Canadian Research Knowledge Network

Réseau canadien de documentation pour la recherche

From National Strategy to National Action: Advancing PIDs across Québec and Canada

John Aspler, Manager, Canadian PID Program, CRKN

Antoine Drouin, Analyste en gestion stratégique, FRQ

Gabriel Joyal, Conseiller stratégique à la Direction scientifique, INRS

Charlie Lessard-Berger, Bibliothécaire spécialiste des identifiants uniques pérennes, Université Laval

crkn-rcdr.ca

Session Schedule

- Introduction
- National PID Strategy Update
- PID Program Update
- Institutional and Québec Perspective (INRS)
- Persistent Identifiers: Québec Leadership (FRQ)
- Q & A

PIDs and CRKN

- **What is a PID?** Long-lasting digital reference to research entity
  - A unique identifier helps locate and disambiguate entities
  - A supporting infrastructure to enable metadata interoperability
- **Vision:** Knowledge is accessible to all
  - Automated and efficient access
  - FAIR Principles
  - Open and connected metadata
- **Mission:** Together, we empower Canada by creating pathways to trusted knowledge
  - Disambiguation, discoverability, connectedness, interoperability

Introduction

Charlie Lessard-Berger, Université Laval

National PID Strategy Update

John Aspler

PID Governance in Canada

Canadian Research Knowledge Network

Réseau canadien de documentation pour la recherche

ORCID Canada Governing Committee

DataCite Canada Governing Committee

Canadian Persistent Identifier Advisory Committee: CPIDAC

- CPIDAC: PID Strategy Development and Implementation
  - Shared advisory committee, advising PID consortia
- Committee composed of **26 organizations**:
  - Funders (e.g., SSHRC, NSERC, CIHR, TGMS, FRQ, CFI)
  - Library Consortia and Associations (e.g., OCUL, CAAL, CARL)
  - Digital Research Infrastructure (e.g., Alliance, Scholars Portal)
  - Sector (e.g., CUCCIO, Research Administrators – CARA)
- Funding from Digital Research Alliance of Canada

Digital Research Alliance of Canada | Alliance de recherche numérique du Canada

National PID Strategy

Vision

That comprehensive PID adoption will underpin an ***effective and equitable*** digital research information landscape in Canada, enabling ***open and persistent connections*** between research ***inputs, activities, outputs***.

6 Guiding Principles

- Open
- Inclusive & Equitable
- Collaborative
- National & International
- Transformative
- Trustworthy

5 Strategic Pillars

- Selection & Adoption of preferred PIDs
- Deployment & System Integration
- Promotion & Community Engagement
- International Engagement
- Sustainability & Governance

Collaboration

Led by the Canadian Persistent Identifier Advisory Committee (CPIDAC)

Supported by:

- CRKN
- Digital Research Alliance of Canada

Digital Research Alliance of Canada

CRKN RCDR

Selection & Adoption

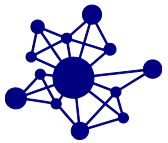
Canada prioritizes

- **ORCID iDs** for researchers (ORCID-CA)
- **DOIs** for research outputs:
  - DataCite DOIs for datasets & repositories (DCAN)
  - Crossref DOIs for publications & journals
- **ROR IDs** for organizations

Emerging PID Areas

- **DOIs** for Funding:
  - Crossref Grant IDs
  - DataCite Award DOIs
- **DOIs** for Data Management Plans (DMPs)
- **RAiD** for research projects & activities

Deployment & System Integration



Types of Systems

- Publishing platforms
- Grant management systems
- Repositories
- CRIS/RIMS platforms
- Discovery systems

Canadian Successes

- FRQ and CFI advanced PID ecosystems (Award DOIs & ORCID integrations)
- Coalition Publica, PKP, Érudit, Scholaris, Borealis & FRDR are strong Canadian examples of PID enabled infrastructure

Stakeholder Actions

Researchers

- Register for an ORCID iD
- Use PIDs when publishing & citing
- Advocate for PID use

Publishers & Infrastructure

- Enable PID inputs
- Enable interoperability between systems

Funders

- Integrate PIDs into grant systems
- Register DOIs for grants and awards

Institutions

- Use PIDs in research information systems
- Use PID providers as information sources

International Engagement

Objectives

- Understand PIDs as global standards
- Participate in international governance & development
- Adopt & shape international best practices

Canadian representation

- ORCID Board
- DataCite Board
- RAiD Global Alliance
- Research Data Alliance's PID Interest Groups
- DSpace & PIDs Interest Group

Sustainability & Governance

Business Model

- Consortia-based business model with member fees
- Government support to fund PID staff & offset PID member fees via the Alliance
- Collective investment in PIDs through work at member institutions & infrastructure providers

Community-led Governance

- CPIDAC provides national strategic oversight
- ORCID-CA & DataCite Canada each have elected governing committees
- Governance is intentionally community-led & collaborative

PID Program Update

John Aspler

Persistent Identifiers (PIDs) in Canada

ORCID Canada Consortium

- 64 members (all U15)
  - SSHRC, NSERC, CFI, FRQ
- 99 system integrations
- 182K active ORCID iDs (.ca)

DataCite Canada Consortium

- 99 members
- 132 repositories
- >900,000 DOIs

Canadian Research Knowledge Network

Réseau canadien de documentation pour la recherche

Digital Research Alliance of Canada | Alliance de recherche numérique du Canada

DataCite Canada – Achievements

- Doubled the membership since 2021: **from 50 to 99**

- Most DOIs ever registered in one year (since Oct 2025): **150K**
  - Driven largely by university libraries registering DOIs for repositories
    - **Dissertations** – McGill (56K), Université de Montréal (35K)
    - **Repository Materials** – McMaster (25K), Regina (7.5K), VIU (4K)

- CFI became the first Canadian funder to register DataCite DOIs for Awards
  - **FRQ** has registered **28K with Crossref** – *second most Grant DOIs globally*
  - **CFI** has registered **14.5K with DataCite** – *most Award DOIs with DataCite*
    - Seventh most when combining DataCite and Crossref metrics

