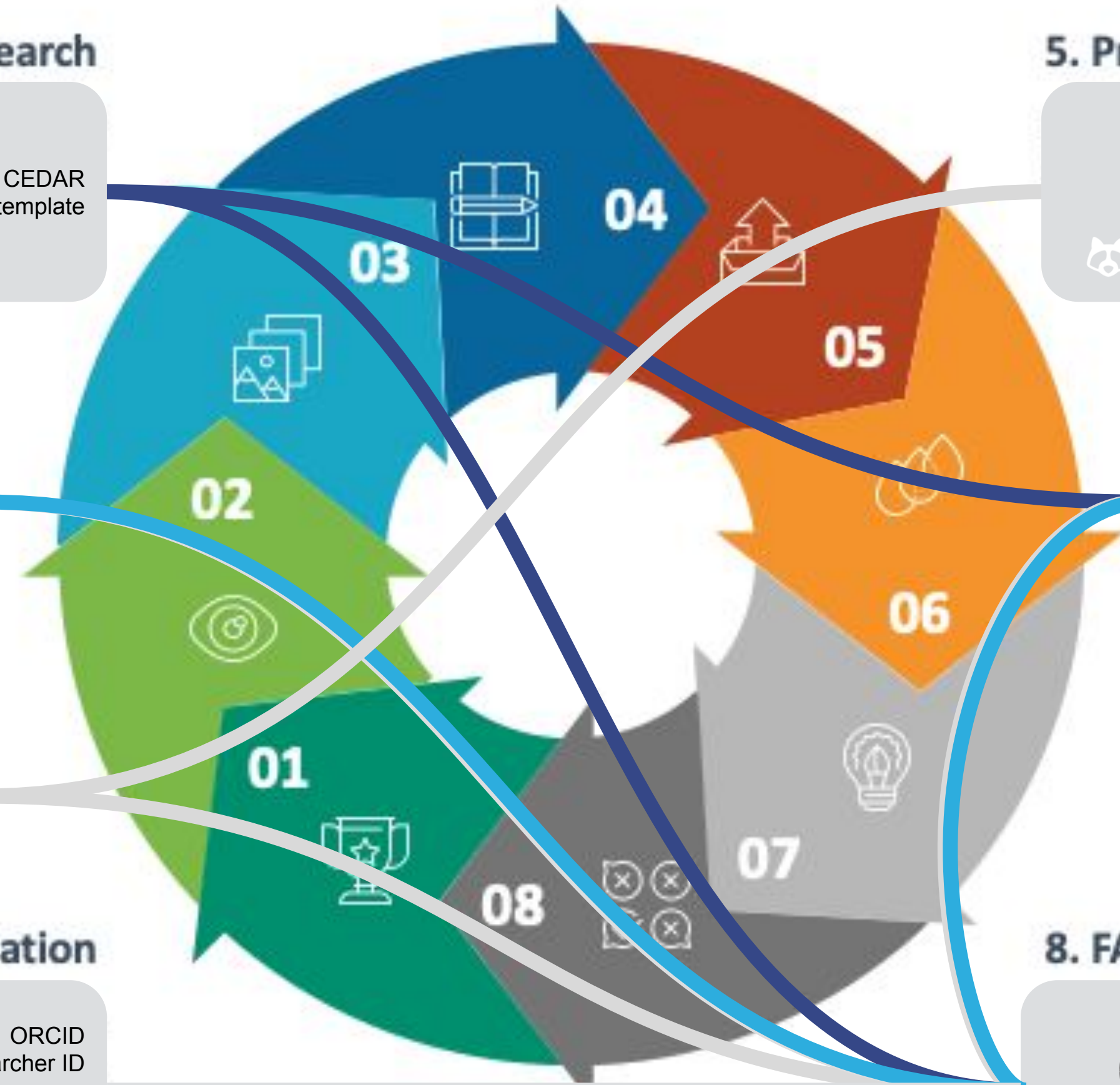


ORCID Researcher ID
ROR Institute ID

8. FAIR Workflow interface



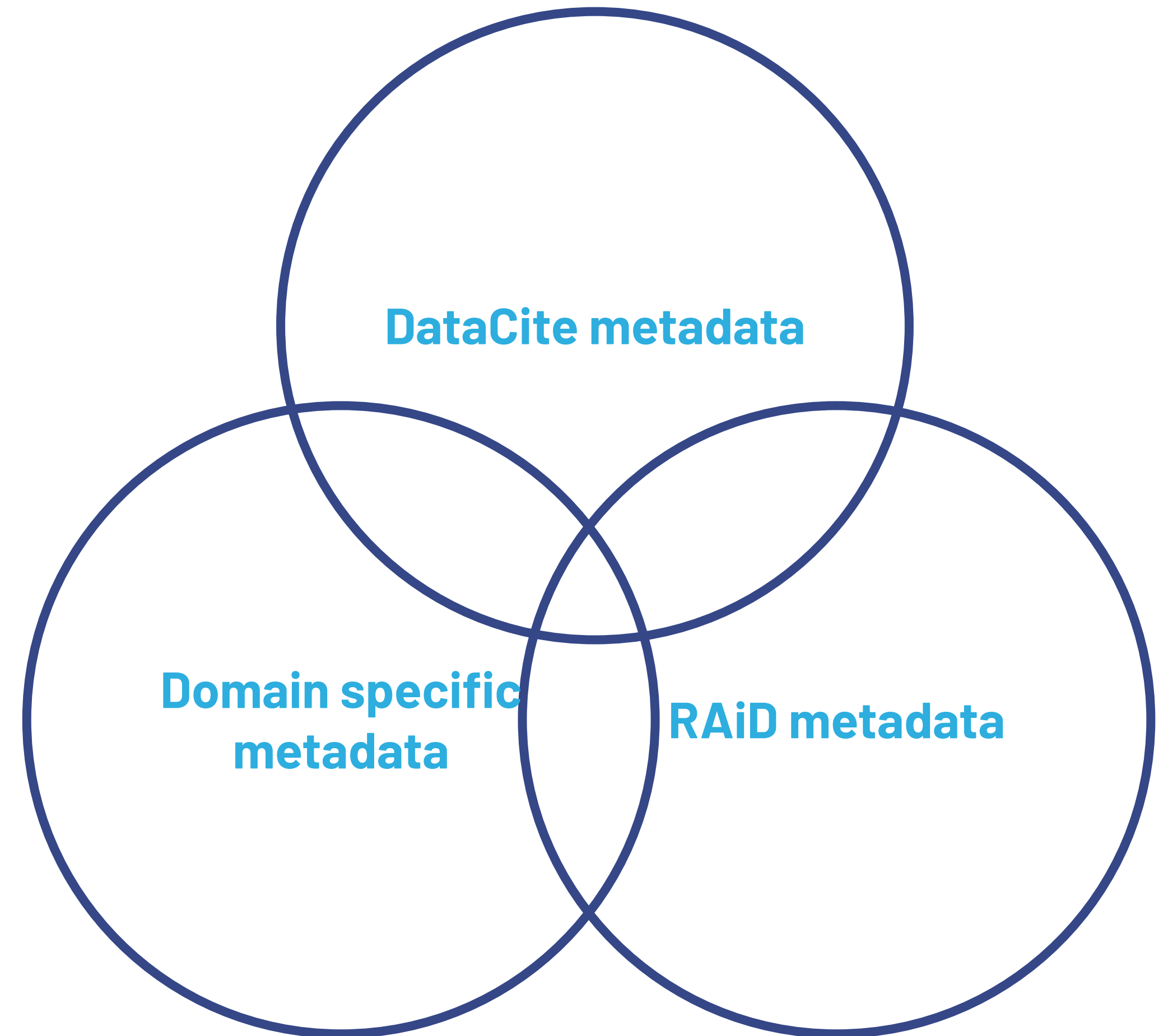
PIDGraph/ GraphQL
DataCite Commons



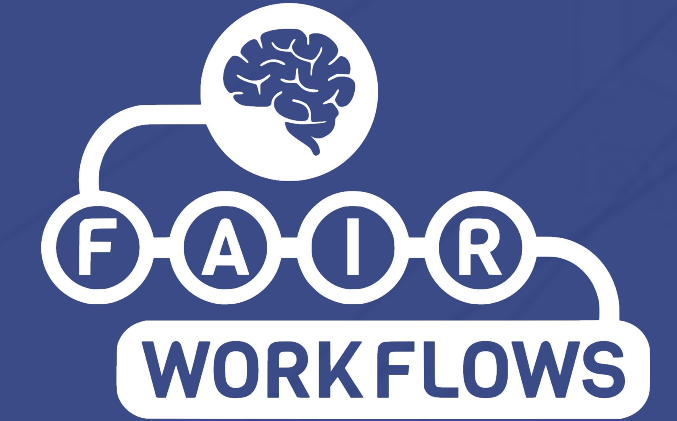
DataCite metadata



- Review and supplement current schema documentation
 - Resource types
 - Relation types
- Establish interoperability between DataCite DOI and RAiD
 - Integrate RAiD to the PID Graph
- Strategize approach for bridging generic metadata and domain metadata



Goals for integrations



- Support DOI registration
- Enhance metadata completeness
- Promote adoption of metadata best practices
- Provide examples, lessons learned, and roadmaps for future integrators

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37° 48' 31.2415" N, 122° 16' 02.9173" E

United States Archive DataCite Consortium

https://ror.org/03yrm5c26

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https://doi.org/10.5061/dryad.4hs71t6t

Data from: Mitochondrial DNA assessment of the phylogeography of the gopher tortoise

