



# What you need to know about the **Tri-Agency Research Data Management Policy**.

Isaac Pratt, PhD + Danica Evering, MA  
December 7, 2022



Photo by Guillermo Ruiz on Unsplash.



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Laslovarga, “Webster Falls in Winter, Waterdown, Hamilton, Ontario, Canada - Spencer Gorge / Webster's Falls Conservation Area,” 23 January 2011, Wikimedia Commons - [https://commons.wikimedia.org/wiki/File:Waterdawn\\_Webster\\_Falls\\_in\\_Winter8.jpg](https://commons.wikimedia.org/wiki/File:Waterdawn_Webster_Falls_in_Winter8.jpg)

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[scds.ca/events/code-of-conduct/](https://scds.ca/events/code-of-conduct/)

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# Certificate Program

*The Sherman Centre offers a Certificate of Completion that rewards synchronous participation at 7 workshops. We also offer concentrations in Data Analysis and Visualization, Digital Scholarship, and Research Data Management.*

*Learn more about the Certificate Program: <https://scds.ca/certificate-program>  
If you would like to be considered for the certificate, verify your participation in this form: <https://u.mcmaster.ca/verification>*

*At an unspecified point during the workshop, a code will be read aloud. This is the answer to the third question of the form.*

## Outline



What is Research Data Management (RDM) and why should we care about it?



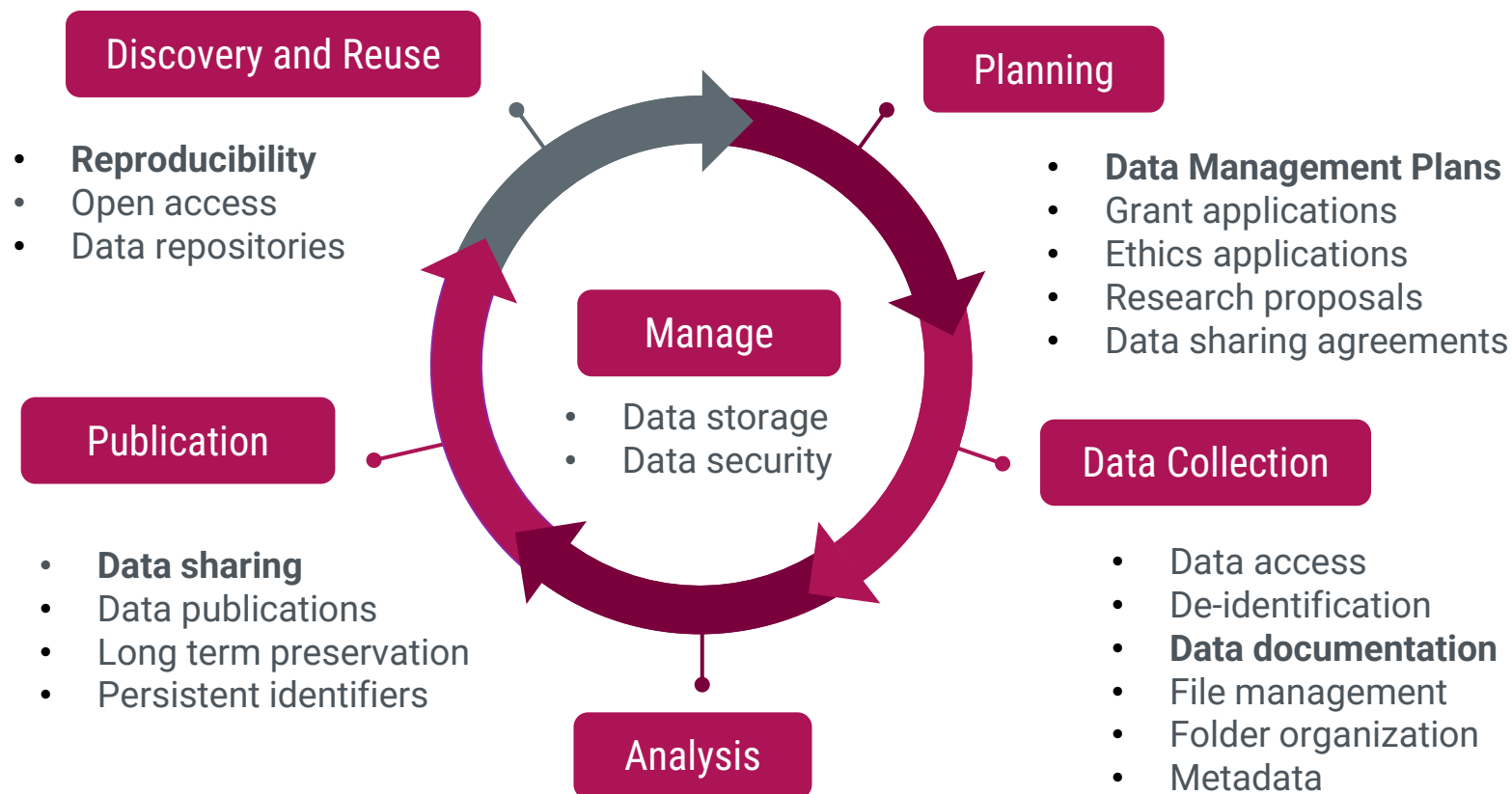
How does the new Tri-Agency Policy for RDM impact researchers?



How can McMaster RDM Services help?

# What is Research Data Management?

**Research Data Management** is the active organization & maintenance of data throughout the research data lifecycle to ensure its **security, accessibility, usability, and integrity**.



