

Review and analysis of the persistent identifier landscape in Ireland

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MORE+BRAINS

NORF NATIONAL
OPEN
RESEARCH
FORUM

| What are persistent identifiers?

- Persistent identifiers (aka PIDs) are long-lasting, globally unique identifiers for people (researchers), places (research organisations), and things (research outputs and grants)
- PIDs 'resolve' to a location on the web

Often with...

- Metadata registries with defined, open schema for information storage and exchange

Importantly:

- Persistence is a function of organisations, it cannot be achieved through technology alone

Persistent



An organisation or governance framework exists to keep it alive

IDentifier



Globally unique alphanumeric string

Other common characteristics of PIDs

- Open and/or community governance
- Managed by a mission-driven organisations or initiative
- Parachute / survival plan to ensure persistence

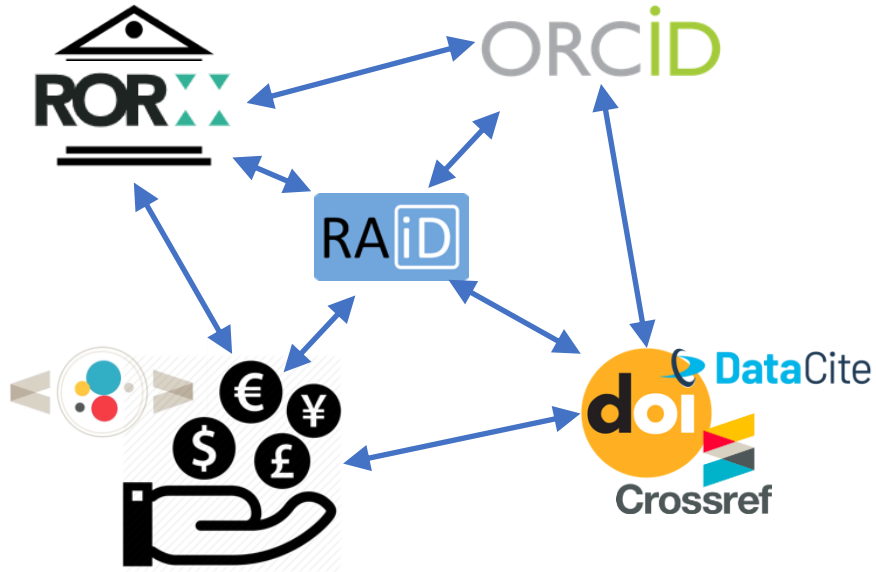
Priority PIDs

The National Action Plan for Open Research identifies the following priority PIDs:

- DOIs for grants and research outputs (Crossref and Datacite)
- ORCID for researchers and contributors to research
- RAiDs for research projects
- RORs for research institutions, funders, and other organisations



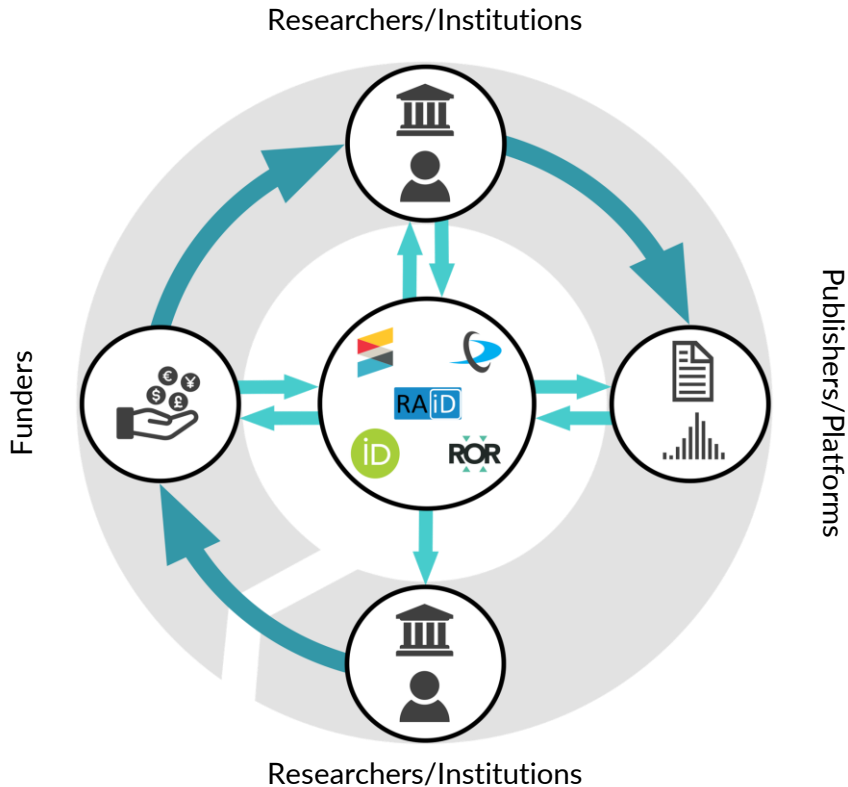
Characteristics that make PIDs invaluable