Joshua R. Ennen, Brian R. Kreiser, Carl P. Qualls, Daniel Gaillard, Matthew Aresco, Henry Mushinsky, Thomas W. Hentges & Aaron Schrey

Version 1 of Dataset published 2012 in DRYAD

Identifying geographic barriers that define genetic structure within a species is crucial for the protection of appropriate management units is critical for the protection of polyphemus, which have declined across their entire range. Previous molecular work has identified several potential geographic barriers. We sequenced a 712-base-pair portion of the mitochondrial DNA of 322 individuals from 42 sites across the range. We found two major assemblages of haplotypes (average uncorrected p distance = 0.015). The biogeographic barrier that best explained the variation was the Apalachicola-Chattahoochee rivers and not the one used to delimit the range (Tombigbee-Mobile). However, the presence of distinct (group 1 and 2) haplotypes in the Tombigbee-Mobile range indicates that the two lineages experienced historical isolation and divergence. We used the results of this study to define genetic units of conservation for gopher tortoises, then the most appropriate based on the analysis of molecular variance of the mitochondrial DNA of the Apalachicola-Chattahoochee and Tombigbee-Mobile rivers as geographic barriers. We recommend that making management decisions on the basis of mitochondrial DNA data should be based on the results of this study. DOI registered March 30, 2012 via DataCite.

1 Citation 153 Views 75 Downloads

Dataset English

https://doi.org/10.5061/dryad.4hs71t6t

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Works People Organizations Repositories

https://orcid.org/0000-0001-6660-6214

Helena Cousijn

Helena Cousijn is DataCite's Community Engagement and Communications Director. Helena is responsible for all DataCite's outreach activities. She's committed to DataCite's mission of enabling data sharing and reuse and is especially passionate about data citation. Her main goal is to communicate in a way that makes DataCite's services accessible to everyone. Before joining DataCite, Helena worked as Senior Product Manager for Research Data Management Solutions at Elsevier. She holds a DPhil in Neuroscience from the University of Oxford.