ORCID-CA – Achievements

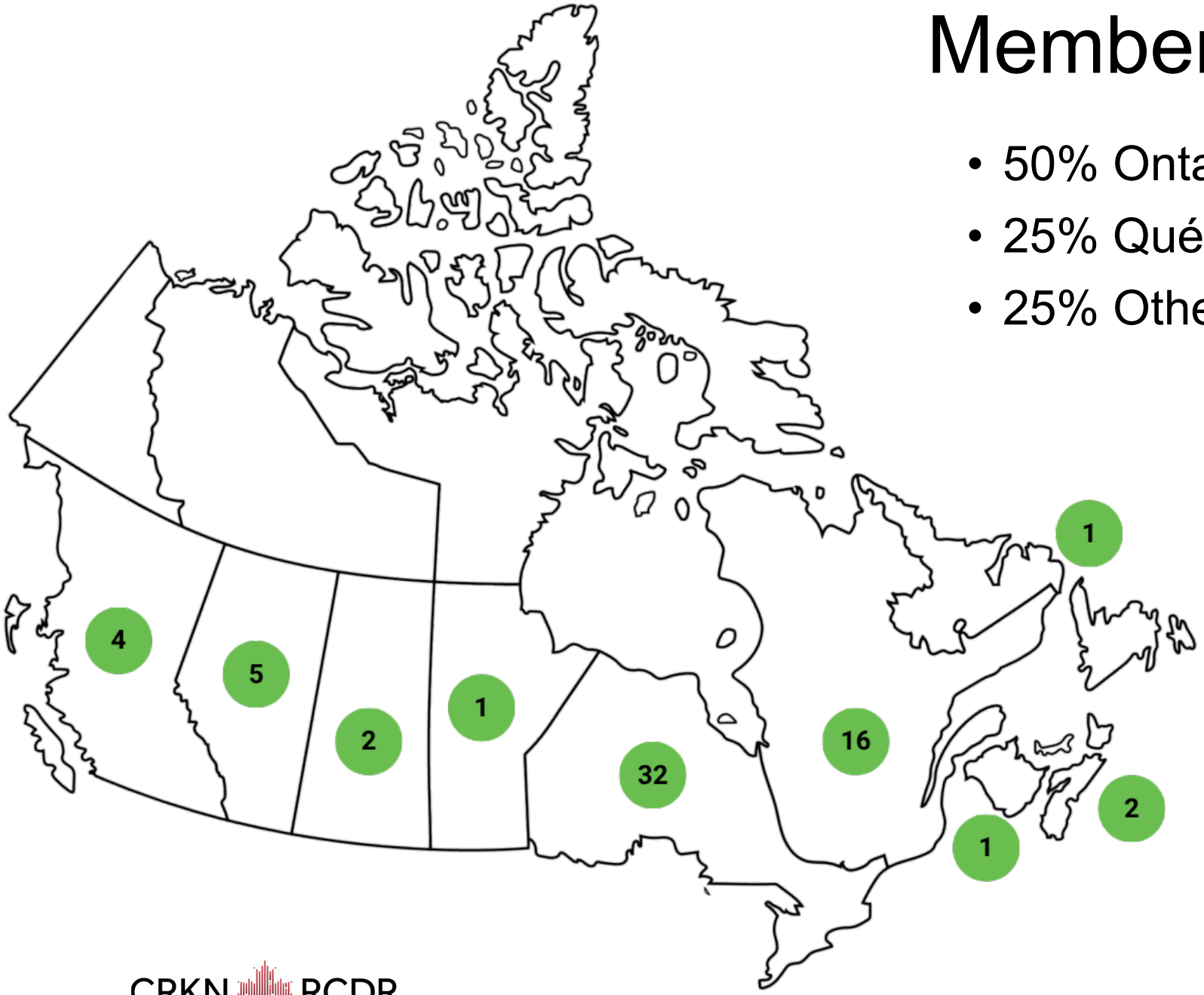
- Recruited over **60 members** – reduced fees for everyone by **15%**
  - Most growth in a single year (9 members)
  - Most affordable the fees have ever been
- More **funders** joining (Stem Cell Network) and implementing (CFI)
- Significant growth in **Quebec** – *more than half of the UQ network*

ORCID-CA: 64 Members - Quebec

- ARUCC (*My Creds*)
- Athabasca University
- Bank of Canada
- Bishop's University
- Brock University
- Canadian Association for Graduate Studies
- Canada Foundation for Innovation
- Canadian Cancer Society
- Canadian Science Publishing
- Carleton University
- CARL
- Concordia University
- CRIRES
- CRKN
- Dalhousie University
- Digital Research Alliance of Canada
- Érudit
- Fisheries & Oceans Canada
- Fonds de recherche de Québec
- Institut national de la recherche scientifique
- MacEwan University
- McGill University
- McMaster University
- Memorial University of Newfoundland
- Mount Royal University
- National Research Council
- Natural Sciences & Engineering Research Council
- Northern Ontario School of Medicine University
- Ontario Institute for Cancer Research
- Ottawa Hospital Research Institute
- Perimeter Institute
- Polytechnique Montréal
- Public Health Agency of Canada
- Queen's University
- Saint Mary's University
- Simon Fraser University
- Social Sciences and Humanities Research Council
- Stem Cell Network
- Toronto Metropolitan University
- University of Alberta
- University of British Columbia
- University of Calgary
- University of Guelph
- Université Laval
- Université de Montréal
- Université de Sherbrooke
- University of Manitoba
- University of New Brunswick
- University of Ottawa
- University of Regina
- University of Saskatchewan
- University of Toronto
- University of Victoria
- University of Waterloo
- University of Windsor
- Université du Québec à Chicoutimi
- Université du Québec à Montréal
- Université du Québec en Outaouais
- Université TÉLUQ
- Université du Québec à Trois-Rivières
- Vancouver Island University
- Western University
- Wilfrid Laurier University
- York University

Members per Province

- 50% Ontario
- 25% Québec
- 25% Other provinces and Territories



CRKN RCDR

Institutional and Quebec Perspective

Gabriel Joyal, INRS

FORMER. INNOVER. AVANCER.

Institut national de la recherche scientifique

From national strategy to national action

Advancing PIDs in Quebec and Canada

Institutional and Quebec perspective

Gabriel Joyal
Strategic Advisor to the Scientific Department

With the contribution of
Ève-Marie Lampron, UQAM
Judith Michaud, U. de Sherbrooke
Édith Robert, UQAM

CRKN Annual General Meeting
October 21, 2026

INRS

PIDS AT INRS

ORCID Canada

- Affiliation Manager
- Integration into the "Institutional CV"
- Support for Faculty

DataCite CONSORTIUM ORGANIZATION

- *Research Reports*
- *Institutional grants*
- *Theses and dissertations*
- *Research infrastructures / platforms*

ROR

- INRS Foundation
- *Centers and UMRs (joint research units)*

- "Directory of Expertise" Group
- FRQ-PBUQ Community of Practice

Institut national de la recherche scientifique

INRS

FORMER. INNOVER. AVANCER.

