Tri-Agency RDM Policy: Background & Summary
Research Data Management

Research data are:
- used as primary sources to support technical or scientific enquiry, research, scholarship, or artistic activity,
- used as evidence in the research process and/or are commonly accepted in the research community as necessary to validate research findings and results

Research data management (RDM):
- includes the collection, storage, preservation and, where appropriate, access to data produced from a given investigation.
- should be practiced over the entire lifecycle of the data


1. Preamble
The Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC) (the agencies) are federal granting agencies that promote and support research, research training, knowledge transfer and innovation within Canada.

As publicly funded organizations, the agencies are strong advocates for making the results of the research they fund as accessible as possible. In promoting access to research results, they aspire to advance knowledge, avoid research duplication and encourage reuse, maximize research benefits to Canadians and showcase the accomplishments of Canadian researchers. These aspirations align with the Government of Canada's commitment to open science, as described in Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation (2014).

Research data include observations about the world that are used as primary sources to support scientific and technical inquiry, scholarship and research-creation, and as evidence in the research process.² Research data are gathered through a variety of methods, including experimentation, analysis, sampling and repurposing of existing data. They are increasingly produced or translated into digital formats. When properly managed and responsibly shared, these digital resources enable researchers to ask new questions, pursue novel research programs, test alternative hypotheses, deploy innovative methodologies and collaborate across geographic and disciplinary boundaries. The ability to store, access, reuse and build upon digital research data has become critical to the advancement of science and scholarship, supports innovative solutions to economic and social challenges, and holds tremendous potential for Canada's productivity, competitiveness and quality of life.

Tri-Agency Statement of Principles on Digital Data Management: *Expectations*

- Data management planning
- Constraints and obligations
- Adherence to standards
- Collection and storage
- Metadata
- Preservation, retention and sharing
- Timeliness
- Acknowledgement and citation
- Efficient and cost-effective

Tri-Agency Statement of Principles on Digital Data Management: Responsibilities

Researchers
- incorporating best practices
- developing DMPs
- adhering to policies and standards

Research Communities
- developing & promoting standards
- fostering excellence
- selecting repositories

Research Institutions
- supporting best practices
- providing access to resources
- creating guidance and policies

Research Funders
- developing policies & guidance
- promoting data management
- providing peer reviewers


Draft Tri-Agency RDM Policy

Released in June 2018; consultation period from June-Sep, 2018

Will apply to Tri-Agency grant recipients and institutions administering tri-agency funds.

Three Pillars:
1. Institutional Strategy
2. Data Management Plans
3. Data Deposit

Planned launch in winter 2019.
Phased and incremental implementation

Institutional Strategy

“Each institution administering tri-agency funds is required to create an institutional research data management strategy. The strategy will outline how the institution will provide its researchers with an environment that enables and supports world-class research data management practices...”

- Fostering and promoting excellence in data management
- Supporting data management practices that are consistent with ethical, legal and commercial obligations [notably, the TCPS2]
- Providing guidance inline with Tri-Agency Statement of Principles on Digital Data Management

Institutional Strategy

“Each institution administering tri-agency funds is required to create an institutional research data management strategy. The strategy will outline how the institution will provide its researchers with an environment that enables and supports world-class research data management practices...”

- Developing their own data management policies and standards
- Ensuring that their researchers have data management plans in place
- Providing, or supporting access to, recognized repository services
- Consulting with existing resources to support the development of their strategies, such as the Portage Network’s Institutional Strategy Template[^3].

Data Management Plans

“...The agencies encourage grant applicants to complete data management plans (DMPs) as an essential step in research project design. For specific funding opportunities, the agencies may require DMPs to be submitted to the appropriate agency at time of application; in these cases, the DMPs may be considered in the adjudication process.”

Data Management Plans

DMPs are living documents that should outline:

- how data will be collected, documented, formatted, protected & preserved;
- how existing datasets will be used and what new data will be created
- whether and how data will be shared; and where data will be deposited.
- roles & responsibilities for managing, including succession plans
- ethical, legal and commercial constraints of the data
- methodological considerations that support or preclude data sharing

Grant applicants are encouraged to use standardized tools to develop their DMPs, such as the Portage Network’s DMP Assistant⁴

⁴ https://portagenetwork.ca/network-of-experts/institutional-rdm-strategy/
“Grant recipients are required to deposit into a recognized digital repository all digital research data, metadata and code that directly support the research conclusions in journal publications, pre-prints, and other research outputs that arise from agency-supported research…”

- The repository will ensure safe data storage, preservation, and curation
- The agencies encourage researchers to provide access to the data where ethical, legal, and commercial requirements [e.g. TCPS 2] allow, and in accordance with the standards of their disciplines.
- Whenever possible, these data, metadata and code should be linked to the publication with a persistent digital identifier.

Points of Discussion
Data in Planning → Data in Motion → Data at Rest
Are DMPs asking the “right” questions?

Can researchers access resources to complete DMPs appropriately?

Does the institution have the capacity to evaluate DMPs?

How can the institution streamline DMP and REB processes?

Portage DMP Assistant
assistant.portagenetwork.ca

Data in Planning  Data in Motion  Data at Rest
Are we providing researchers with appropriate:
- Triage and assessment guidance
- Methodological guidance
- Options for file storage, backup, sharing?
  - Deeper consideration of cloud options like OneDrive and sync.com

How to enable sharing across institutional collaborators that satisfies all REBs?

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**Data Storage Finder**
finder.research.cornell.edu/storage
Moving beyond ‘default = destroy’ …

… while assessing re-identification risk

Understanding and accommodating ‘disciplinary standards and practices’

Demystifying repository vs archival storage

Portage Responsible RDM Practices for Sensitive Data Working Group

More Information

McMaster Library’s RDM page
library.mcmaster.ca/services/rdm

Contact: rdmgmt@mcmaster.ca

CARL Portage Network
portagenetwork.ca