For a fuller introduction to RDM see our other webinars including “Best Practices for Managing Data in your Research” - <https://scds.github.io/intro-rdm/intro.html>

# **Good Research Data Management**

**data organization and planning**

**data storage and backup strategies**

**secure data management**

**depositing and sharing data openly**

## **makes your research better.**

saves time and resources.

help avoid loss of data from theft, corruption,  
or failure of storage devices.

protects research participants and sensitive  
data.

increases the visibility of research and  
allows others to reproduce and verify results.



**But now...some  
questions for you.**

Photo by Guillermo Ruiz on Unsplash.

A blue-tinted image of Earth from space, showing the horizon and clouds. A blue rectangular box is overlaid on the left side of the image.

# Why do funders care about RDM?

- Maximizing the value of datasets
- Recognizing Indigenous sovereignty
- Protecting research participants and sensitive research data
- Avoiding duplication of data collection
- Reproducibility and trust in research
- Providing public access to research

# 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

<http://www.science.gc.ca/default.asp?lang=En&n=83F7624E-1>

# 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



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Research Data Management

Tri-Agency Statement of  
Principles on Digital Data  
Management

Open Letter

Tri-Agency Research Data  
Management Policy

Public Consultation  
Summary

Frequently Asked  
Questions

## Tri-Agency Research Data Management Policy

### 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.

The agencies expect the research they fund to be conducted to the highest professional and disciplinary standards, domestically and internationally. These standards support research excellence by ensuring that research is performed ethically and makes good use of public funds, experiments and studies are replicable, and research results are as accessible as possible. Research data management (RDM) is a necessary part of research excellence.

The agencies believe that research data collected through the use of public funds should be responsibly and securely managed and be, where ethical, legal and commercial obligations allow, available for reuse by others. To this end, the agencies support the FAIR

- “**Research Data Management** is a necessary part of research excellence.”
- “Recognize that data related to research by and with **First Nations, Métis, or Inuit** in Canada must be managed in accordance with data management principles developed and approved by these communities.”

# Tri-Agency RDM Policy 2021

Government of Canada / Gouvernement du Canada

Search Canada.ca

MENU

Home > Interagency research funding > Policies and Guidelines > Research Data Management

Research Data Management

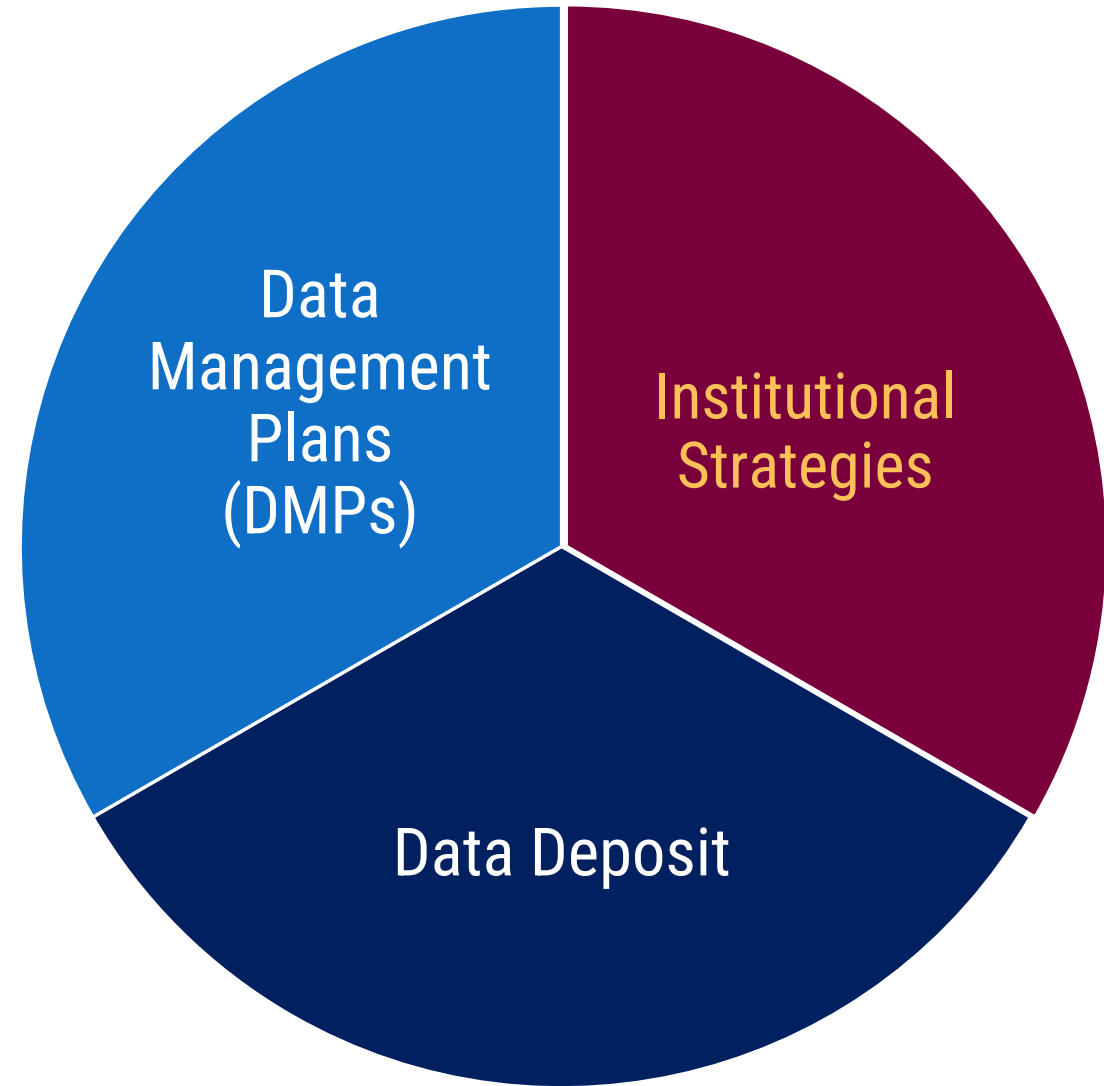
- Tri-Agency Statement of Principles on Digital Data Management
- Tri-Agency Research Data Management Policy
- Public Consultation Summary
- Open Letter
- Completed institutional research data

## Tri-Agency Research Data Management Policy

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# Institutional Strategies

- “Each postsecondary institution...is required to create an institutional RDM strategy and...make it publicly available on the institution’s website.”
- The Tri-Agencies “expect high quality strategies that outline how the institution will provide its researchers with an environment that enables and supports RDM.”