Other Identifiers

GitHub: hcousijn

Other Profiles

ORCID

Impactstory

Europe PMC

Netherlands

https://orcid.org/0000-0001-6660-6214

DRYAD

Deposits

148,840

DataDryad.org is a scientific publication repository of data for which no other data has been published elsewhere.

Contacts

curator@datadryad.org

help@datadryad.org

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2018 4

2017 4

2012 1

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Text 15

Dataset 2

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Language

English 4

Field of Science

Computer and information sciences 1

Registration Agency

DataCite 18

Authors

Chodacki, John 5

Lowenberg, Daniella 4

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Aggregated Citations, Views and Downloads

3 Citations

18 Works

Publication Year

2010 1

2015 4

2020 5

2021 4

Eurytemora affinis 2008 Experiment

Carly Strasser

Version 1 of Dataset published 2012 in DRYAD

Experiments to determine population growth rate

DOI registered November 17, 2016 via DataCite.

74 Views 4 Downloads

Dataset English

https://doi.org/10.15146/r3wk5c

Creators

Joshua R. Ennen	Brian R. Kreiser
Daniel Gaillard	Matthew Aresco
Tracey D. Tuberville	Earl D. McCoy
Thomas W. Hentges	Aaron Schrey

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Ennen, J. R., Kreiser, B. R., Qualls, C. P., Gaillard, D., Aresco, M., Birkhead, R., Tuberville, T. D., & Schrey, A. (2012). Data from: Mitochondrial DNA assessment of the phylogeography of the gopher tortoise. *DRYAD*. <https://doi.org/10.5061/DRYAD.4HS71T6T>

153 Views 75 Downloads

153 views reported since publication in 2012.

1 Reference 1 Citation

Publication Year

2010 1

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2020 5

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Employment

DataCite

Director of Community Engagement

Since July 2018

Elsevier BV

Senior Product Manager

March 2015 to June 2018

Aggregated Citations, Views and Downloads

15 Citations 11 Views

Accessibility Achievements

58% of the researcher's associated DOIs have metadata with rights as CC-BY, CC0 or public domain license.

104 Works

Publication Year

2010 1

2015 4

2020 5

2021 4

Work Type

104

License

104

humanities and social sciences

bioinformatics and computational biology

biochemistry and molecular biology

agriculture, forestry and fisheries

natural sciences

biodiversity

148,840 Deposits

Year of Deposit

2010 1

2015 4

2020 5

2021 4

Field of Science

Medical & Health Sciences

Clinical

Health Sciences

Computer Science

Agriculture

Medical & Health Sciences

Sociology

Earth and Environmental Sciences

Natural Sciences

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Data: Researcher Perspectives on the Academic Publishing Process

Yasmin Alnoamany & John Borghi

Version 3 of Dataset published 2018 in UC Berkeley

We are interested in learning about perceptions, values, and processes. To understand researchers' perspectives on academic institutions throughout the United States, we conducted a survey of academic researchers. The responses of the survey participants after excluding those from the University of California Berkeley Committee on Academic Freedom and Open Inquiry are available here.

DOI registered August 5, 2017 via DataCite.

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Dataset English

https://doi.org/10.5438/0x88-gvge

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Presenting PIDapalooza 2019!

Helena Cousijn

Version 1.0 of Content published 2018 in DataCite Blog

PIDapalooza, the open festival of persistent identifiers is back and it's better than ever. Mark your calendar for Dublin, Ireland, January 23-24, 2019 - and send us your session ideas by September 21. Yes, it's back and - with your support - it's...

DOI registered August 28, 2018 via DataCite.

Text

https://doi.org/10.5438/cd2b-xj80

Taking discoverability to the next level: datasets with DataCite DOIs can now be found through Google Dataset Search

Helena Cousijn, Patricia Cruse & Martin Fenner

If you plan to deposit your data, please contact us for more information.

