

What is a Persistent Identifier (PID)?

A persistent identifier is a long-lasting reference to a digital object. It usually includes two components: a unique identifier that ensures the continuity of a digital object (i.e., that the object is what it claims to be), and a service that locates the object over time even when its location changes, ensuring it resolves to the correct current location¹. PIDs help prevent 'dead links' and ensure that an object is accessible and can be referenced through time.

PIDs may refer to people (e.g., researchers), objects (e.g., publications), datasets/metadata, and in some cases scientific instruments². There are multiple PIDs available, used by different disciplines, for different digital objects, maintained by various providers. Some commonly used PID providers are ORCID, Crossref, ROR, DataCite, RRID, and RAiD is the newest PID provider to emerge.

The Value of PIDs

Using PIDs helps make data and other research outputs FAIR, as it can ensure that it is discoverable, accessible and reusable by others^{4 5}. Persistent identifiers aim to solve the problem of the persistence of accessing cited resources and objects, particularly in relation to scholarly literature, datasets and metadata⁶. They improve connections between authors' publications and the datasets that support them, allowing authors and researchers to get credit for their work. A robust PID infrastructure is one of the prerequisites of reproducible digital science.

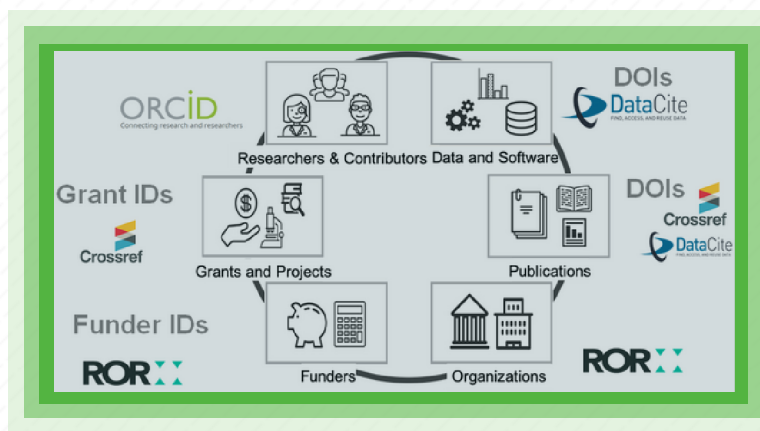


Image by <https://projects.tib.eu/pid-service/en/persistent-identifiers/persistent-identifiers-pids/>
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For example, a PID solution means that someone executing a workflow - today, next month, or 25 years from now - can assume the analysis will receive the exact same input datasets.

The value of PIDs differs for each user community. According to the PID Forum⁷, researchers gain credit for their work, which becomes discoverable, ultimately building their profile; those reusing data and other objects are assured that the references they provide are persistent and resolve to the correct location; librarians and repository managers benefit from the PIDs longevity and trustworthiness; service developers and providers benefit from the interoperability that PIDs offer; funders and policy makers can track outputs easier, gaining understanding between research outputs and researchers; and publishers benefit from resource trustworthiness and interoperability across published outputs

1. <https://www.dpconline.org/handbook/technical-solutions-and-tools/persistent-identifiers>
2. <https://www.rd-alliance.org/groups/persistent-identification-instruments-wg>
3. <https://sis.web.cern.ch/submit-and-publish/persistent-identifiers/what-are-pids>
4. <https://www.go-fair.org/fair-principles>
5. <https://blog.westminster.ac.uk/researchoffice/what-are-persistent-identifiers-pids-and-how-can-you-use-them>
6. <https://www.dpconline.org/handbook/technical-solutions-and-tools/persistent-identifiers>
7. <https://pidforum.org/t/why-use-persistent-identifiers/714>

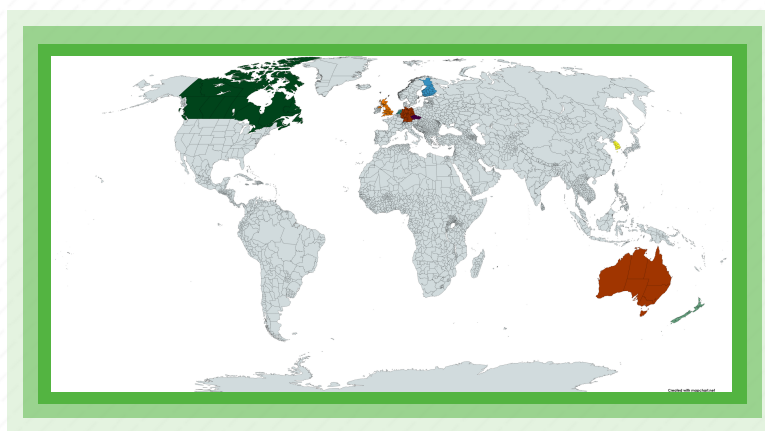
The Rise of National PID Strategies

Having a national strategy rather than a local directive allows the strategy to reflect the collective needs of the research community, taking into account the specific landscape of research infrastructure within that country. Having a national strategy also reduces the administrative burden on individual institutions and research centres. A national strategy ideally takes into account the views of all stakeholders in a given country. The universal and consistent adoption of PIDs is financially and administratively beneficial, and increases research quality and FAIRness, as recognised by national consortia, policy-makers and funding agencies, research communities, all recently engaging in the endeavour for the establishment of national PID strategies.