*Research institutions must post their RDM strategies by **March 1, 2023.***

# Why does the Tri-Agency want Institutional Strategies?

The requirement is intended to encourage institutions to raise RDM capacity and support capabilities.

Institutional Strategies should:

- Recognize and promote data as an important research output,
- Support researchers in establishing and carrying out RDM practices,
- Recognize Indigenous data sovereignty and the importance of a distinctions-based approach to indigenous research.

The Tri-agencies are not monitoring or evaluating strategies. Published Institutional Strategies can be found here: <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/research-data-management/published-institutional-research-data-management-strategies>

# RDM Institutional Strategy Working Group

The working group was formed in March 2021 as a subcommittee of the Research Information Technology Committee (RITC).

Membership includes representatives from:

- Research Administration Offices (ROADS, HRS, MILO),
- Research Ethics Boards (MREB, HiREB),
- IT units (RHPCS, UTS)
- Hospital Research Offices (St Josephs, HHS, PHRI),
- McMaster's Indigenous Research Institute (MIRI)
- McMaster Libraries (MUL, HSL)
- Faculties of Humanities, Business, Social Science, Engineering, Science, and Health Science.

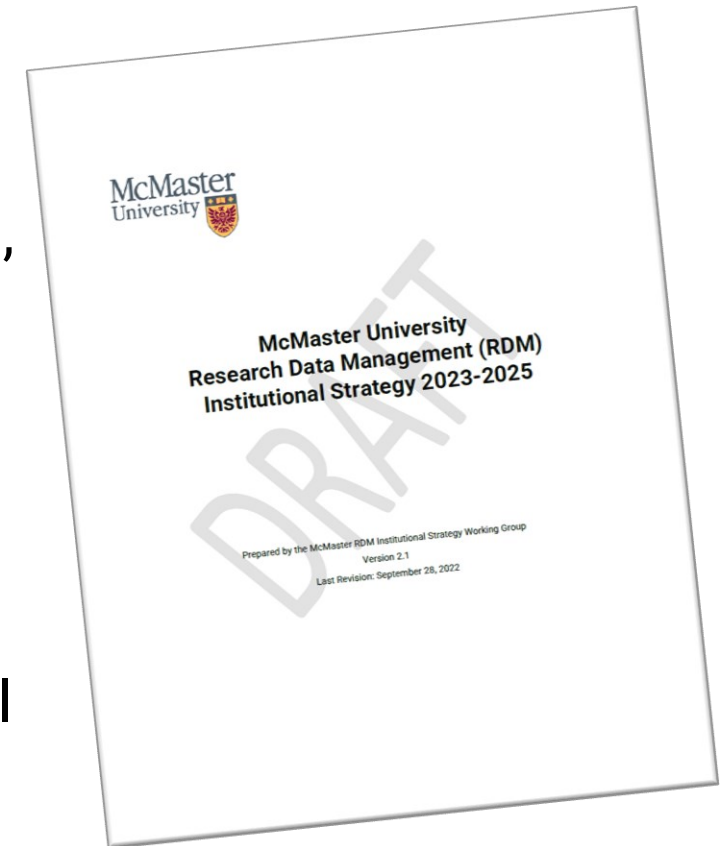
Learn more at [rdm.mcmaster.ca/iswg](https://rdm.mcmaster.ca/iswg)

# McMaster's Institutional Strategy For Research Data Management

## Vision:

- Support our researchers in producing the **highest quality research**, meeting **disciplinary and funder expectations**, and leading the **adoption of RDM best practices**
- Provide a researcher-focused integrated framework of interconnected and complementary services, infrastructure, policies, practices, guidelines, tools, technologies, training, and support.
- Going beyond the Tri-Agency requirement to build a strategy for all researchers at McMaster

McMaster's Strategy will officially launch in **March 2023**



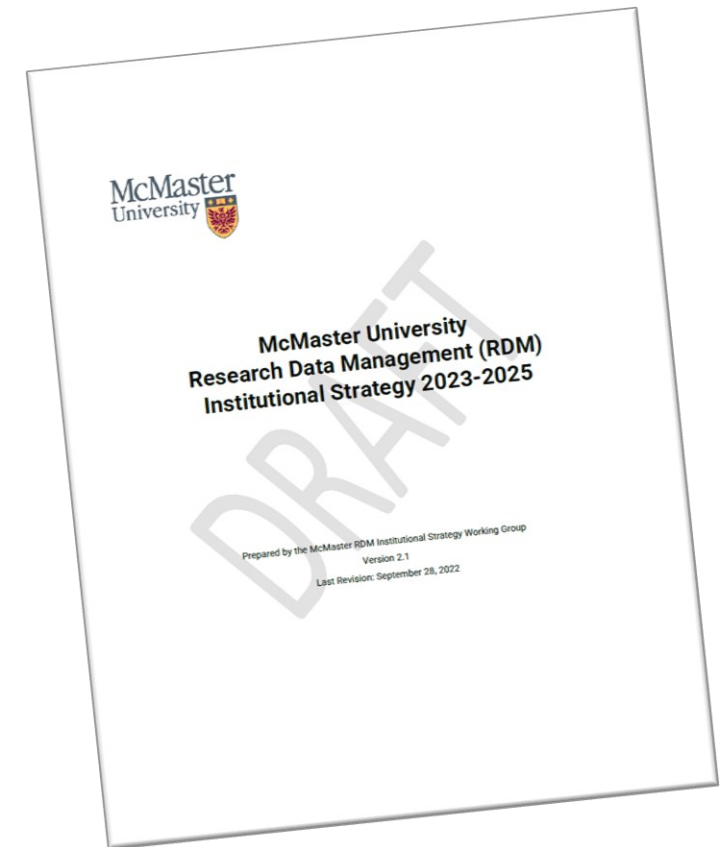
# McMaster's Institutional Strategy For Research Data Management

