NCRIS
National Research Infrastructure for Australia
An Australian Government Initiative

Emerging Uses of PIDs in NCRIS Research Workflows

Melroy Almeida, Australian Access Federation
Jens Klump, CSIRO & AuScope
Matthias Liffers, Australian Research Data Commons

AuScope

AUSTRALIAN ACCESS FEDERATION AAF.EDU.AU

Australian Research Data Commons

CSIRO

Acknowledgement of Country

We acknowledge the Traditional Owners of the land, sea and waters, of the area that we live and work on across Australia. We acknowledge their continuing connection to their culture and we pay our respects to their Elders past and present.

Housekeeping Notes

- Download the app for Q&A
- Switch your electronic devices to silent mode.

About this Session

- Investigate emerging best practices for sharing and connecting input research artefacts (samples, observational data, software, etc) and resultant outputs of the workflow with relevant scholarly works through PIDs.
- Discuss the obstacles and advantages of tool interoperability.
- Explore the concept of a research workflow that has been engineered to maximise the benefits of PIDs and its role in facilitating the creation and dissemination of FAIR data.
- Document use-cases to share with the National PID Strategy working group.

The big picture – wasted time & money

Admin Tasks
30-40% of researchers time

Total time cost manually rekeying metadata
38 000 days per year

Total Financial cost
$24 million per year

http://doi.org/10.5281/zenodo.7100578

AUSTRALIAN ACCESS FEDERATION

ARDC
Australian Research Data Commons

How did they get the data?

MoreBrains (report authors) asked managers at Australian universities:

- How many times is info about grants and publications entered into systems?
  - **23 institutions** responded to the survey
  - Grants info **entered 3.25** times and read 5.9 times
  - Publication info is **entered 3.1** times and read 7.3 times

AUSTRALIAN ACCESS FEDERATION

Australian Research Data Commons

How can PIDs help?

- PIDs are a critical component of national research infrastructure

- PIDs offer a way to embed metadata into descriptions of entities (e.g. people, publications) at the point of creation, store metadata in standardised formats that are both human- and machine-readable, thereby facilitating information exchange and eliminating the need to rekey information into multiple systems.

AUSTRALIAN ACCESS FEDERATION

ARDC
Australian Research Data Commons

Recommendations

A National PIDS Strategy for Australia leveraging ARDC & AAF leadership in PIDs

Whole sector approach with **5** priority PIDS

- ORCID for people
- ROR for institutions
- RAiDs for projects
- DOIs for research outputs
- DOIs for grants

Funders should build on success of ARC integration

Target for **80%** adoption in **5** years

AUSTRALIAN ACCESS FEDERATION

ARDC
Australian Research Data Commons

What do we start?

National PID infrastructure*

Identifier for	Identifier type	Offered by
People	ORCID	AAF-led Australian ORCID Consortium
Data and related materials	DOI	ARDC-led DataCite Consortium
Projects	RAiD	ARDC
Grants	PURL	ARDC
Samples	IGSN	ARDC-led DataCite Consortium
Publications	DOI	Publishers
Organisations	ROR	Research Organization Registry (ARDC is supporter of)

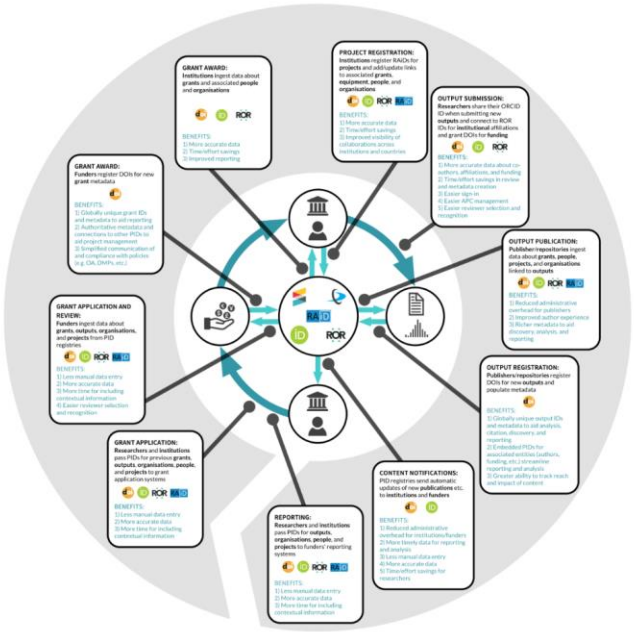
*offered via partnership with international PID providers