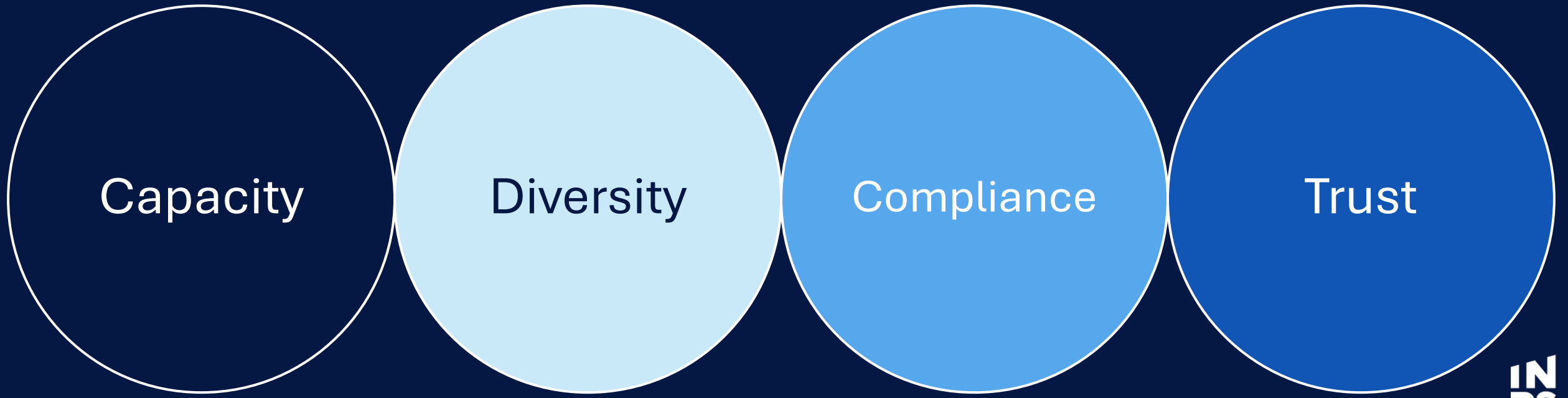
Institut national de la recherche scientifique

What is the value of PIDs in practice?

INRS

What tensions must be managed to achieve this?

Combining the quest for "perfect data", the temptation to measure everything and valuing what really matters



Tensions to be managed

Diversity

Can / should we include the variety of contributions in research and creation?

Formats, disciplines, languages, complexity, comprehensiveness, etc.

Diversity ↔ Standards

Trust

Can the infrastructure sustain the research community's trust over time?

CCV phase-out, academic freedom, institutional support, change management, etc.

Consistency ↔ Utility

Capacity

Do we have the capacity to find and process information?

Discoverability, "retroactivity", resources, expertise, etc.

Quality/quantity ↔ Burden

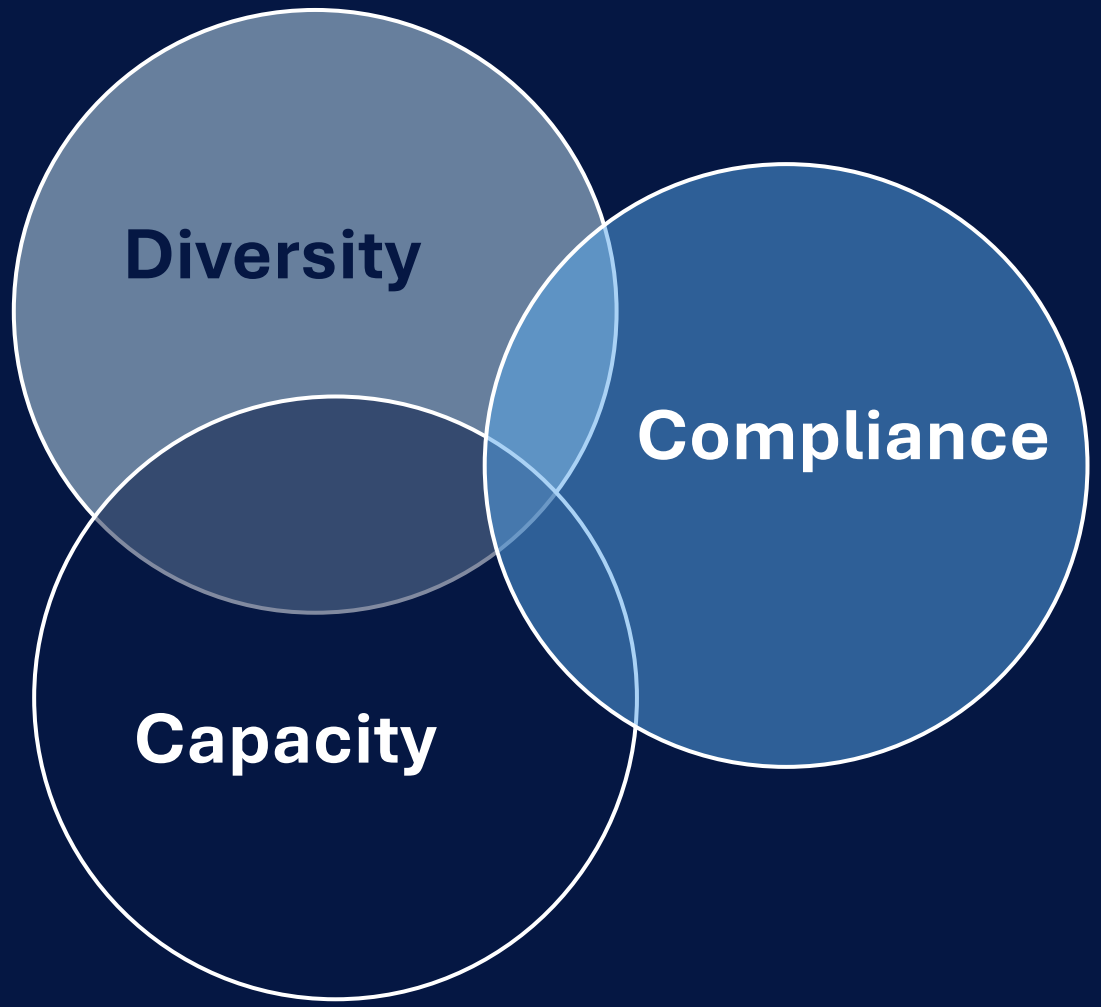
Compliance

How can PID quality and quantity support richer descriptions?

Integrity, research evaluation, good practices, etc.