## Town Hall (Recording):

*With presentations from Matthew Lucas, Executive Director, Corporate Strategy and Performance, SSHRC on behalf of the Tri-Agencies about the new RDM Policy and McMaster RDM Services on how McMaster's RDM Strategy was developed.*

Recording is available at: <https://scds.github.io/intro-rdm/townhall.html>

**Feedback Form:** If you were unable to attend the Town Hall or wish to share more detailed feedback, you can use this anonymous feedback form ([u.mcmaster.ca/rdm-feedback](https://u.mcmaster.ca/rdm-feedback)) or contact [rdm@mcmaster.ca](mailto:rdm@mcmaster.ca).





# Data Management Plans (DMPs)

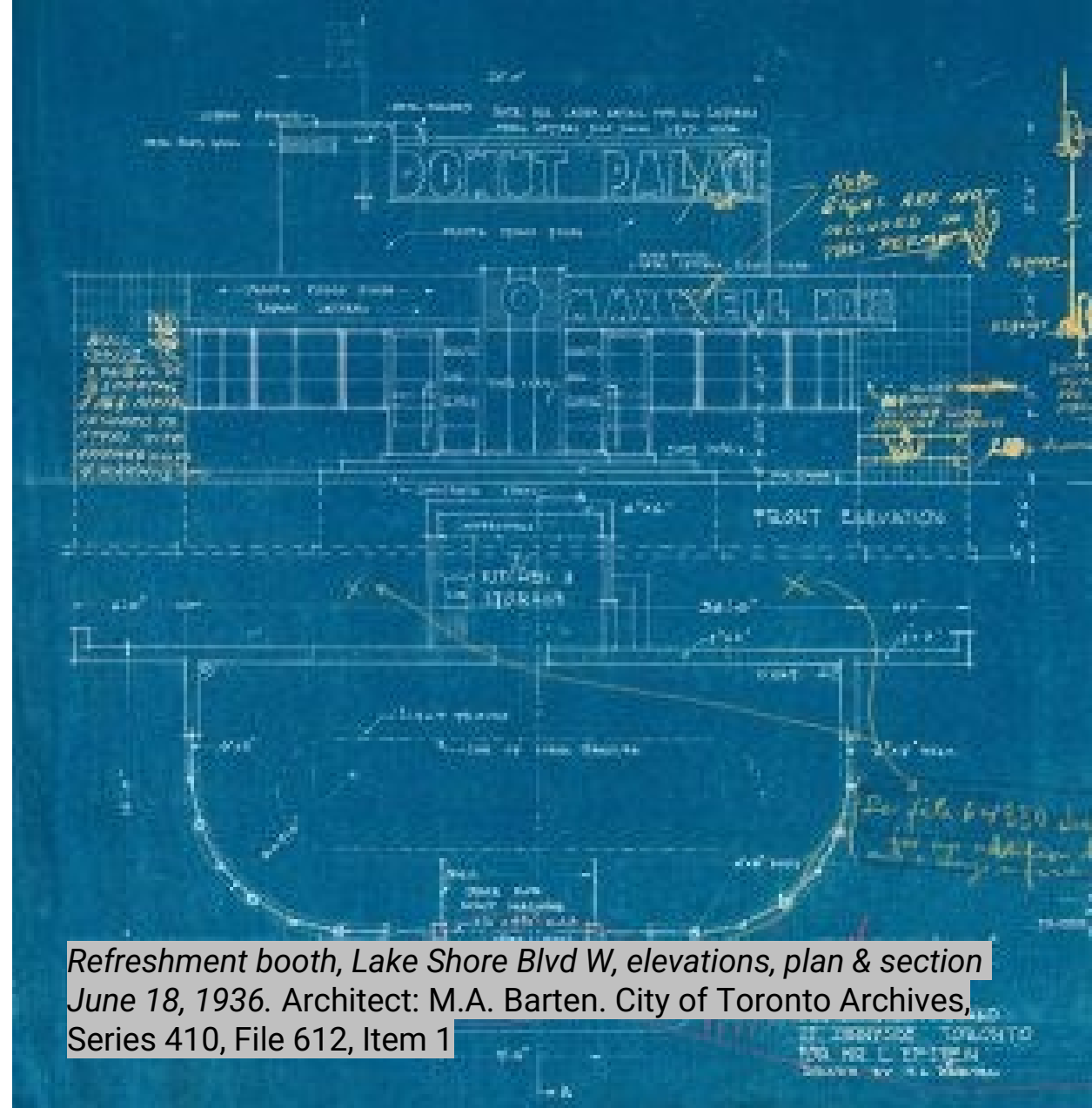
- “For certain funding opportunities, the agencies will require data management plans (DMPs) to be submitted”
- We provide guidance and templates for researchers using the **DMP Assistant**.