PIDS...

- are unique
- are open
- don't change
- are connected to each other
- can be read by computers
- save effort and time when finding and compiling information
- are FAIR (Findable, Accessible, Interoperable, Reusable)

PID-optimised research cycle



- Open: Information (metadata) can move from one system to another
- Efficient: Automated movement of information results in complete and timely records
- Trackable: Links between PIDs enable connections between to be analysed
- Cross-stakeholder: Requires standards, technical, and social integrations between
 - Funders
 - Research institutions
 - Publishers

<https://resources.morebrains.coop/pidcycle/>
<https://doi.org/10.5281/zenodo.4991733>

National PID strategies are on the rise

First ORCID and DataCite Consortia

Creating communities of practice for tools, services and resources on national and regional scale

2016

Digital Research Alliance Canada

Research Data Canada WG
Unique Identifiers: Current Landscape and Future Trends
[10.5281/zenodo.557106](https://doi.org/10.5281/zenodo.557106)

FREYA launches

A 3-year grant-funded project by the European Commission
Goal: extend the infrastructure for PIDs

2017

2018

Prof Tickell independent advice

...to the UK government on open access to research triggers research project by Jisc to identify the five priority PIDs for open access

Progress at Jisc and FREYA

Jisc begins national PID strategy development

The PID graph is launched (FREYA output) [10.5438/jwvf-8a66](https://doi.org/10.5438/jwvf-8a66)

PID federation scoping report (FREYA output) [10.5281/zenodo.4059557](https://doi.org/10.5281/zenodo.4059557)

2019 -2020

2021

RDA WG and national strategies

First session at RDA on national strategies

RDA working group set up
Jisc Cost Benefit Analysis released
[10.5281/zenodo.4772627](https://doi.org/10.5281/zenodo.4772627)

Strategies in Australia and Canada

ARDC & AAF release incentives to invest report

[10.5281/zenodo.7100578](https://doi.org/10.5281/zenodo.7100578)

CIPIDAC & CRKN release roadmap to a PID strategy
[10.5281/zenodo.7217469](https://doi.org/10.5281/zenodo.7217469)