Traditional CV ↔ Descriptive CV

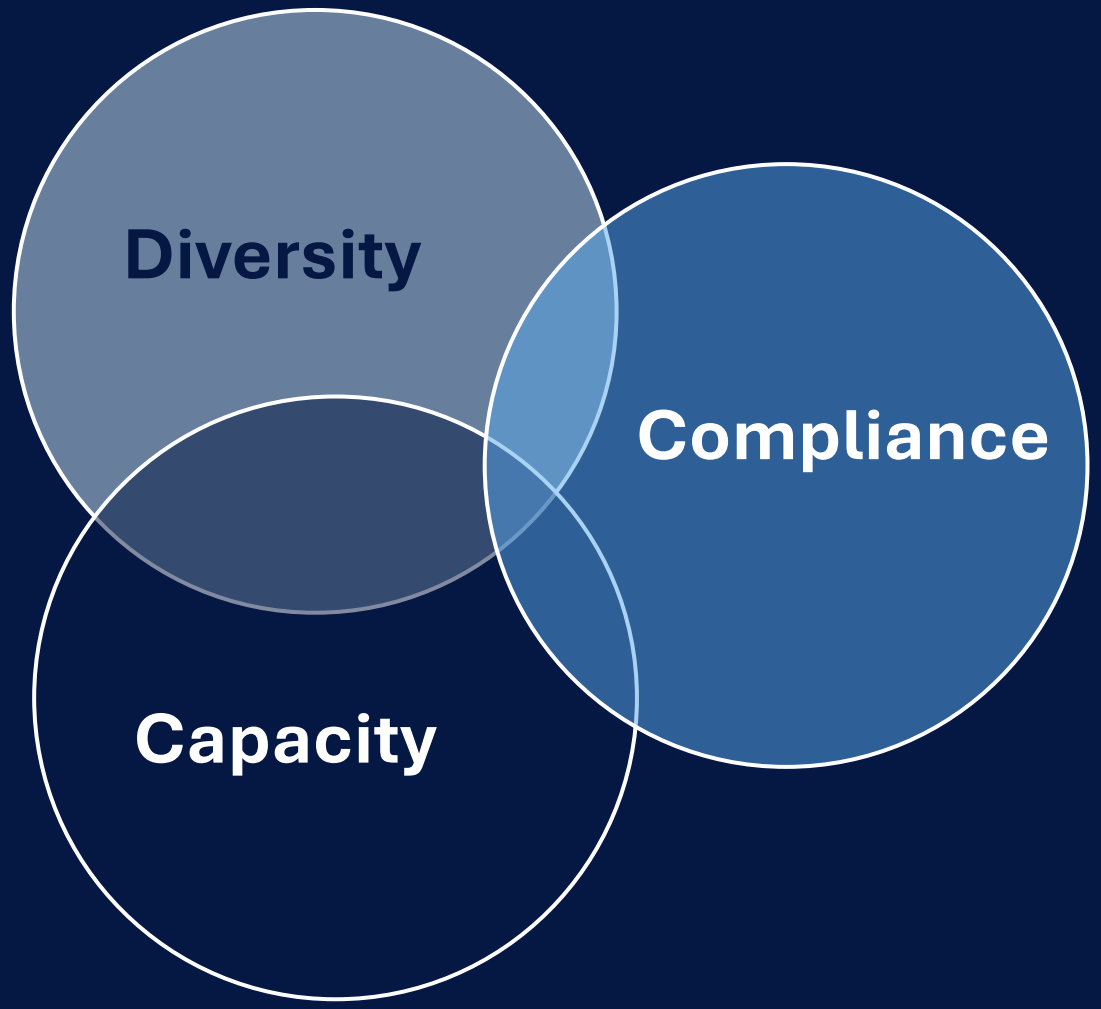
Exhaustiveness?



Bad information is problematic...

... so is too much good information!

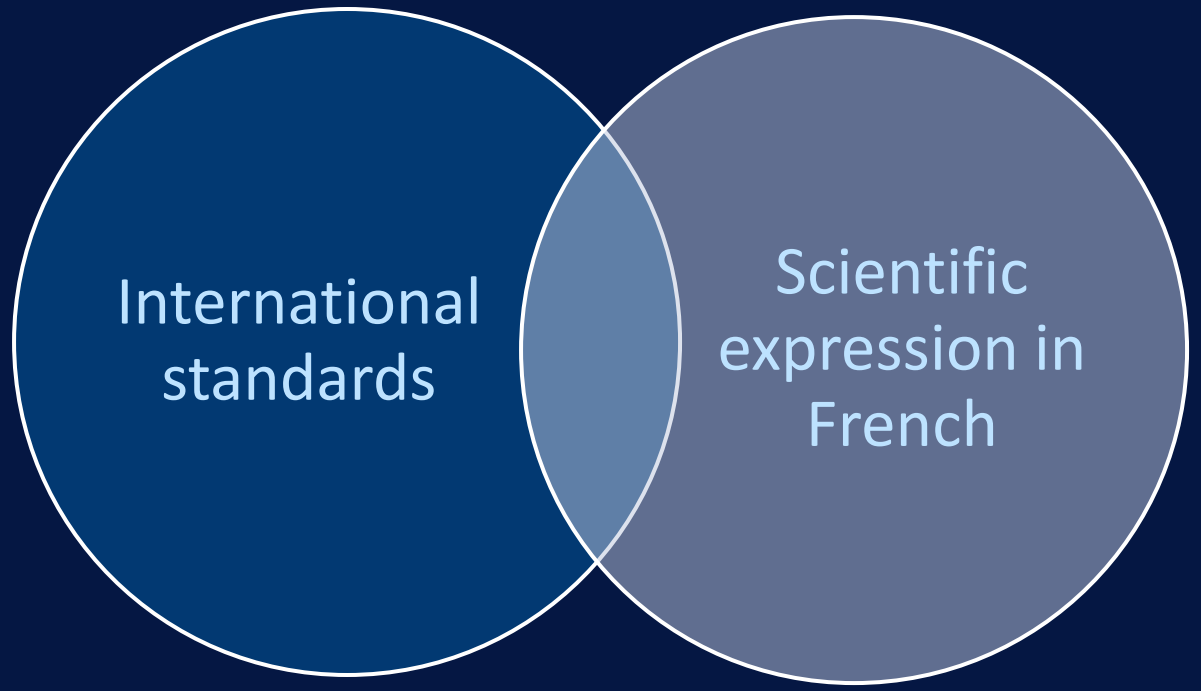
Exhaustiveness?



What we “count” is not always what “counts”

"How can PID infrastructure recognize diverse research contributions and highlight expertise and skills (narrative CVs)?"