*This requirement is rolling out in competitions which started this summer 2022.*

# Data Management Plans

A Data Management Plan (DMP) is a **living document** describing your plan for how you will create, store, organize, document, secure, preserve, and share your research data.

- DMPs ask pointed questions of researchers to help them **articulate their plans for managing data**; *they do not compel researchers to manage data differently.*
- DMPs outline how you will manage data both **during** the active phases of your research and **after** the completion of the research project.
- DMPs are an excellent way for you to **anticipate and identify opportunities and challenges** in managing your data before those opportunities and challenges emerge.



Refreshment booth, Lake Shore Blvd W, elevations, plan & section  
June 18, 1936. Architect: M.A. Barten. City of Toronto Archives,  
Series 410, File 612, Item 1

# Initial Competitions With DMP Requirements

## CIHR

- Network Grants in Skin Health and Muscular Dystrophy (Anticipated launch fall 2022 or early winter 2023)
- Virtual Care/Digital Health Team Grants (Anticipated launch fall 2022 or early winter 2023)
- Data Science for Equity (Anticipated launch fall 2022 or early winter 2023)

## NSERC

- Subatomic Physics Discovery Grants - Individual and Project (Anticipated launch summer 2023)

## SSHRC

- Partnership Grants Stage 2 (Anticipated launch summer 2023)

Link: [https://science.gc.ca/eic/site/063.nsf/eng/h\\_547652FB.html](https://science.gc.ca/eic/site/063.nsf/eng/h_547652FB.html)

# Pilot DMP Assessments

For initial competitions:

- Recommend the use of the [DMP Assistant](#)
- Expect for DMPs around 2-3 pages
- Reviewers will comment on DMPs but not use them in application scoring
- DMPs may be reviewed at the mid-term review stage.
- External consultation will take place in early 2023.



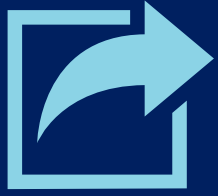
Photo by [Beatriz Pérez Moya](#) on [Unsplash](#)

# DMP Assistant

- A web-based, bilingual data management planning tool
- An interactive guide to creating a “good” DMP with built-in templates
- Available to all McMaster researchers for free – MacID SSO
- Alliance also publishes [DMP Exemplars](#)
- Exportable data management plans



<https://assistant.portagenetwork.ca/>



# Data Deposit

- “Grant recipients are required to deposit into a digital repository all digital research data, metadata and code that support... journal publications and pre-prints”

**Grant recipients will not be required to openly share data.**

*Rollout will follow review of institutional strategies and in line with readiness of Canadian research community. SSHRC and some CIHR data is already required to be deposited.*

# Why deposit data?

Depositing data helps to ensure that data are **securely preserved** and **accessible** (to you and others) in the long term.

In addition to requirements, you may **want** to deposit your data for the following reasons:

- To comply with potential audits
- A journal may request the data to verify or reproduce your results
- To prevent data loss and keep data organized
- To create a long-lasting record of your work
- To enable data sharing, where desired and appropriate

Photo by Taylor Vick on Unsplash.

# CIHR Data Deposit Requirements

CIHR has some specific data related requirements which are currently in force. Researchers are required to:

- **Deposit bioinformatics, atomic, and molecular coordinate data** into the appropriate **public database**
- **Retain original data sets** for a minimum of **five years** or longer if other policies apply.
- **Annex:** Examples spreadsheet linking research data outputs to corresponding archive/repository/database.  
<https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/open-access/annex>

# SSHRC Data Availability Requirements

SSHRC also has some specific data related requirements currently in force which were initially established in 1990 and updated in 2016. Researchers are required to:

- Preserve and make available for use by others all research data collected with the use of SSHRC funds. This must occur within “a reasonable period of time.”
- SSHRC considers "a reasonable period" to be within two years of the completion of the research project for which the data was collected.

An aerial photograph of a city, likely Hamilton, Ontario, with a red location pin placed in the center of the city.

# Where can I deposit my data?

A **data repository** is a web platform and storage space for researchers to deposit data sets associated with their research.

Repositories provide:

- **Long-term storage** and access to research data beyond the life of a grant, research project, or individual careers.
- **Discoverability** and **findability** for datasets through features like indexing and DOIs.
- **Easy-to-use shared platforms** designed for researchers.

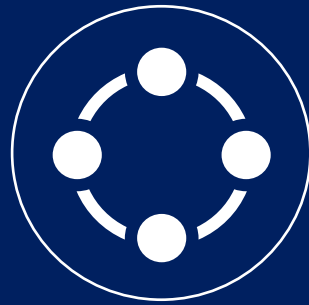
# Where can I deposit my data?

Publishing data in a recognized data repository is the best way to share data. There are thousands of data repositories.



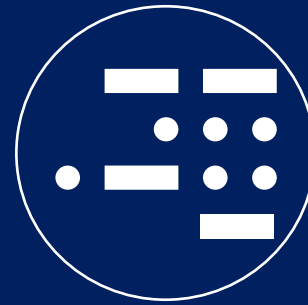
## Domain Specific Repositories

Focus on certain types of data such as genomic information or astronomical information.