AUSTRALIAN ACCESS FEDERATION

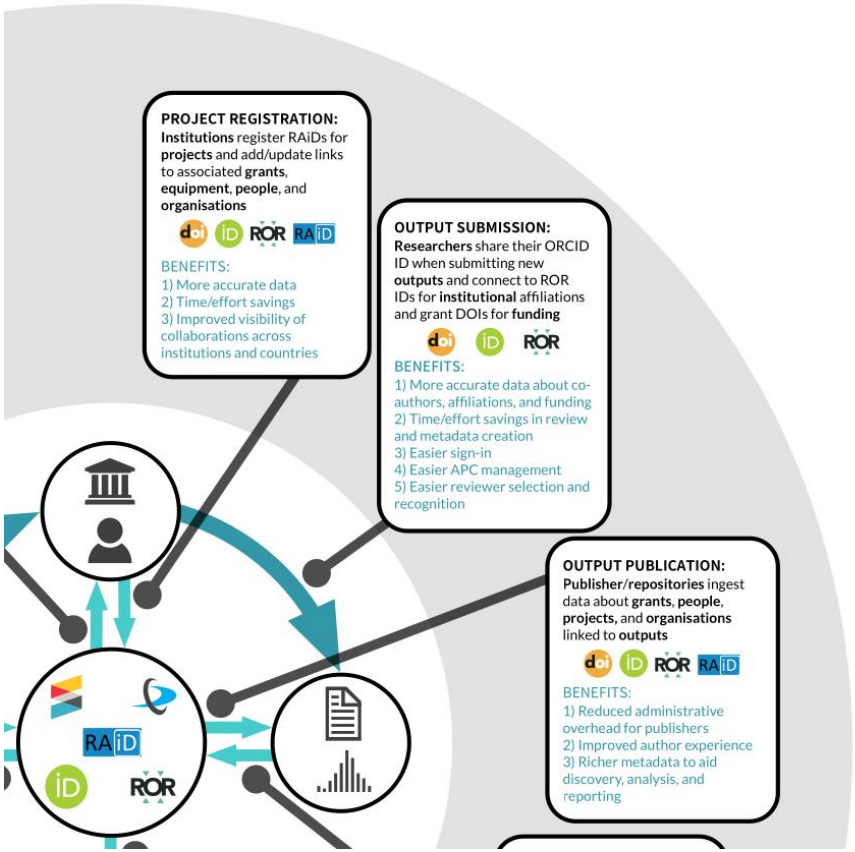
Australian Research Data Commons

MOREBRAINS

PID-optimised research cycle



ACTORS AND ENTITIES IN THE RESEARCH CYCLE	PRIORITY PERSISTENT IDENTIFIERS AND REGISTRIES
Funding Agency	Crossref
Research Performing Organisation	Datacite
Research Contributor	ORCID
Research Output Platforms (articles, data, algorithms, etc)	Digital Object Identifiers (DOI)
	Research Activity Identifier (RAiD)
	Research Organization Registry (ROR)



https://resources.morebrains.coop/pidcycle/

… and now magic happens …

- There are inputs - samples, funding, allocations (access to NCRIS capabilities), software
  - What if there are thousands of inputs?
- There are outputs - samples, data, software
  - Where do the outputs sit?
- These inputs and outputs need to be identified so that they can be linked when researchers get to Step 6 Output submission.

Example at EMSL

https://orcid.org/
0000-0001-5742-032X

Name
Norman Lewis

Research resources (2) Sort

An Integrated Omics Guided Approach to Lignification and Gravitational Responses: The Final Frontier

Deciphering Lignin-forming Supramolecular Protein Complexes for Facile Biomass Deconstruction

Environmental Molecular Sciences Laboratory (Richland, WA, US) Show less detail
2018-10-01 to 2020-09-30
DOI: 10.25582/v01.proj.2018.50193

Environmental Molecular Sciences Laboratory (Richland, WA, US)

Organization identifiers
GRID: grid.436923.9
Environmental Molecular Sciences Laboratory: Richland, Washington, US
http://www.emsl.pnnl.gov/emslweb/

Other organization identifiers provided by GRID
ISNI: 0000 0004 0373 6523
ORGREF: 19642725
ROR: https://ror.org/04rc0xn13
WIKIDATA: Q5381141
WIKIPEDIA_URL: https://en.wikipedia.org/wiki/Environmental_Molecular_Sciences_Laboratory (preferred)

Added
2018-12-05
Last modified
2019-04-25

Facility & Equipment information cited

- INFRASTRUCTURES **EMSL Facility** Show more detail
- EQUIPMENT **600 MHz NMR Hood (Metabolomics)** Show more detail

Source: Environmental Molecular Sciences Laboratory (EMSL)

AUSTRALIAN ORCID CONSORTIUM LEAD

Discussion

- Is this what we want?
- Where are the blockers?
- What can we do to solve it?

NCRIS
National Research Infrastructure for Australia
An Australian Government Initiative

Thank you!

AuScope

AUSTRALIAN ACCESS FEDERATION AAF.EDU.AU

ARDC
Australian Research Data Commons

CSIRO