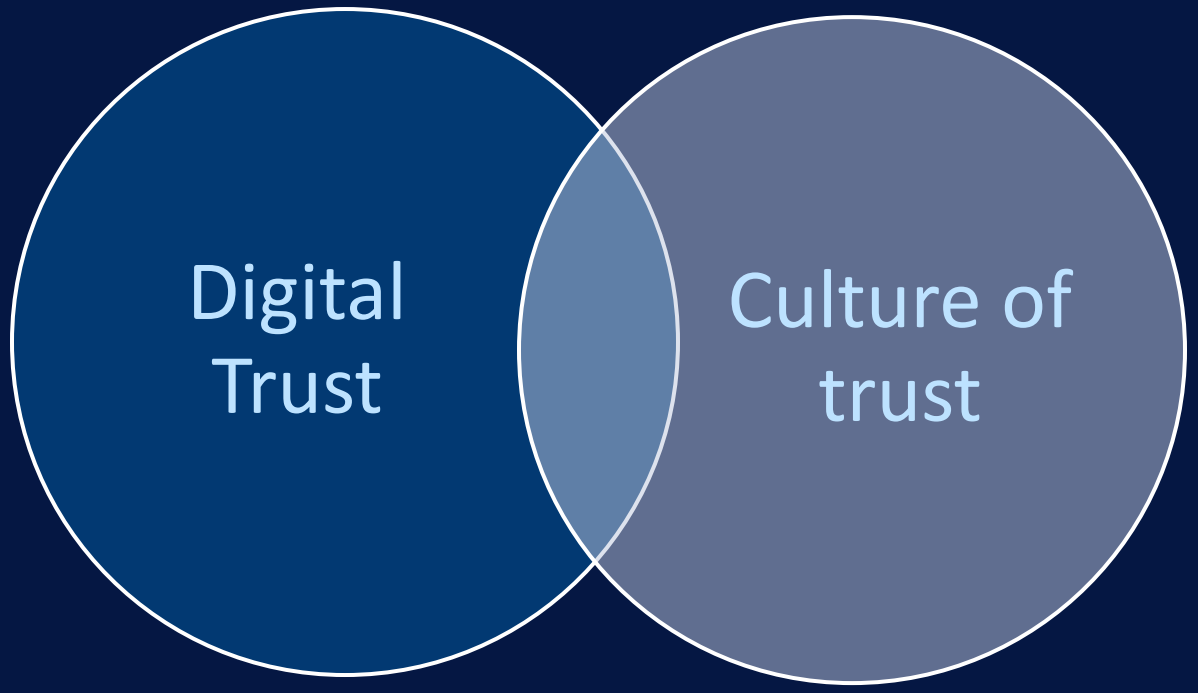
Language interoperability



Multilingual PIDs interfaces →content translation

"How can we build digital infrastructure that reduces linguistic digital divides, or at least avoids widening them?"

Trust of the research community



Erosion of trust in institutions

"More reliable (meta)data, for whom?"

To foster buy-in from the research community

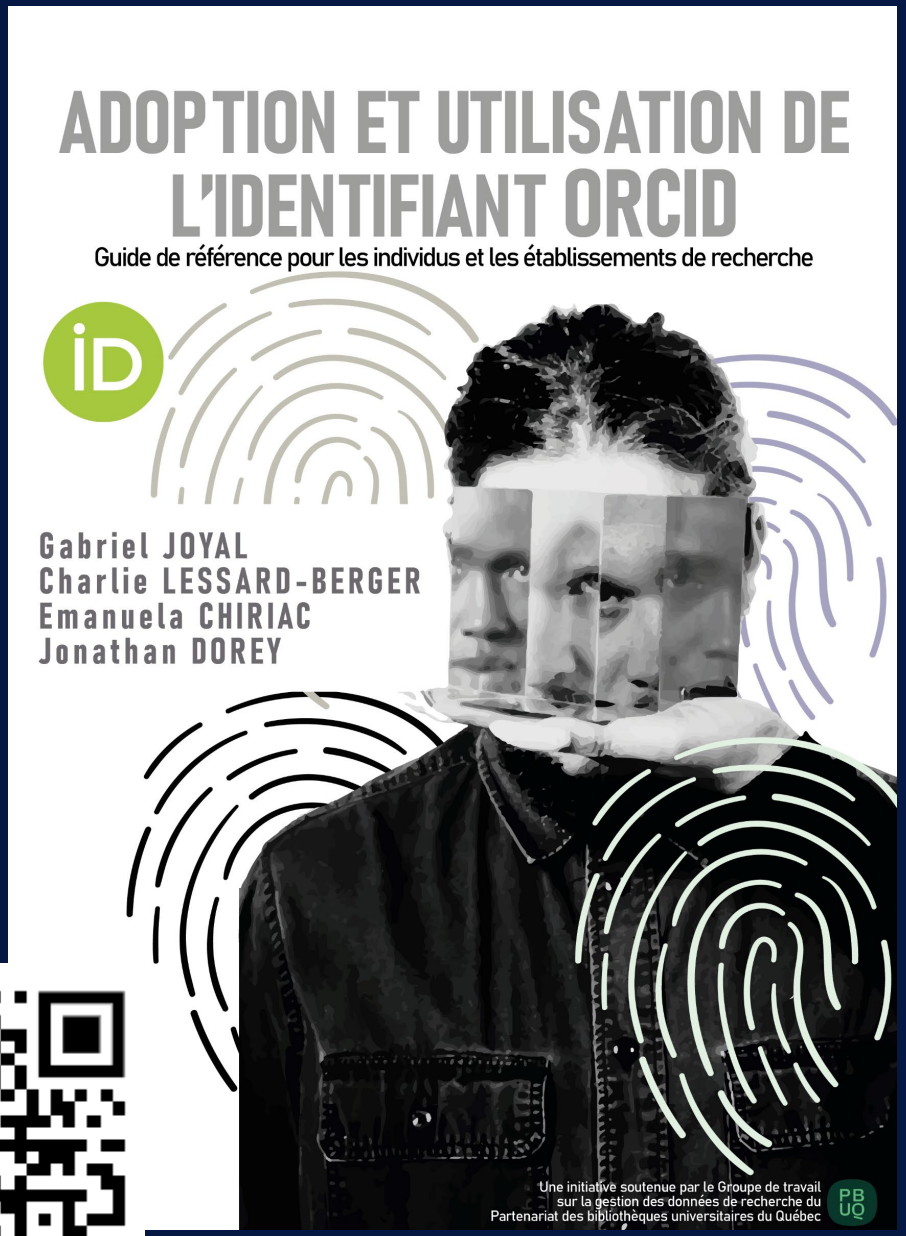
- ✓ trusted systems and stakeholders
- ✓ demands commensurate with needs
- ✓ recognition of diversity of contributions and workload
- ✓ shared PID culture and literacy

PID success depends on more than the number of identifiers created. It also depends on our ability to work productively with existing tensions in the research ecosystem.

Collecting the right information, at the right time, from the right people

Adoption and Use of the ORCID Identifier

Reference Guide for Individuals and Research Institutions



https://doi.org/10.60918/20482

PIDs and Quebec Leadership

Antoine Drouin, FRQ

Persistent Identifiers
Quebec Leadership

Antoine Drouin
Strategic Management Analyst

CRKN Members Summit

October 21, 2026

Statement on the Recognition of Indigenous Knowledge in Research

- First Nations and Inuit are guardians and carriers of both traditional and contemporary Indigenous knowledge. The Fonds de recherche du Québec (FRQ) recognizes the importance of this knowledge in promoting research that is open to the world. The FRQ acknowledges that the wholistic approach of First Nations and Inuit promotes the kind of intersectoral research fostered by its three research sectors: Nature and Technology, Health, and Society and Culture.
- The FRQ emphasizes that collaborative and participatory research with First Nations and Inuit has paved the way for a shift from research on Indigenous Peoples to research with, for, and by those most directly concerned. Furthermore, the FRQ recognizes the complementarity of scientific and Indigenous knowledge in the co-construction of new knowledge to address societal challenges.

What You'll Learn

- **The FRQ ranks among the leading funding agencies in terms of the number of DOIs assigned for grants**
- **The FRQ's traceability strategy includes the deployment of grant DOIs and the integration of ORCID and ROR into its systems**
- **Gaining community buy-in and providing support remain among the most significant challenges associated with traceability**
- **Libraries play an essential role in supporting the research community through this change**

The Fonds de recherche du Québec

Mission: To support and promote curiosity-driven and basic research, and to foster diverse training pathways for the next generation of researchers, in order to stimulate discovery and innovation.