## General Repositories

Accept broader types of research data. ex. *McMaster Dataverse (part of Borealis) and Canada's Federated Research Data Repository (FRDR).*



## Code Repositories

There are also code-specific repositories like Github, Gitlab, BitBucket, SourceForge



## Repository Finder

This tool by DataCite can help you find an appropriate repository to deposit your research data:  
<https://repositoryfinder.datacite.org>

# McMaster Dataverse

<https://borealisdata.ca/dataverse/mcmaster>

- Institutional Data Repository: home for all research data originating from McMaster researchers.
- Built for **datasets**.
- Contains tools for tabular data exploration and analysis.
- Locally administered at McMaster with servers in Canada.
- Part of Canada-wide Borealis Network
- McMaster provides basic data curation services  
(*Not recommended for sensitive data*)

The screenshot shows the McMaster University Dataverse page within the Borealis network. At the top, the Borealis logo is on the left, and navigation links for Search, User Guide, and Support are on the right. The McMaster University logo is prominently displayed in the center. Below it, links for 'McMaster University Dataverse (McMaster University)' and 'McMaster RDM Services' are visible. A breadcrumb trail shows 'Borealis >'. The main heading is 'About Dataverse', followed by a description of the repository and links to research data management guidelines. A search bar with the placeholder 'Search this dataverse...' and a magnifying glass icon is present, along with a link to 'Advanced Search'. On the left, a sidebar lists filters: 'Dataverses (19)', 'Datasets (64)', and 'Files (783)'. Below these are 'Dataverse Category' links: 'Research Project (5)', 'Laboratory (3)', 'Teaching Course (2)', 'Journal (1)', and 'Organization or Institution (1)'. The main content area displays '1 to 10 of 83 Results'. The first result is 'Long-term Rocky Tidal Community Data from Discovery Bay, Jamaica', dated Jun 30, 2022, with a citation by Jurek, Kolasa, 2022. The second result is 'Nurr1 is not an essential regulator of BDNF in mouse cortical neurons', dated May 30, 2022.

# McMaster Dataverse: Capabilities



**Limit Access:** Researchers can choose whether to share their datasets openly or through limited access.



**Monitor Statistics:** Researchers can monitor statistics about the use of their data.

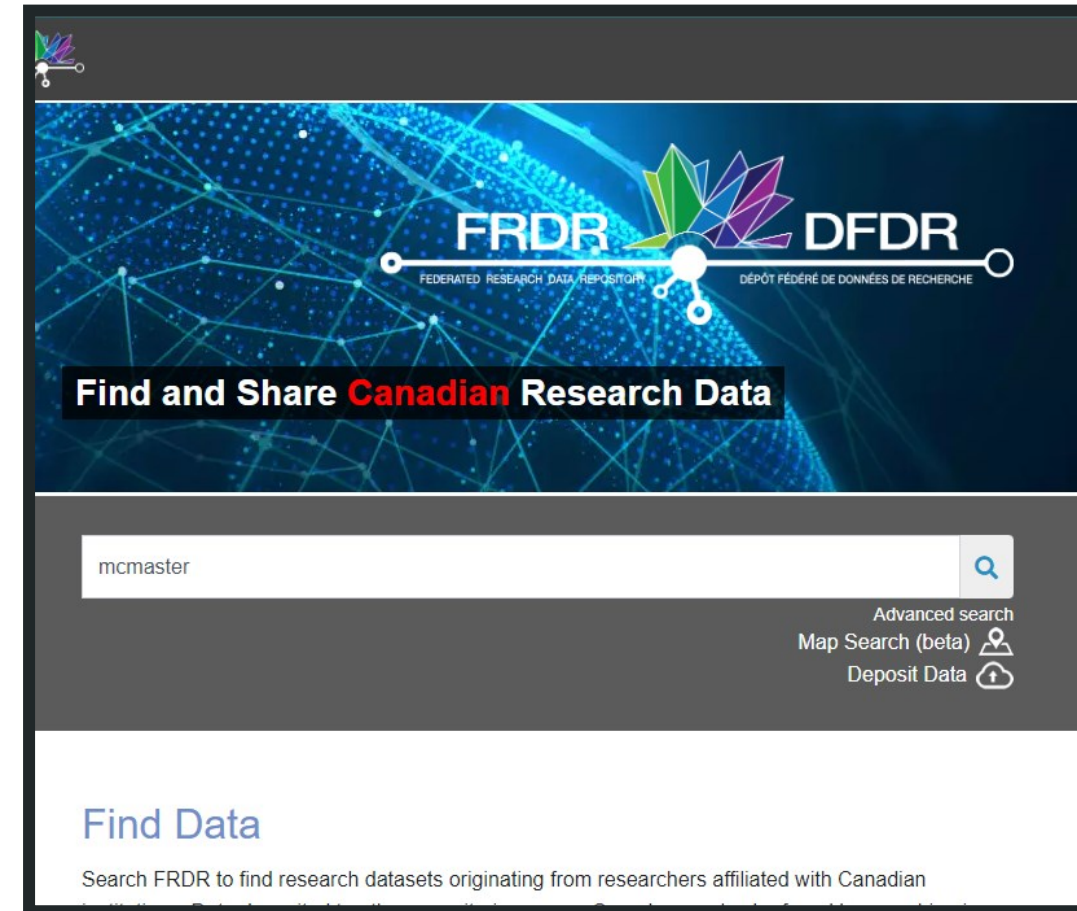


**Anonymous Deposits:** Deposits can be set up anonymously for double blind reviews.

# Federated Research Data Repository (FRDR)

<https://www.frdr-dfdr.ca/repo/>

- Available to any researcher affiliated with a Canadian institution
- Built for large (1 TB+) datasets
- Datasets are actively curated by professional staff at FRDR
- Datasets must be open access but can be embargoed for a one-year period





## Sensitive Data in FRDR

The Federated Research Data Repository (FRDR) is working on a pilot project to add optional zero-knowledge encryption to the repository.

“Zero-knowledge encryption” means that FRDR will never be able to access your data directly. All datasets that are deposited are encrypted and their keys deposited into a separate researcher managed platform.

This allows you to store your data in a trusted repository for archival but still control a restricted access protocol.

