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Persistent Identifiers: What they are and why you should care

Research is becoming ever more digital, technologically demanding, data-intensive, and global. With a growing administrative burden, researchers have less and less time for research and innovation. Estimates suggest that <u>researchers can spend as little as 17% of their time doing research</u>. It's no wonder that so many are frustrated. To fix this problem, we need to streamline research administration – for everyone's benefit. Persistent identifiers (often referred to as PIDs) are part of the solution. If widely adopted across research organizations and systems, they have the potential to make the entire research lifecycle more efficient and effective, enabling researchers to spend more time on research.

A PID is both a unique label (code or number) for and a long-lasting link to an entity (a person, place, or thing). It's associated with additional information (known as 'metadata') about that person, place, or thing. For example, a PID for a journal article (a thing) would be associated with metadata such as the author's name (a person) and affiliation (an organization, aka a place). These, in turn, would be associated with their corresponding PIDs —in this case, the author's <u>ORCID</u> identifier and the <u>Research</u> <u>Organization Registry (ROR)</u> ID for their institution — all of which can be linked.

Typically, a PID for a journal article would be a 'digital object identifier' (DOI), and a PID for a person would be an ORCID ID — two of the best known and most used PIDs in the research world. In addition to publications, DOIs can also be assigned to many different kinds of research outputs like datasets, videos, dissertations and theses, and more. Researchers can then populate their ORCID records by linking themselves to the DOIs for their research outputs, either manually or by giving other organizations permission to do so. Researchers can even set this up to happen automatically, for example, through <u>Crossref</u> and <u>DataCite</u>'s auto-update services.

PIDs provide a technical solution to many of the costly and complex information challenges facing the Canadian research ecosystem. Benefits of widespread PID adoption include:

- Reducing how many times the same information has to be rekeyed, through automation and pre-population of fields saving time and minimizing errors
- Helping to answer important questions about return on investment, and the long-term impact of research by enabling persistent links between researchers, their outputs, and their organizations

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- Ensuring reliable citations in the scientific literature, helping to verify content and give credit where it is due
- Supporting open research and <u>FAIR</u>ness, as outlined in the <u>Canadian Roadmap for Open</u> <u>Science</u>
- Enabling better strategic decision-making about national research priorities
- Reducing bureaucratic barriers to applying for grant funding
- Improving the understanding and practice of reproducibility and integrity of research

Thanks in large part to two national PID consortia – <u>ORCID-CA</u> (54 institutional members) and the <u>DataCite Canada Consortium</u> (84 institutional members) – Canada is already seeing substantial growth in PID adoption. For example, as of March 2025, there are roughly 243,000 ORCID iDs registered to Canadian accounts and over 738,000 DOIs have been registered through DataCite Canada. Now a diverse group of Canadian research stakeholders (funders, institutions, libraries, publishers, researchers, and others) are working together to build on this success. Facilitated by the <u>Canadian Persistent</u> <u>Identifier Advisory Committee</u> (CPIDAC), they are developing a national PID strategy designed to bring the benefits of PIDs to all researchers in Canada – irrespective of discipline, institution, language, or region.