$313,6 million in investments, including contributions from partners

131 staff members

8 321 researchers—including university faculty, clinicians, college faculty, and others—supported through the programs

4 437 recipients of excellence grants (training or internships)

112 regular research groups supported

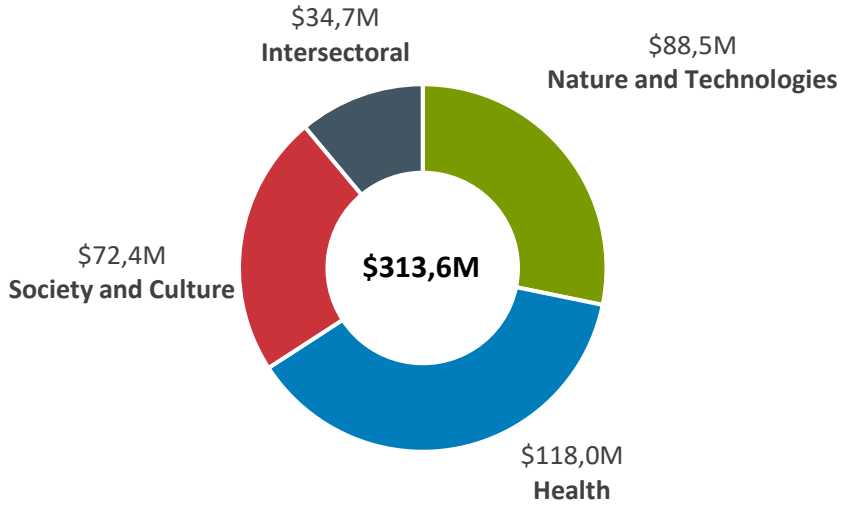
2 484 research grants and career awards awarded

97 FRQ funding partners

73 institutions managing grant awards

3 070 members of evaluation committees

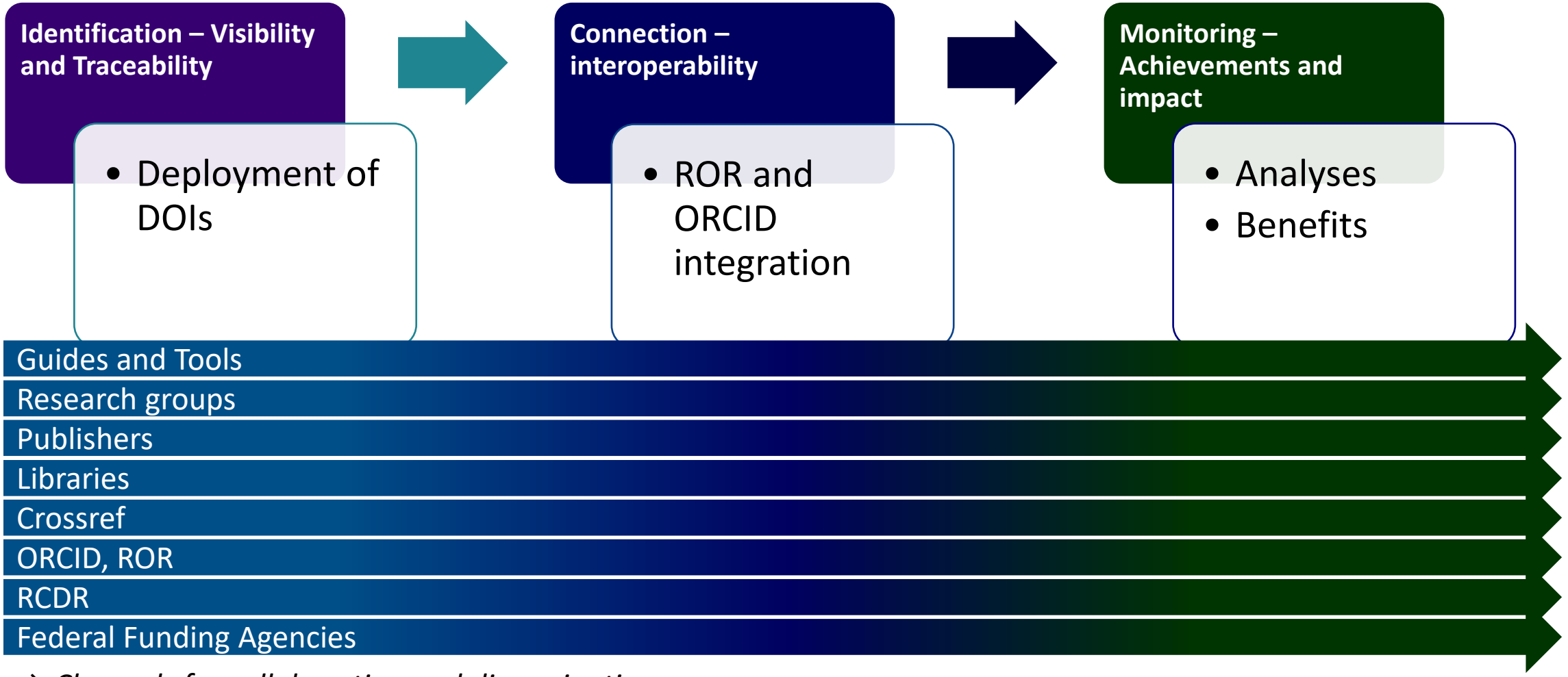
883 evaluation committees held



Positioning within the Ecosystem

- The only public research funding agency in Québec
- Signatory to CoARA (2023): Prioritizing the quality and diversity of contributions
- Immediate open access policy for publications (2022)
- Crossref membership in 2024: second-largest funding agency by volume (28,311 DOIs starting from 2019)
- Rollout of the descriptive CV based on the federal model

Global PIDs Strategy



→ *Channels for collaboration and dissemination*

ORCID – Integration into FRQnet 2.0

- **Personal/Biographical Information**
- Name and other names used (“also known as”)
- Biography
- Country
- Email addresses
- Websites
- Keywords
- Other identifiers (Scopus ID, ResearcherID, etc.)
- **Affiliations and Career History**
- Employment
- Education
- Qualifications
- Memberships and service
- Invited Positions
- Distinctions