*Interested in using this service? Email us: [rdm@mcmaster.ca](mailto:rdm@mcmaster.ca)*

# RDM Services: Consultations

We can meet with a researcher or research group to discuss RDM needs including:

- Data deposit for sharing and archival, with specific support for [McMaster Dataverse](#)
- Data Management Plan creation and management
- Data storage & backup, data security, metadata & data documentation

Schedule a consultation at  
**[u.mcmaster.ca/rdm-appointments](https://u.mcmaster.ca/rdm-appointments)**

## Make an Appointment - McMaster University Library

### 1. Select a staff member:

Research Consultation (45 minutes)

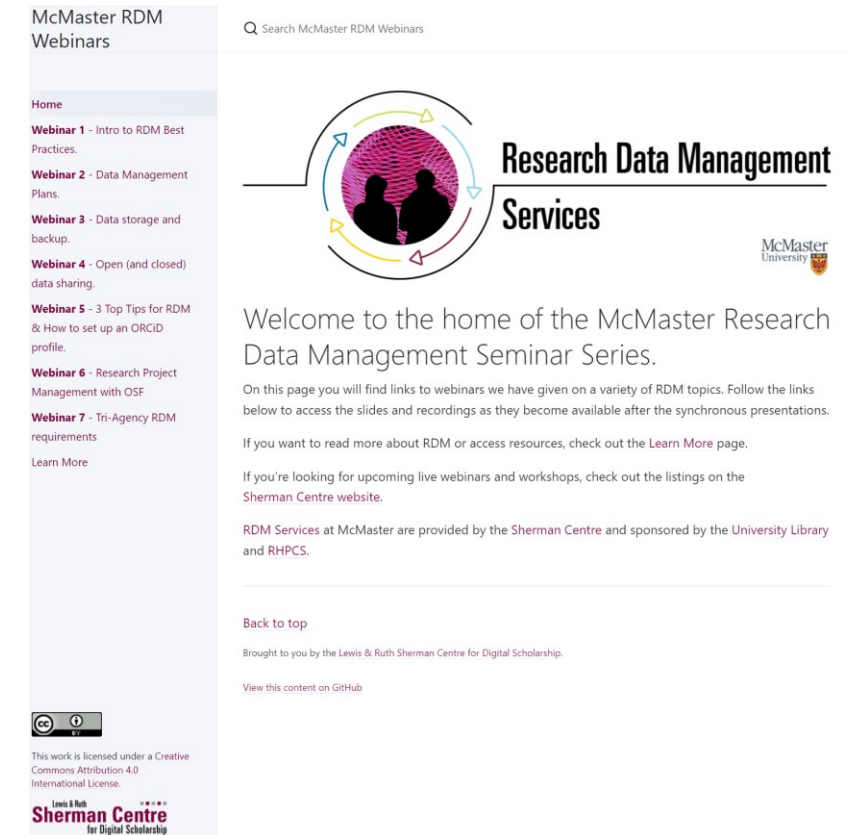
- ☐ No preference
- ☐ Isaac Pratt - Research Data Management
- ☐ Danica Evering - Research Data Management Specialist

# RDM Services: Training

We can present targeted workshops to research groups, academic units, or other groups on any aspect of RDM.

- **Current Webinars:** These can be a good place to learn and to ask questions. Register for events at [rdm.mcmaster.ca/events](https://rdm.mcmaster.ca/events)
- **Class visits & Modules:** An RDM Specialist can prepare a module and present in your class.
- **Recordings:** Asynchronous review is available through webinar recordings and slides. Learn from past webinars at [u.mcmaster.ca/learn-rdm](https://u.mcmaster.ca/learn-rdm).

To request training on a specific topic, email [rdm@mcmaster.ca](mailto:rdm@mcmaster.ca)



McMaster RDM Webinars

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Home

- Webinar 1** - Intro to RDM Best Practices.
- Webinar 2** - Data Management Plans.
- Webinar 3** - Data storage and backup.
- Webinar 4** - Open (and closed) data sharing.
- Webinar 5** - 3 Top Tips for RDM & How to set up an ORCID profile.
- Webinar 6** - Research Project Management with OSF
- Webinar 7** - Tri-Agency RDM requirements

Learn More

Research Data Management Services

Welcome to the home of the McMaster Research Data Management Seminar Series.

On this page you will find links to webinars we have given on a variety of RDM topics. Follow the links below to access the slides and recordings as they become available after the synchronous presentations.

If you want to read more about RDM or access resources, check out the [Learn More](#) page.

If you're looking for upcoming live webinars and workshops, check out the listings on the [Sherman Centre website](#).

RDM Services at McMaster are provided by the Sherman Centre and sponsored by the University Library and RHPCS.