- Borghi, J., Alnoamany, Y., & Borghi, J. (2018). Researcher Perspectives on the Academic Publishing Process. *UC Berkeley*.
- Goodman, J., & Fenner, M. (2018). Care and Feeding of a Dataset. *DataCite*.
- Pampel, H., & Fenner, M. (2018). Repository of DataCite. *DataCite*.

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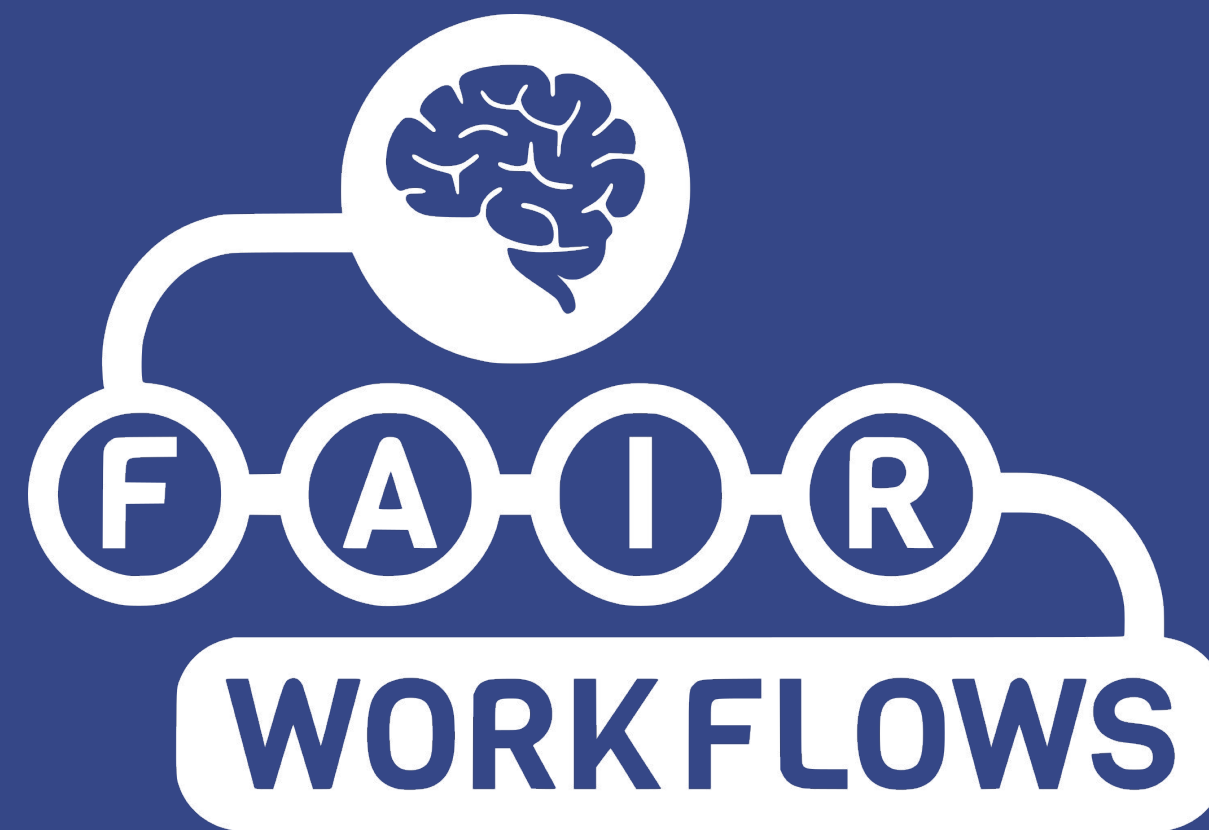
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Immediate Next steps

- **Domain specific metadata template building**
- **Explore DataCite metadata strategies**
- **kick-off integration implementations**





Keep in touch!



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