2022

National strategies progress

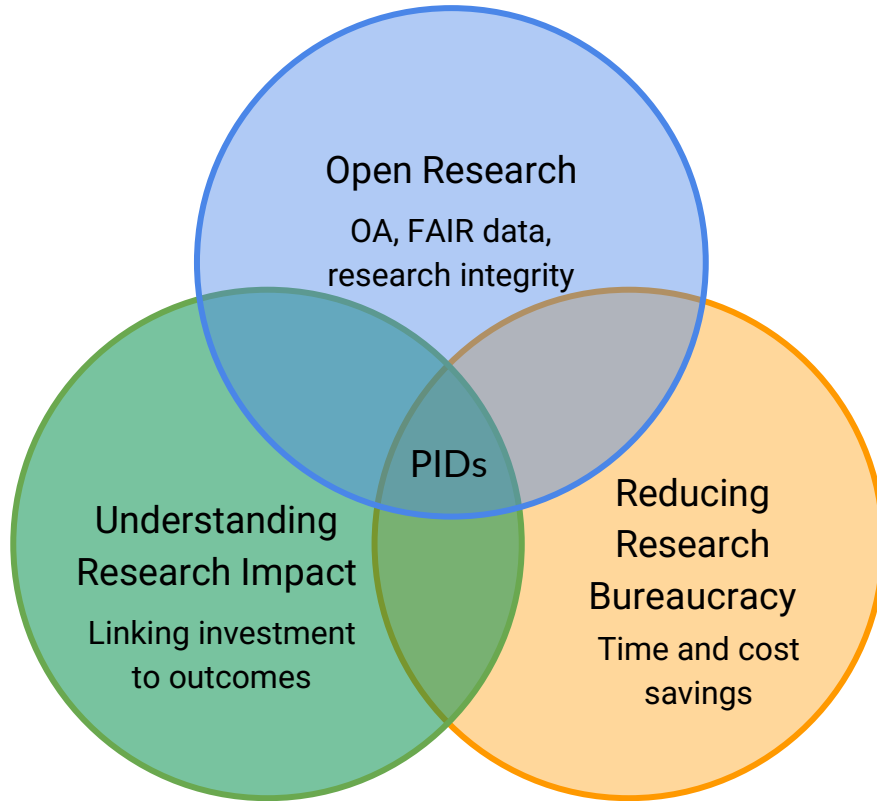
Irish national PID roadmap work begins

ARDC starts national strategy development led by Linda O'Brien

RDA national PID strategies interest group launched

2023

Key international policy drivers



- United Kingdom
- Netherlands
- Finland
- Czech Republic
- Korea
- Australia
- New Zealand
- Colombia
- Canada

Why is an Irish National PID strategy needed?

Action	Description	Key stakeholders	Timeline
A4.4 Invest in Persistent Identifier infrastructure to enable consistent monitoring and improve interoperability.	A4.4.1 Support the Irish ORCID Consortium and encourage further development and adoption of ORCID according to international best practice by researchers and within the systems and processes of publishers, research performing organisations, research funding organisations, and infrastructures. ³⁴	NORF, RPOs, RFOs, research infrastructures (e.g. IReL)	Ongoing
	A4.4.2 Develop a national roadmap for the adoption of a range of Persistent Identifiers according to international best practice, such as ORCID, DOIs, RAiDs and ROR identifiers. Implement this roadmap to consolidate national coordination and accelerate the uptake and integration of priority identifiers.	NORF, RPOs, RFOs, research infrastructures (e.g. IReL)	2023-27

From the National Action Plan for Open Research

Developing an Irish National PID strategy

Why?

- Supports implementation of Ireland's National Action Plan for Open Research 2022-30

What?

- Cost benefit analysis of persistent identifier (PID) adoption in Ireland
- National PID Strategy Roadmap for Ireland

Who?

- MoreBrains Cooperative
- NORF and its PID Task Force
- Irish research stakeholders

When?

- Project runs from October 2023 - July 2024

How?

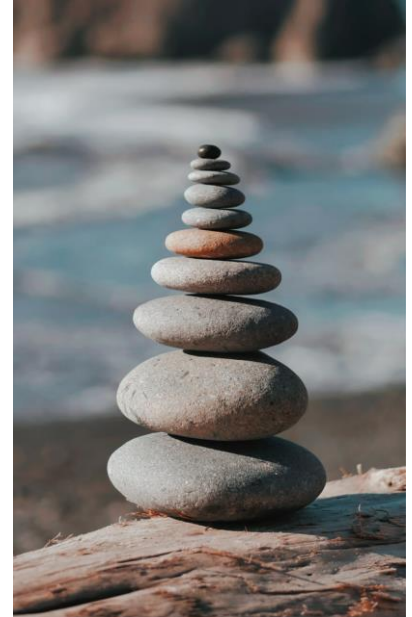
- **Inclusive** – community consultations
- **Evidence-based** – data gathering and analysis
- **Transparent** – openly available outputs



Exploring the context of the PID strategy

We have categorised three related priority areas, based on [Impact 2030](#), the [National Action Plan for Open Research](#), and the [Open Data Strategy](#):

1. **National ambitions (high-level context)**
 - *Global positioning*
 - *Digitalisation of research infrastructure*
1. **National priorities (motivators at the core of the case)**
 - *Open research*
 - *FAIR data*
 - *Impact*
1. **National challenges (more specific use cases for PIDs)**
 - *Data quality*
 - *Interoperability*
 - *Access to infrastructures*