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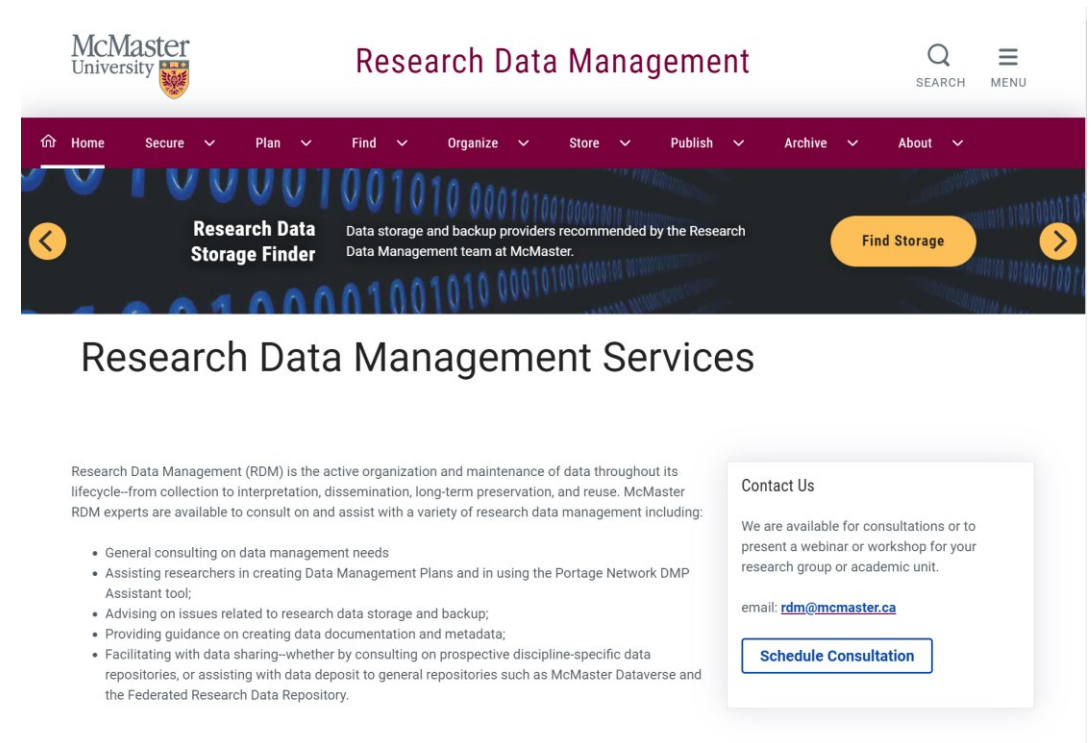
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Lewis & Ruth Sherman Centre for Digital Scholarship

# RDM Services: Website

- McMaster's research data management services website contains links, overviews, and resources for every stage of the research cycle.
- Learn more about how to Secure, Plan, Find, Organize, Store, Publish, and Archive data throughout the research cycle.
- Access our Frequently Asked Questions and recent RDM News.

Visit the website at [rdm.mcmaster.ca](https://rdm.mcmaster.ca)



# RDM Services: Data Storage Finder

- McMaster RDM Services has a **Data Storage Finder**, an interactive tool to help you find a vetted storage provider.
- Answer questions to narrow down options depending on risk, volume, and other needs.
- This tool also allows you to compare feature sets of selected options.

Access the Data Storage Finder at  
<https://rdm.mcmaster.ca/finder>

## Data Storage Finder

The tool is currently in **testing**, if you have any comments, please fill out our [feedback form](#). As McMaster data storage guidelines and practices change and evolve, the data storage providers listed here may change.

This interactive tool lists various data storage and backup providers recommended by the Research Data Management team at McMaster. If none of these providers meet your needs, contact us to set up a [consultation](#). To use the tool, just follow the following steps:

**Step 1:** Answer a few questions about your research data storage needs. Answering these questions will recommend specific options for data storage providers that will meet your needs.

**Step 2:** Choose the data storage providers you would like to compare

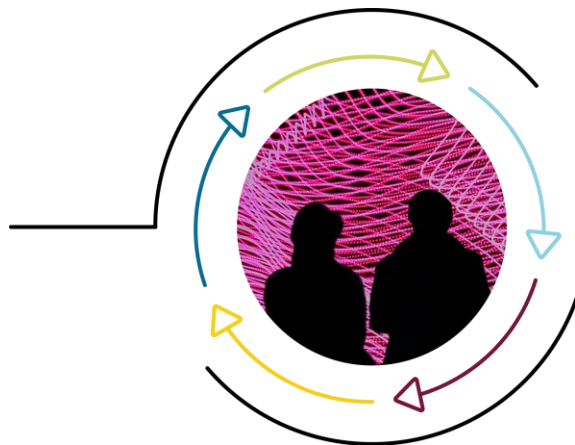
**Step 3:** Explore the details of the providers you have chosen.

The screenshot displays the 'Data Storage Finder' tool interface. On the left, 'Step 1: Answer these questions to narrow down storage provider options.' includes a 'Clear Answers' button and two questions: '1. What risk level is your data?' with radio buttons for Low, Medium, and High, and '2. What type of data storage are you looking for?' with an information icon. On the right, 'Step 2: Select data storage providers you would like to compare' features a grid of eight provider cards, each with a selection circle. The providers are: Compute Canada (Advanced research computing systems, storage and software), Compute Canada NextCloud (Advanced research computing File hosting services), Dataverse (Store, share, publish and discover research data), FRDR (Find and Share Canadian Research Data), Github (Distributed version control system for software code), MacDrive (File Synchronization and Sharing solution), MacDrive (Encrypted Data) (Encrypted File Synchronization and Sharing solution), and MacDrop (Web service to store and transfer files). At the top right of Step 2 are 'Select All' and 'Clear Selections' buttons.

## Discussion Prompts:

- What aspects of the Tri-Agency policy are you unclear or concerned about?
- What impact will the policy have on your research?
- What RDM-related challenges do you face in your research?
- What kinds of resources, services, and supports do you need?

Photo by Guillermo Ruiz on Unsplash.



## Research Data Management Services

McMaster RDM webpage: [rdm.mcmaster.ca](https://rdm.mcmaster.ca)

Contact RDM services at: [rdm@mcmaster.ca](mailto:rdm@mcmaster.ca)

Upcoming RDM webinars: [rdm.mcmaster.ca/events](https://rdm.mcmaster.ca/events)

Recorded RDM webinars: [u.mcmaster.ca/learn-rdm](https://u.mcmaster.ca/learn-rdm)

Make an appointment with a Research Data Management Specialist:  
[u.mcmaster.ca/rdm-appointments](https://u.mcmaster.ca/rdm-appointments)