The RDA National PID Strategies WG recognises the value and rise of these pursuits, and using the RDA as a global platform for collaboration and community consultation set out to facilitate further discussion and alignment between the strategies, refinement of the value proposition and sharing practical development pathways to a national PID strategy.

National PID Strategies Working Group Recommendation - The Case Studies

At the establishment of the WG, National PID Strategies were beginning to emerge in a number of different countries as a pathway to realising benefits from widespread PID adoption. The WG set out to map commonalities across nine international case studies, with the ambitious aim to develop guidance for developing a National PID strategy. The case studies covered Australia, Canada, Czech Republic, Finland, Germany, South Korea, New Zealand, the Netherlands and the United Kingdom. The WG developed a template and issued a call for volunteers; the 9 resulting case studies were those who responded to the call.



The analysis of the case studies yielded the conclusion that at present there is no ‘cookie cutter’ approach to developing a national strategy, as individual national interests may differ and the specific national research landscape needs to be considered. The WG however pinpoints a number of common components in existing strategies that should be considered by those undertaking their strategy development. These components have been compiled by the Group into a checklist for this purpose. All case studies are publicly available as part of the Group’s Recommendation⁸.

Find out more about the National PID Strategies RDA Working Group

8. <https://doi.org/10.15497/RDA/00091>

National PID Strategy Guide and Checklist

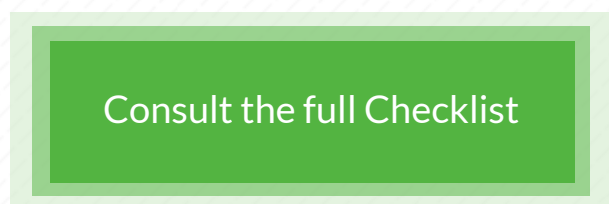
The checklist and accompanying guide produced by the WG maps out the common features found in the case studies analysed. Key elements include ensuring there is a lead organisation driving the effort (such as ARDC, Jisc, KISTI etc, in the case of the countries analysed), defining a clear scope - which may evolve during the process (i.e., who the strategy applies to), and identifying and involving key stakeholders (such as PID service providers, funding bodies, governments, the research community and research infrastructures, among others). It is also critical that a clear value proposition is included in a national PID strategy, with some common drivers identified in the analysis being cost benefits, facilitating FAIR and Open research, improving interoperability, supporting best practice, and better tracking of research impact, among others.

Unique-to-country drivers were also identified in the case studies, with some examples being the need to build better national services to support interoperability in the case of Finland, a coordinated networking and promotion of PID services in the case of Germany, and the need for a formal framework for management and access to PIDs and introduce them as a standard into the Czech R&D environment in the case of the Czech Republic. Other findings include key infrastructure needed to support or engage with national PID strategies, with common elements identified including a national research publication/discovery portal, repositories and international PID providers (e.g. ORCID), and the common approach of countries examining how particular PIDs can address specific problems. Common use cases examined include those for people, organisations, research outputs, funding, projects and activities and samples, with common PIDs identified as ORCID, DOIs and RORs.

The full analysis of the case studies including comparison tables between countries on the common elements described above and country-specific observations can be found in the WG's Recommendation.

The Guide can be used to:

- Inform the development of your National PID Strategy
- Develop a roadmap to accompany your strategy
- Align with international initiatives in this important area
- Facilitate stakeholder engagement with National PID Strategies
- Connect, communicate and collaborate with others developing National PID Strategies



Where next? Join the new RDA National PID Strategies Interest Group

The RDA National PID Strategies Working Group is evolving into the [RDA National PID Strategies Interest Group](#). The IG will continue to facilitate the much needed discussion and alignment between the strategies, refinement of the value proposition and sharing practical development pathways to a national PID strategy. The IG's focus areas include:

- Facilitating information exchange between those developing and/or delivering national PID strategies;
- Facilitating engagement between developers of national PID strategies and international PID providers such as ORCID, DataCite and Crossref;
- Collaboratively developing the value proposition for national PID strategies overall as well as its component parts (such as grant identifiers, person identifiers, organisation identifiers) that can be reused/adapted by the community;
- Collecting case studies of national PID strategies from countries across the globe;
- Maintenance of the guide and checklist produced by the National PID Strategies WG.



If you are involved in any of these activities in your region or country - for example, if you're a stakeholder in national PID strategy development or involved in efforts to harmonise national PID strategies, or if you're interested in how you might go about instigating a discussion on a national PID strategy, please join this Interest Group and participate in this energetic community!



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