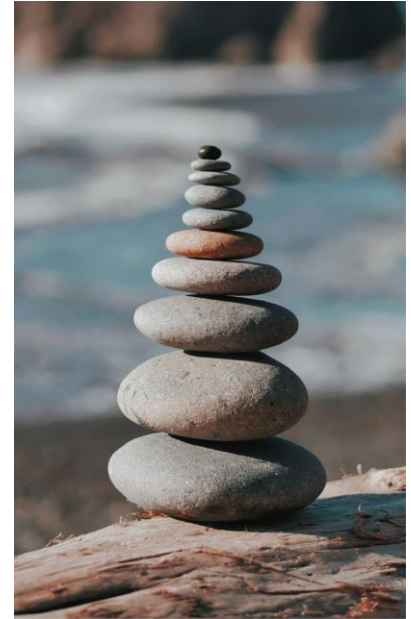
National ambitions

Global positioning: Ireland as a desirable research destination, and a leading research power

- Robust integration into international information systems is key to successful global participation and impact. PIDs deliver this by:
 - Mapping Ireland's collaborations, participation, and reach
 - Embedding Irish research activities, outputs and outcomes in global discovery and analysis systems

Digitalisation of research infrastructure: As the digital landscape grows and becomes more complex, bridges between systems and contexts become ever more important

- PIDs are a valuable tool for connecting information from different infrastructures, both digital and analogue



| National priorities

Open research:

- PIDs underpin transparency, sharing and collaboration and help to create visibility in the recording of processes
- PIDs are essential for the effective monitoring of changing practice and the impact of OA policies - they are fundamental to Plan S technical requirements
- Understanding and maximising research impact is central to the Irish government's ambitions for the Irish Research and Innovation community

FAIR data:

- PIDs are a fundamental tool for discovery and management of resources, access requests, data re-use, etc

Impact:

- Understanding and maximising research impact is central to the Irish government's ambitions for the Irish Research and Innovation community
- PIDs are a valuable toolset for increasing the evidence base for impact and for understanding the connections between impacts and research inputs and activities

National challenges

Improved data quality:

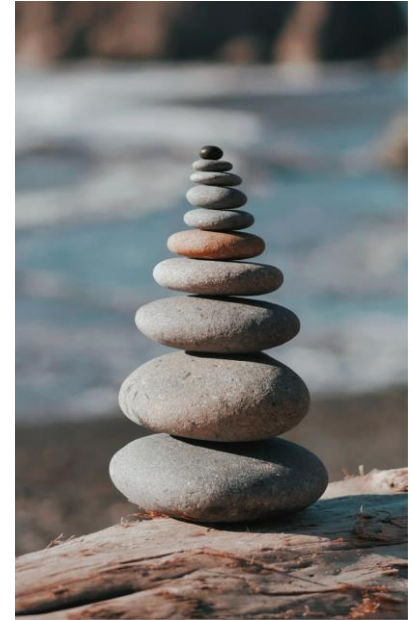
- PIDs help with measuring assets, understanding trends, and benchmarking progress
- Potential adopters see improved data quality as one of the main benefits of PIDs

Interoperability:

- Interoperability between internal systems and interoperability with external systems are seen as some of biggest benefits of widespread PID adoption

Access to infrastructures:

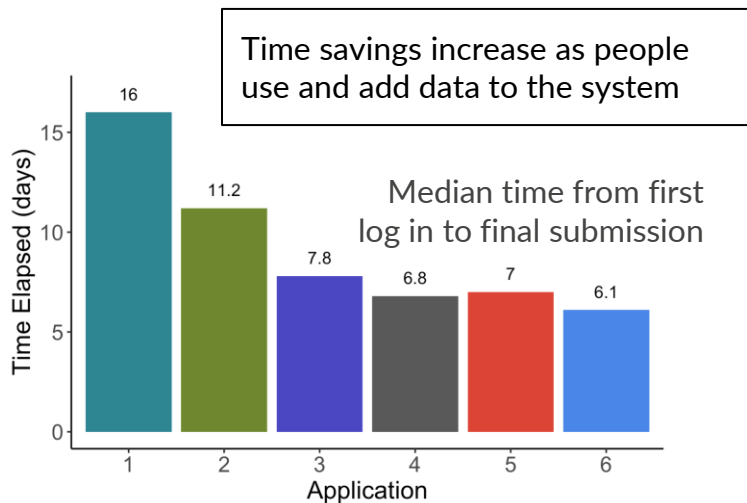
- PIDs are a core component of digital research infrastructure



