

# Acadia University's Research Data Management Strategy

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# Introduction

## Background

Acadia University boasts both exemplary undergraduate experiences and an active research culture. These two foundational components of the university's ecosystem lend themselves to both the participation in, and modelling of, best practices in research and scholarly inquiry on campus. As an adaptive and forward-thinking institution, it is vital that both its student and faculty researchers are equipped to engage fully with Research Data Management (RDM) principles and practices embraced by national and international research communities, scholarly publishers, and funding bodies.

In the spring of 2021, the Canadian Tri-Agencies released [the Tri-Agency Research Data Management Policy](#), an integral piece in its policy building surrounding fair and open research.<sup>1</sup> This key document follows the release of the [Tri-Agency Statement of Principles on Digital Data Management](#) (2016), the primary RDM document shared by the federal funding agencies. Each of these documents engage and intersect with [CIHR's Health Research and Health-Related Data Framework](#) (2017), the [Tri-Agency Framework: Responsible Conduct of Research](#) (2016), the [Tri-Agency Open Access Policy on Publications](#) (2015), the [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans](#) (2014), and [SSHRC's Research Data Archiving Policy](#) (1990).<sup>1</sup>

The Tri-Agency Research Data Management Policy outlines three core expectations surrounding RDM for both institutions and researchers: institutional strategies, data management plans (DMPs), and data deposit. The Tri-Agency is requiring postsecondary and research institutions to make publicly available their institutional strategies.<sup>1</sup> The purpose of this document is to fulfill the institutional strategy requirement of the RDM Policy and provide guidance to Acadia University as it endeavors to support and promote RDM best practices across campus. This document and the strategy outlined will continue to evolve to meet the needs of researchers, funding agencies, and the University.

## The Research Landscape at Acadia University

Acadia University is a research-active, primarily undergraduate institution. We offer thesis-based honours research within most programs, fifteen master's programs, and an interdisciplinary doctoral program in the School of Education. Faculty at Acadia are engaged in research with graduate students and undergraduate students (at all levels), and many also collaborate with industry, government agencies, non-government organizations, other faculty across the campus, and researchers elsewhere. Supported by the Division of Research,

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<sup>1</sup> Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada. (2021). *Tri-Agency Research Data Management Policy*. [https://science.gc.ca/eic/site/063.nsf/eng/h\\_97610.html](https://science.gc.ca/eic/site/063.nsf/eng/h_97610.html)

Innovation and Graduate Studies, Acadia faculty apply annually to various external granting organizations such as Tri-Council (SSHRC, NSERC, CIHR), Research Nova Scotia, and the Canadian Foundation for Infrastructure. The research infrastructure at Acadia is diverse and includes custom-built research laboratories and innovation spaces that foster collaborative work.

## Participants

Students, staff, and faculty are all participants in RDM at Acadia University. Each of these groups either participate in or support RDM in their own research context. For the purposes of this institutional strategy, participants in RDM support and services have been identified here.

### **Acadia Research Ethics Board (REB)** (<https://reb.acadiau.ca/>)

Data management plans necessarily relate to and involve research ethical considerations which extend beyond a project's data collection phase, which is why the role of the Research Ethics Board is so important. As required by Canada's granting councils, Acadia's Research Ethics Board (est. 1999) meets monthly 12 times per year to review applications for ethics approval that relate to research involving human subjects or involving data collected from human subjects. This body has the power to approve, reject, or to propose modifications to such research.

### **Acadia Technology Services** (<https://ts.acadiau.ca/>)

Acadia's Technology Services team provides support to students, faculty, and staff. They manage a wide range of Acadia's digital infrastructure, essential systems, and security to electronically support Acadia's teaching, research, learning and administrative services. They also provide consulting and support for data capture, data security, data integrity and information integration and extraction. Without such infrastructure and support, much of today's research data collection and management would be impossible. TS staff sign an agreement, that is kept in Human Resources, to protect and preserve the confidentiality of any information they see, hear, or access.

### **Coordinator of Indigenous Affairs**

Acadia's Coordinator of Indigenous Affairs is an important collaborator to include in institutional RDM planning and implementation. Some of the coordinator's many duties involve ensuring that research data collection and management involving Indigenous peoples and knowledge are being done with respect for any additional ethics requirements or reviews by the community, serving as a liaison between faculty and local Indigenous communities, and providing research guidance relating to Indigenous peoples, culture, and heritage. In addition, the "[Working with Indigenous Peoples at Acadia University - Handbook and Protocols](#)" (2018) provides essential guidance for academics who plan to involve Indigenous peoples in their research.