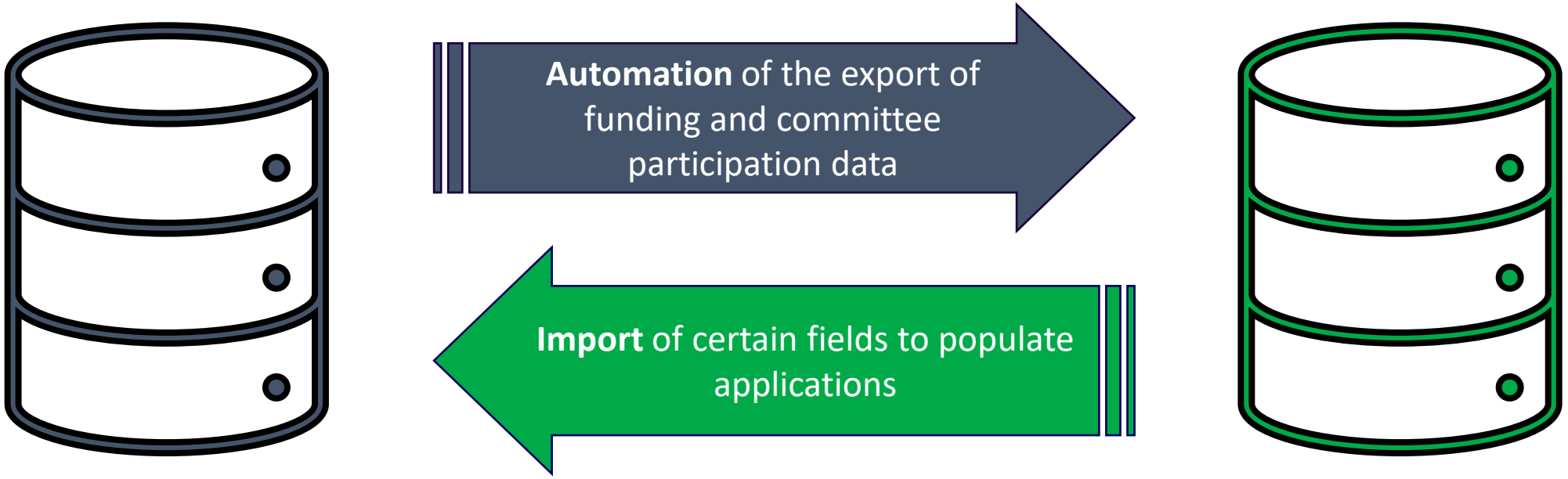
Research Contributions and Activities

- ✓ Funding
- Works / Publications
  - Articles
  - Books
  - Chapters
  - Datasets
  - Software
  - Conferences
  - Preprints
  - etc.
- ✓ Peer Review Activities
- Research Resources

ORCID – Upcoming Developments

FRQnet 2.0

ORCID



ROR

- ROR already integrated into the metadata of grant DOIs
- Gradual integration into FRQnet over the next few years for managing organizations associated with funding applications – preliminary planning phase

DOIs for Grants: Objectives of the Rollout

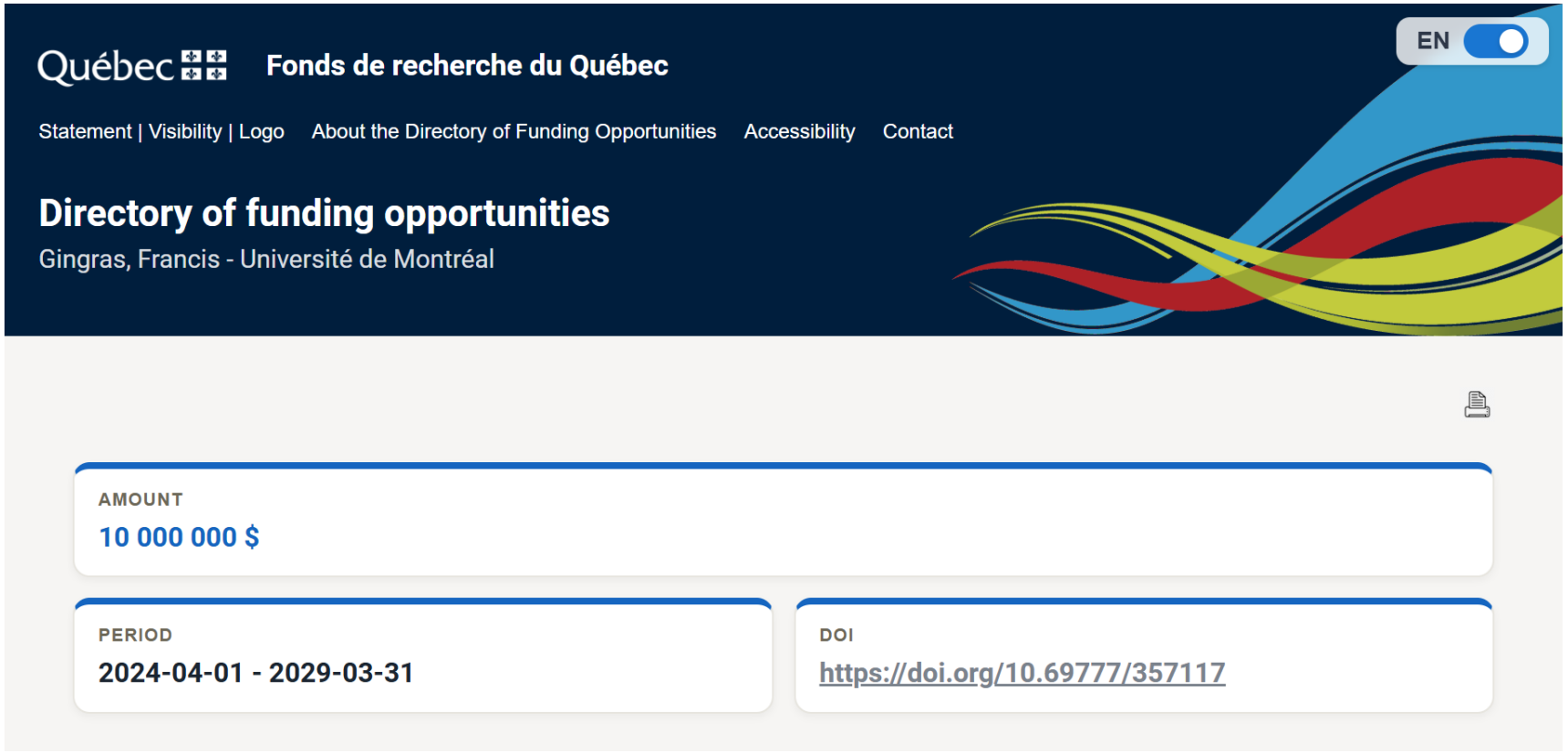
- **Improve the experience** for grant recipients by reducing administrative burden
- Provide data that complements the data in progress reports and final reports
- **Improve the traceability** of FRQ grants
- Gain a **better understanding of the impacts** associated with research funding
- Promote a **diversity of contributions** in line with the FRQ's initiative on the evolution of research excellence evaluation (E3R)

Completed Milestones

- *2025*
- Start of DOI rollout
- Notification (past and current grant recipients)
- Press release: Chaque octroi du FRQ a désormais son DOI!
- Web Pages: Persistent unique identifiers (DOI)| Mention | Visibilité | Logo
- Integration into the Common General Rules
- Integration of ORCID into the administrative portal
- Integration of ROR into DOI metadata
- *2026*
- Start of the analysis of the traceability of research outputs
- Redesign of the DOI visualization application
- Automation of exports to ORCID