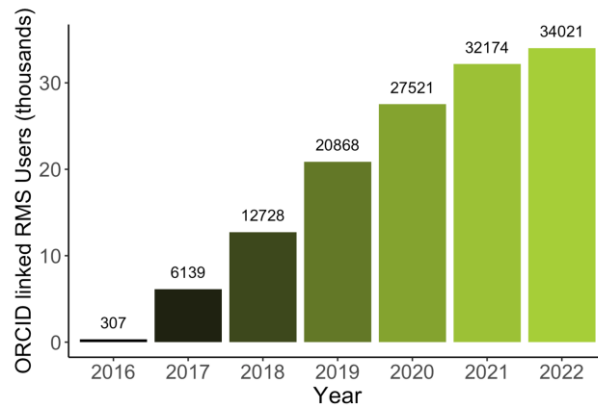
Reducing the admin burden - an additional priority?

A crisis of burden on researchers:

- Estimates of time researchers spend on administrative range from 10-42%
- Some surveys show that researchers spend as little as 17% of their time on research - this is increasingly seen as a major policy issue
- PIDs can and do reduce this burden, as this example from the Australian Research Council shows



78% of publications submitted to support ARC grants are via ORCID - total cost savings of nearly **\$850 k**



Project plan and timeline (complete/in progress)

- October
 - Project launch
- November:
 - PID Task Force convenes
 - Community survey conducted
 - Cost benefit analysis starts
- December
 - Community survey results and draft cost benefit analysis shared with PID Task Force
- January
 - Engagement plan developed
 - Draft cost benefit analysis report shared with PID Task Force
- February
 - Engagement plan approved by PID Task Force
- March
 - Cost benefit analysis approved by PID Task Force
 - Focus groups conducted for institutions, funders, infrastructure/repository organisations

Community survey and cost benefit analysis

Survey:

To enable a clear understanding of current awareness and usage of PIDs in Ireland, as well as providing insights into how the community views the opportunities and challenges of widespread national PID adoption

Cost benefit analysis:

To evaluate the cost savings (time and money) associated with widespread PID adoption in Irish research institutions



| Community survey

- Deployed November 2023
- 68 responses from 45 organisations*
 - 49 research institutions/universities
 - 16 research funding organisations
 - 13 research infrastructure organisations
 - 12 policy maker/government organisations
 - 11 libraries
 - 7 publishers
 - 9 “other” (mostly also categorised as another option)

* multiple options could be selected

| Cost benefit analysis

Researchers and administrators spend significant amounts of time keying metadata into systems for funding applications, grant management, manuscript submissions, repositories, and more.

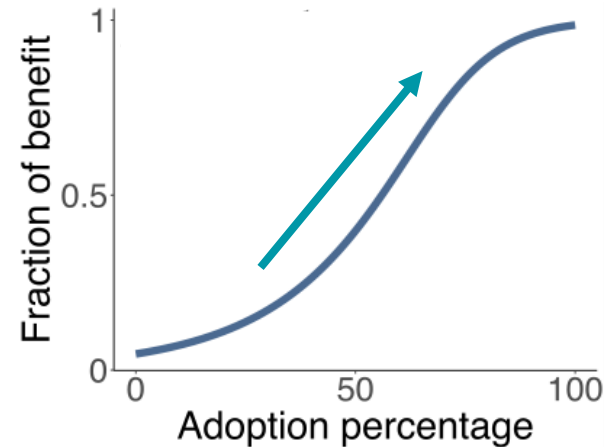
Research questions:

1. How much time (and therefore money) would be saved if this information about research activity moved from system to system automatically?
1. How much difference would having a central service to support widespread PID adoption at Irish HEIs make?

The case for a central support service

- Support service staffed by 3 FTE
- Central support would enable reduce the cost of implementing 5 priority PIDs to the equivalent of 2 ORCID integrations
- A central support service generates economies of scale, particularly around training, documentation, and best-practice
- The service will support communities of practice and capability building

Central support will lead to an increased rate of adoption



| Project plan and timeline (next steps)

- April
 - Publication of cost benefit analysis (English and Irish)
 - Strategic SWOT analysis with PID Task Force (based on findings)
 - Community workshop
- May
 - Community consultations findings shared with PID Task Force
- June
 - Draft PID strategy roadmap shared with PID Task Force, then made publicly available for comments
- July
 - PID strategy roadmap finalised and published
 - Post-consultancy national PID group established

Ongoing community outreach via webinars, blog posts and articles, conference presentations, etc



Thank you!

Questions?