### **Research, Innovation, and Graduate Studies** (<https://www2.acadiau.ca/research-office.html>)

Acadia's Division of Research, Innovation and Graduate Studies (RIGS) acts as a central hub for the campus' research culture, coordinating a participatory and interdisciplinary environment

that connects researchers, graduate students, government agencies, industry partners, non-government organizations, and community groups. As Acadia's liaison with external funding agencies, RIGS will play a vital role in the implementation of Acadia's RDM policy moving forward and will be central to informing and advising researchers regarding RDM expectations on campus. The Associate Vice-President Research, Innovation and Graduate Studies sits on the REB (see above) and thus offers the REB timely opportunities for discussions related to RDM.

**Vaughan Memorial Library** (<https://library.acadiau.ca>)

Libraries are at the heart of 21st-century academic information and data management. In addition to offering an excellent RDM guide (<https://libguides.acadiau.ca/rdm>) for faculty and student researchers, Acadia's Vaughan Memorial Library offers instructional sessions on RDM and consultations on data management plans and data deposit. The library recognizes research data as valuable products of scholarship independent of published analyses. Since the library already stewards an institutional database for scholarship produced by the Acadia community, it is well poised to launch a data repository to house these important scholarly outputs.

**Provost and Vice-President Academic** (<https://www2.acadiau.ca/about-acadia/leadership/vice-president-academic.html>)

As an office that exists to centrally coordinate, encourage, and enable the academic work taking place across campus, and advocates for the academic and research needs of faculty to other campus sectors and senior management, the Provost and Vice-President Academic (VPA) is the primary liaison in the adoption and encouragement of RDM practices across campus. In addition to being a leadership model for RDM, the VPA's office can provide a lead organizational role in coordinating participants and making the transition to RDM best practices an easy one for faculty members across Acadia.

## Acronyms, Initialisms, and Definitions

**CARE** – Collective benefit, Authority to control, Responsibility, Ethics. CARE is a set of principles supporting Indigenous data sovereignty. For more information on these principles, refer to <https://www.gida-global.org/care> by the Global Indigenous Data Alliance.

**DMP** - A Data Management Plan (DMP) is a formal document that details how a researcher or researchers will collect/gather, process, analyze, store, preserve, and share research data. It also contains information about data responsibilities, ethical/legal considerations, and any relevant information pertaining to one's data organization and stewardship.

**FAIR** - Findable, Accessible, Interoperable, Reusable data. For more information on these principles, refer to <https://www.go-fair.org/fair-principles/> by GoFAIR.

**OCAP** – Ownership, Control, Access, Possession. OCAP is a set of First Nations principles to safeguard Indigenous data sovereignty developed by The First Nations Information Governance Centre (FNIGC). For more information on OCAP, refer to <https://fnigc.ca/ocap-training/> by FNIGC.

**Research Data** - Research data is any information that has been collected, recorded, generated, or reused to create, inform, and validate original research.

**Research Data Management (RDM)** - Research data management is how one plans for, and takes care of, the data used for scholarly inquiry. Careful oversight and stewardship of research data are necessary from the start of a project to completion, and beyond.

**Research Ethics Board (REB)** - Acadia's independent Research Ethics Board (REB) reviews the ethics of all "research involving human subjects which is conducted within, or by members of, the institution" in accordance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, Second Edition (TCPS2).

**Tri-Agency** – This triad of federal granting agencies includes 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).

## Laying the Groundwork for Acadia's RDM Strategy

The Acadia Research Data Management Working Group is a sub-group of the Senate Research Committee. Formed in the Spring of 2021, the RDM Working Group was assembled to evaluate Acadia's RDM environment and develop a strategy to provide services and support for RDM on campus. The Working Group membership has evolved over time and has included representation from the Division of Research, Innovation and Graduate Studies, the Vaughan Memorial Library, Technology Services, and academic departments/schools across disciplines. Other RDM participants on campus have also been consulted throughout the course of the strategy development, including the Chair of the Research Ethics Board (REB), and the Coordinator of Indigenous Affairs. The RDM Working Group has taken guidance from the Digital Research Alliance of Canada's Institutional Research Data Management Strategy Template and RDM Maturity Assessment Model in Canada. Published RDM Institutional Strategies from other Canadian universities have also been consulted.