Display of DOIs

https://doi.org/10.69777/357117



Display of DOIs

If applicable, following approval by the FRQ, the modified principal investigator, institution, and title appear in separate fields

PROGRAM NAME

Réseau québécois de recherche et de mutualisation pour les revues scientifiques

FUNDING AGENCY

Fonds de recherche du Québec - https://ror.org/00w3qhf76

EVALUATED APPLICATION HOLDER

Gingras, Francis

EVALUATED APPLICATION INSTITUTION

Université de Montréal - https://ror.org/0161xgx34

SECTOR

Society and culture

EVALUATED APPLICATION TITLE

Réseau québécois de recherche et de mutualisation pour les revues scientifiques

Display of DOIs

The abstract cannot be edited

SUMMARY

L'adhésion des Fonds de recherche du Québec (FRQ) au Plan S (promotion de la science ouverte) et la révision en 2022 de sa Politique de diffusion en libre accès exige désormais des chercheurs et des chercheuses que leurs publications scientifiques soient disponibles en libre accès immédiat et sous licence ouverte. Ces décisions ont des conséquences majeures pour tous les acteurs du milieu de la recherche, notamment les éditeurs et les diffuseurs de contenus scientifiques. La mise en réseau de toutes les personnes impliquées dans cette importante mutation de l'écosystème de la publication savante (directions des revues scientifiques, plateformes de diffusion, bibliothèques universitaires et spécialistes des mécanismes de transformation des communications savantes et des questions de découvrabilité des contenus en français) permettra d'assurer une transition efficace et aussi fluide que possible vers un nouveau modèle où la publication n'exige de paiement ni de ceux et celles qui produisent les articles ni de celles et ceux qui les lisent (modèle diamant).

Or le travail éditorial a un coût, comme le maintien et le développement des plateformes de diffusion des résultats de la recherche. L'adhésion de la communauté scientifique aux principes du libre accès immédiat et gratuit suppose de repenser l'organisation du travail d'édition et de diffusion, tout en assurant des perspectives de soutien financier stable qui puissent compenser les déficits associés aux pertes de revenus générés jusqu'à maintenant par les abonnements. La mise en relation de tous les acteurs de la chaîne de production, d'édition et de diffusion des contenus scientifiques doit permettre de trouver des solutions qui assurent la pérennité du nouveau modèle afin non seulement de permettre l'accès immédiat et gratuit aux résultats de la recherche, mais plus encore d'en assurer la viabilité et la disponibilité dans la longue durée.

La mise en réseau au sein d'une même organisation des différents acteurs permettra l'implantation du modèle diamant dans les meilleures conditions, en tenant compte à la fois des avancées de la recherche et des nouveaux services offerts par les bibliothèques universitaires, mais aussi – et sans doute d'abord et avant tout – des besoins concrets des directions de revues scientifiques ou des plateformes de diffusion, tout particulièrement Érudit, principale plateforme de diffusion au Québec. La mutualisation de certains services, facilitée par les interactions au sein du réseau, contribuera à l'élaboration d'un modèle économique viable pour l'édition savante. De même, la force du nombre permettra de mieux faire entendre la voix des personnes impliquées aux différentes étapes de la communication scientifique, depuis la production des résultats jusqu'à leur diffusion et à leur découvrabilité par un lectorat que l'on espère toujours plus vaste et diversifié. De ce point de vue, le réseau permettra aux revues québécoises ainsi regroupées d'exercer un véritable leadership dans le mouvement international de transformation des moyens de diffusion des contenus scientifiques, notamment dans l'espace francophone.

Mention of FRQ funding

- “This work was supported by a grant (‘357117’ or **https://doi.org/10.69777/357117**) from the Fonds de recherche du Québec.”

Example

AMOUNT

246 321 $

PERIOD

2024-07-01 - 2028-06-30

DOI

https://doi.org/10.69777/347426

💡 *Grant traceable via the DOI*

PROGRAM NAME

Chercheurs-boursiers et chercheuses-boursières

FUNDING AGENCY

Fonds de recherche du Québec - https://ror.org/00w3qhf76

EVALUATED APPLICATION HOLDER

Clery, Justine

Example

eLife Home Browse Magazine Community About

Computational and Systems Biology

FRQ-related preprint via the grant's DOI

A real-time, multi-animal model for automatic face detection and identification of freely moving common marmosets based on YOLOv8 algorithms

Jiayue Yang, James Wang, Justine Cléry

The Neuro, Department of Neurology and Neurosurgery, McGill University, Montreal, Canada • Integrated Program in Neuroscience, McGill University, Montreal, Canada • McConnell Brain Imaging Centre, The Neuro, Montreal Neurological Institute and Hospital, McGill University, Montreal, Canada ... show 1 more

https://doi.org/10.7554/eLife.110932.1

Example


```
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  "award": [
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  ],
  "award-info": [
    {
      "award-number": [
        "10.69777/347426"
      ],
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        {
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      ]
    }
  ],
  "id": [
    {
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      "id-type": "ROR",
      "asserted-by": "crossref"
    }
  ]
},
```


traceable output

An overview of the benefits

- With grant DOIs, these questions could be answered:
- How much time elapses between funding and output?
- What proportion of published articles are open access?
- What types of research outputs predominate?
- Which research outputs are produced with funding from other granting agencies?

Challenges

- Defining metadata **governance**
- Identifying different **types** of research outputs
- Building community **buy-in**

Other organizations are following suit

FWF Austrian Science Fund

ARDC
Australian Research Data Commons

Australian National Persistent Identifier (PID) Strategy 2024

February 2024

Australian Government | NCRIS National Research Infrastructure for Australia

The ARDC is enabled by NCRIS

Identifiants pérennes : des alliés essentiels pour la recherche !

AUTEUR Hugo Samson | PUBLIÉ LE 13 janvier 2025 | PUBLIÉ DANS Technologies

érudit

ROR iD doi

Stratégie sur les PID au Canada

Haigh, Susan[1] iD; Brodeur, Jason[2] iD;

Canadian Research Knowledge Network ROR;

Digital Research Alliance of Canada ROR

Priorities

- **Raise awareness** of **the FRQ strategy** among the research community and library staff
- **Involve research clusters leadership** in implementing the change
- **Analyze research outputs** tracked through Crossref
- **Continue integrating** unique and persistent identifiers into information systems to improve interoperability
- Explore the potential **of AI-based applications** (Open Alex, etc.)

The Essential Role of Libraries

- PBUQ-FRQ Community of Practice
- While funding agencies are developing expertise in grant DOIs, libraries remain experts in research outputs and the platforms and institutional repositories that host them
- They can support the research community in correctly identifying the funding received for different types of research outputs on various platforms through guides, training sessions, etc.

Thank you!

Conclusion and Next Steps

John Aspler and Charlie Lessard-Berger

Canadian Leadership in PIDs

Strong National Consortia

Leading with RAiDs

Funding Agency Leadership

Organizational Adoption

International Involvement

Government Support

Questions/ Discussion