



University of Guelph Strategy for Research Data Management

March 1, 2023

Vision Statement

University of Guelph supports research excellence through the promotion of research data management and data stewardship practices.

1. Introduction

The Tri-Agencies (i.e., NSERC, SSHRC and CIHR) released a Research Data Management Policy in March 2021 based on the following principles:

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 Policy requires every post-secondary institution eligible to administer Tri-Agency funds to create an institutional RDM strategy that promotes the above principles and to make the strategy publicly available on the institution's website no later than March 1, 2023.

In addition to the release of the Research Data Management Policy by the Tri-Agencies, the Tri-Agencies have been identifying funding programs where researchers are required to submit a data management plan with their grant proposal.

After the review of institutional RDM strategies, the Tri-Agencies will phase in the data deposit requirement. In addition to any existing sponsor requirements, grant recipients will be required to archive all digital research data, metadata and code that directly support research conclusions in journal publications and pre-prints into a digital repository, and "provide appropriate access to the data where ethical, cultural, legal and commercial requirements allow".

The University of Guelph Research Data Management Strategy outlines the approach the University will take to ensure that research data at the University of Guelph will be managed throughout the research lifecycle using appropriate data stewardship best practices.

2. Jurisdiction/Scope

The strategy applies to all University of Guelph researchers, including students, staff, and faculty in all disciplines, at the University.

3. Statement of Principles

3.1. Research Excellence

The University is committed to research excellence. Research data will be managed to the highest standards throughout the research data lifecycle as part of the University's commitment to research excellence and the promotion of the following:

- Findability, Accessibility, Interoperability, and Reuse (where appropriate) of research data
- research transparency
- alignment with principles of Indigenous data sovereignty
- compliance with legal, ethical, commercial and funding requirements
- responsible conduct of research
- acceleration of scientific enquiry

The University encourages all researchers to develop research Data Management Plans (DMPs) for all research projects or programs, regardless of funding source or for unfunded research.

3.2. Service Provision and Training

The University is committed to training, support, advice and, where appropriate, guidelines and templates for research data management and research data management plans. Current support available is outlined at the Library's Research Data Management website.

The University is committed to the provision of tools and services for storage, backup, registration, deposit and retention of research data assets in support of current and future access, during and after completion of research projects.

3.3. Context-Based Approach

Recognizing that different domains have different needs, a context-based approach is recommended to:

- Promote a flexible RDM model that is adaptable to all research domains. For example, it is recognized that there will be instances where research data would not be shared nor retained due to legal, ethical or commercial requirements; the reasons for restriction must be documented within the data management plan.
- Align the institutional approach with recognized frameworks such as the FAIR Principles (Findable, Accessible, Interoperable, and Reusable), i.e.,
 - All research data should be accompanied by appropriate documentation (metadata) to facilitate discovery and reuse.
 - Exclusive rights to reuse or publish research data should not be transferred to commercial publishers or agents without retaining the rights to make the data openly available for re-use, unless this is a condition of funding.

- Ensure that the unique rights, interests and circumstances of First Nations, the Métis Nation and Inuit are respected by adopting a distinction based RDM approach for research involving First Nations, the Métis Nation and Inuit communities and their data, such as OCAP® (Ownership, Control, Access, and Possession) and CARE (Collective benefit, Authority to control, Responsibility, and Ethics).

4. Goals and Objectives

4.1. Ensure University of Guelph on-going alignment with RDM national policies and best practice

4.1.1. Establish a UofG RDM oversight body that will:

- 4.1.1.1. Develop, adopt and sustain institutional RDM policies and procedures.
- 4.1.1.2. Communicate effectively and regularly with the UofG research community changes to RDM strategy, policies and procedures.

4.1.2. Establish a campus plan for the promotion of RDM that will include:

- 4.1.2.1. Raising awareness of national policies and guidelines that affect RDM (e.g., Tri-Agency policies, funder policies, journal policies, DMP Assistant, the Federated Research Data Repository (FRDR), and the Borealis Dataverse Repository).
- 4.1.2.2. Providing links and resources for best practices and tools.
- 4.1.2.3. Developing, expanding and enhancing RDM services, support and technologies.

4.2. Provide necessary IT Infrastructure services

4.2.1. Engage with campus stakeholders and investigate national initiatives in the development of strong supports for short-term (active) and long-term (preservation) storage and preservation of sensitive data.

- 4.2.1.1. Leverage DRAC (Digital Research Alliance of Canada) national solutions for preserving sensitive data.
- 4.2.1.2. Provide solutions for large file and collections data transfers, managing and archiving sensitive data, and sharing data with collaborators outside of the University.

4.2.2. Provide an IT menu with all RDM services for researchers, including:

- 4.2.2.1. Encrypted research data (e.g., CCS has an encryption service available, but only if it is requested).
- 4.2.2.2. Access to additional servers for analysis and the costs for this service.

- 4.2.2.3. Collaborative digital workspaces.
- 4.2.2.4. Improved governance for of enterprise software, and researcher awareness of available software.