The RDM Working Group conducted a survey of faculty RDM practices at Acadia to help inform the University's strategy. The purpose of this survey was to a) gather information on the data habits of Acadia's researchers, b) identify areas where RDM support is needed or gaps exist, and c) receive feedback on the types of learning opportunities and services Acadia's researchers want surrounding RDM. In advance of the survey, work was done to promote RDM through a Library Research Guide, information sharing via email, a live, virtual session on RDM and FAIR (Findable, Accessible, Interoperable, Reusable) data principles, and information sessions within individual departments and schools. These awareness and education endeavours were intended to lay the groundwork for a healthy RDM culture at Acadia, as well as to help faculty members engage with the survey from a place of greater understanding. The survey was followed by a

series of focus groups to further characterize data management practices among Acadia's faculty, and to identify gaps in RDM supports and barriers to RDM practices. Preliminary analyses of the results from both the survey and the focus groups have taken place, with further analyses to follow. These results will inform the RDM strategy going forward.

## Vision and Guiding Principles

### Vision

Acadia University will become a recognized champion of research data management. RDM best-practices will be instilled as a fundamental part of research culture at Acadia, employed by faculty and students alike. Our goal is to support all stages of data life cycles, from data management planning to data deposit, preservation and data sharing as appropriate and permitted. We will establish a vibrant data repository where our researchers' datasets can be referenced and reused widely. We will continue to respect and advocate for Indigenous data sovereignty.

### Guiding Principles

This strategy is guided by Acadia's research ethics policies (<https://reb.acadiau.ca/policies.html>), the principles of FAIR data (<https://www.go-fair.org/fair-principles/>), and the Indigenous data sovereignty OCAP principles (<https://fnigc.ca/ocap-training/>) and CARE principles (<https://www.gida-global.org/care>). Together, these outline data management practices that support the production of high-quality datasets, respect data sovereignty, and increase the reach of scholarship at Acadia.

## Governance of this Strategy

### Governance

This strategy shall be jointly administered by the Vaughan Memorial Library and the Division of Research, Innovation and Graduate Studies. The Dean of Libraries and the Associate Vice-President Research, Innovation and Graduate Studies shall ensure provision of resources adequate to support Acadia researchers' data management planning and data deposit.

Links to the strategy will be available on the websites of the Division of Research, Innovation and Graduate Studies and the Vaughan Memorial Library.

### Review of this Strategy

This strategy will be reviewed and updated every two years by the Senate Research Committee in consultation with the Vaughan Memorial Library, the Division of Research, Innovation and

Graduate Studies, Technology Services, the Research Ethics Board, and the Coordinator of Indigenous Affairs.

## Goals

### **1. Further develop and deliver education and training in RDM best-practices for Acadia's students and faculty.**

- a. Maintaining a Library guide to RDM that contains in-house training materials and links to external training materials, tools, and resources.  
Responsibility: Vaughan Memorial Library  
Timeline: ongoing
- b. Provide in-person or online training sessions on topics in RDM, as needed, including the promotion and facilitation of RDM training offered by regional and national organizations (ACENET, Council of Atlantic Academic Libraries (CAAL-CBPA), Research Data Alliance of Canada, etc.).  
Responsibility: Vaughan Memorial Library, Division of Research, Innovation and Graduate Studies  
Timeline: ongoing
- c. Provide one-on-one or small group consultation on data management plans (DMP), data deposit, and other topics in RDM.  
Responsibility: Vaughan Memorial Library, Division of Research, Innovation and Graduate Studies  
Timeline: ongoing
- d. Provide training on data security.  
Responsibility: Technology Services  
Timeline: ongoing

### **2. Maintain and develop technical infrastructure to support RDM at Acadia.**

- a. Provide support for local data computing and storage (including Acadia supported cloud computing and storage), large file transfers, and integration of third-party computing and storage services.  
Responsibility: Technology Services  
Timeline: ongoing
- b. Offer guidance on selecting and accessing third-party solutions for high-speed computing, data storage, and data deposit (ACENET, Research Data Alliance of Canada, Federated Research Data Repository (FRDR), etc.).  
Responsibility: Vaughan Memorial Library, Technology Services  
Timeline: ongoing
- c. Create an Acadia University data repository using the Borealis platform.  
Responsibility: Vaughan Memorial Library, Technology Services.  
Timeline: 1-2 years



3. **Provide guidance and support for compliance with RDM ethics requirements and funding requirements.**
  - a. Provide individual or small group consultations for grant applications.  
Responsibility: Division of Research, Innovation and Graduate Studies  
Timeline: ongoing
  - b. Provide guidance on research data management plans with a focus on sensitive data.  
Responsibility: Vaughan Memorial Library, Division of Research, Innovation and Graduate Studies, Research Ethics Board  
Timeline: ongoing
  - c. Provide technical resources that researchers use to store and manage data. The systems are managed by Systems Administrators who are trained in preservation of confidentiality of resources they manage.  
Responsibility: Technology Services  
Timeline: ongoing

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### **Current and past members:**

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## RDM Contacts

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