4.3. Expand and enhance RDM services and support

4.3.1. Integrate currently available support services offered through UofG divisional units and external resources, e.g., Office of Research, Research Ethics Boards, Library, DRAC.

4.3.2. Workshops, Consultations and Support Resources:

- 4.3.2.1. Review and adjust instructional support services including consultations and workshops to align more closely with researcher needs.
- 4.3.2.2. Strengthen support for researchers preparing data for preservation.
- 4.3.2.3. Strengthen joint record-keeping protocols for staff who support RDM/DMP.

4.4. Build capacity across disciplines for researchers to use the DMP Assistant platform and integrate DMPs into other research processes

4.4.1. Provide additional DMP templates (based on Portage; customized for UofG) for other disciplines, areas of research, and modes of inquiry and to increase our capacity to support DMP Reviewing/feedback.

4.4.2. Investigate new and emerging technical functionality of the DMP Assistant platform to help ease transmission of field content to other databases, including the Research Management System, to create additional DMP templates for questions, template guidance language, and DMP matrix language used to assess the quality of submitted DMPs, to align language and terminology and to help clarify expectations.

4.4.3. Integrate DMP into REB to save the time of researchers.

4.5. Provide and Maintain RDM Financial Support

4.5.1. Provide base HR funding to increase UofG current RDM expertise.

4.5.2. Leverage any national funding opportunities (e.g., DRAC) for people and infrastructure.

Definitions

CARE Principles for Indigenous Data Governance

CARE stands for Collective Benefit, Authority to Control, Responsibility, Ethics. The CARE Principles were created to advance the legal principles underlying collective and individual data rights in the context of the [United Nations Declaration on the Rights of Indigenous Peoples \(UNDRIP\)](#). CARE was created by the International Indigenous Data Sovereignty Interest Group, a group that is a part of the [Research Data Alliance](#). The CARE Principles reflect the crucial role of data in advancing Indigenous innovation and self-determination.

FAIR Principles

FAIR Principles for scientific data management and stewardship are international best practice for improving findability, accessibility, interoperability and reuse of research data.

Indigenous Research

“Indigenous Research” is “research in any field or discipline that is conducted by, grounded in or engaged with First Nations, Inuit, Métis or other Indigenous nations, communities, societies or individuals, and their wisdom, cultures, experiences or knowledge systems, as expressed in their dynamic forms, past and present.”

Social Sciences and Humanities Research Council. (2021, May 4). Definitions of Terms. Government of Canada. Retrieved June 30, 2022, from <https://www.sshrc-crsh.gc.ca/funding-financement/programmes-programmes/definitions-eng.aspx>

OCAP (Ownership, Control, Access and Possession)

OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). It refers to Ownership, Control, Access and Possession. (Adapted from: First Nations Information Governance Centre Understanding OCAP®).

Research Data

“Research data are data that are used as primary sources to support technical or scientific enquiry, research, scholarship, or creative practice, and that are 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 may be experimental data, observational data, operational data, third party data, public sector data, monitoring data, processed data, or repurposed data. What is considered relevant research data is often highly contextual, and determining what counts as such should be guided by disciplinary norms.

”Innovation, Science and Economic Development Canada. (2021). Frequently Asked Questions - Tri-Agency Research Data Management Policy. Government of Canada. Retrieved June 30, 2022, from https://science.gc.ca/eic/site/063.nsf/eng/h_97609.html#1a

Research Data Management

“Research Data Management” is “the storage of, access to and preservation of data produced from one or more investigations, or from a program of research. Research data management practices cover the entire lifecycle of the data, from planning the investigation to conducting it, and from backing up data as

it is created and used to preserving data for the long term after the research has concluded. It also includes data-sharing, where applicable.”

Social Sciences and Humanities Research Council. (2021, May 4). Definitions of Terms. Government of Canada. Retrieved June 30, 2022, from <https://www.sshrc-crsh.gc.ca/funding-financement/programmes-programmes/definitions-eng.aspx>

Related Policies, Procedures & Documents

External

- [SSHRC Research Data Archiving Policy](#)
- [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans \(TCPS2\) Chapter 9](#)
- [Tri-Agency Framework: Responsible Conduct of Research](#)
- [Tri-Agency Statement of Principles on Digital Data Management](#)
- [The First Nations Principles of OCAP](#)
- [CARE Principles for Indigenous Data Governance](#)

Internal (University of Guelph)

- [Institutional Data Governance Policy](#)
- [Guidelines for Categorization and Security of Research Data & Information](#)
- [Data Storage Guidelines](#)
- [Secure Online Data Collection Guidelines](#)
- [Encryption Policy \(2021-03-16\)](#)
- [Acceptable Use Policy](#)
- [McLaughlin Library Digital Repositories Policy](#)
- [Borealis Terms of Use](#)
- [University of Guelph Research Data Repositories Data Deposit Guideline](#)
- [Intellectual Property Policy](#)

Original Approval Date:

Date of Most Recent Review:

Next Review: Institutional RDM strategies are expected to be reviewed and revised regularly as practices evolve.