RESEARCH DATA MANAGEMENT STRATEGY
MARCH 2023

I. Introduction

In March 2021, 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) launched the *Tri-Agency Research Data Management Policy*. This policy seeks to support Canadian research excellence by promoting sound data management and data stewardship practices to ensure "that research makes good use of public funds, experiments and studies are replicable, and research data are available for reuse where ethical, legal, and commercial obligations allow."[1] The agencies recognize that standards for Research Data Management (RDM) vary across disciplines, areas of research, and modes of scientific and scholarly inquiry.

The RDM Policy requires all postsecondary institutions and hospitals eligible to administer Tri-Agency funds to develop an institutional research data management (RDM) strategy that reflects the institution's size, research intensity, and existing RDM capacity. Additionally, the Tri-Agency RDM Policy, establishes new data management requirements for researchers applying for federal funding. For certain funding competitions, the agencies will require data management plans (DMPs) to be submitted during the application process. The quality of these plans will be considered in the merit review process. Further, after reviewing the institutional strategies and in step with the readiness of the Canadian research community, the agencies will phase in a data deposit requirement. The RDM policy acknowledges that "determining what counts as research data, and which data should be preserved, is often highly contextual and should be guided by disciplinary norms."[2]

II. Importance of Research Data Management

RDM enables researchers to organize, store, access, reuse and build upon digital research data. RDM is essential to Canadian researchers' capacity to securely preserve and use their research data throughout their research projects, reuse their data over the course of their careers and, when appropriate, share their data. Furthermore, as an acknowledged component of research excellence, strong RDM practices support researchers in achieving scientific rigor and enable collaboration in their fields (Tri-Agency Research Data Management Policy - Frequently Asked Questions).

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[1] Government of Canada (2021). *Tri-Agency Research Data Management Policy*. Retrieved January 31, 2023, from https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/research-data-management/triagency-

[2] Ibid.

III. Institutional Context

Huron University College's RDM strategy reflects its current research activities, intensity, and context as a small undergraduate liberal arts university, affiliated with a large research-intensive university. Research and research-learning are vital to the culture and mission of Huron University. Huron is committed to research excellence and recognizes that strong research data management is a key component of research excellence.

Data management planning and the new Tri-Agency requirements represent a significant change for Huron researchers and for the institution. We are in the early stages of creating the supports and awareness necessary to foster a culture of research data management. Huron recognizes data as an important research output and is committed to promoting responsible RDM that will enable our researchers to establish and implement RDM practices most appropriate to their disciplinary context.

Huron will support researchers in adopting the FAIR Principles to make research data findable, accessible, interoperable, and reusable. The FAIR principles are complemented by Tri-Agency Framework: Responsible Conduct of Research and the TCPS 2 (2022), which provides guidance on data management in areas of consent, privacy and confidentiality, and secondary use of data.

IV. Indigenous Data Considerations

Huron is committed to decolonizing our curriculum, practices, and relationships with the Indigenous peoples of Canada and particularly of southwestern Ontario. This includes research conducted in partnership with First Nations, Métis and Inuit communities, collectives, and organizations. Huron recognizes that Indigenous communities themselves must "guide and ultimately determine how the data are collected, used and preserved, and have the right to repatriate the data."[3] Huron is committed to working in partnership with Indigenous stakeholders to implement a distinctions-based approach to ensure that the unique rights, interests, and circumstances of First Nations, Métis, and Inuit peoples are acknowledged, affirmed, and implemented

Huron supports the use of data management practices, such as the First Nations Principles of OCAP® (Ownership, Control, Access, Possession), and the CARE Principles for Indigenous Data Governance (Collective benefit, Authority to Control, Responsibility, Ethics), to support Indigenous data sovereignty. In addition, Chapter 9 of the TCPS 2 (2022) details considerations in research with Indigenous Peoples. Huron's Indigenous Initiatives Coordinator is a key resource in ensuring appropriate and meaningful application of RDM principles and strategies to Indigenous data.

V. Ethics Considerations

Research projects involving human participants are reviewed by Huron's Research Ethics Board. The REB has recently incorporated research data management in the application form for ethics approval.

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[3] Government of Canada (2021). *Tri-Agency Research Data Management Policy*. Retrieved January 17, 2023, from https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/research-data-management/triagency-

VI. Scope

This strategy applies to all faculty, staff, and students who conduct research at Huron. It also applies to any person (including, but not limited to, affiliated faculty, visiting professors or students, adjunct professors and postdoctoral associates and fellows) appointed or invited to engage in research activity at, or under the auspices of, Huron.[4]

VII. Oversight and Review

The Office of the Provost, with support from the Coordinator, Research & Learning, is responsible for the development and implementation of the RDM strategy. As a living document, the RDM strategy will be revised on an ongoing basis in consultation with Huron researchers, Library and Learning Services, Information Technology Services, the Research Ethics Board, and other institutional stakeholders.

VIII. Institutional Strategy

Huron wishes to foster a research data management culture where researchers are aware of data management planning tools, repositories, and resources and incorporate them throughout the research lifecycle. Our initial priorities are to increase awareness, support, and capacity for RDM practices, while leveraging, where appropriate, RDM resources available through Western University, the Digital Research Alliance of Canada (formerly Portage) and other organizations.

Objective 1: Build RDM Awareness and Institutional Capacity

- Promote the value and importance of data management
- Increase awareness of the new Tri-Agency RDM requirements and the Tri-Agency Statement of Principles on Digital Data Management
- Survey the Huron research community to evaluate current RDM practices, gaps, and capacity
- Identify needs for data storage, data deposit, and data security
- Develop and implement an institutional framework to support RDM

Objective 2: Provide RDM Support and Training

- Develop a repository of resources focused on RDM needs in the social sciences and humanities
- Offer RDM workshops, Lunch and Learns, and other training opportunities
- Provide researchers with guidance to manage their data in accordance RDM best practices, including the development of data management plans for funding applications
- Increase awareness of RDM resources and training available through the Digital Research Alliance of Canada and Western Libraries, including the DMP Assistant and Borealis, the Canadian Dataverse Repository

Objective 3: Support Indigenous Data Sovereignty

- Increase awareness of Indigenous data sovereignty, including the OCAP® and CARE principles
- Provide resources and training to support researchers in working responsibly with Indigenous partners and communities
- Collaborate with the Indigenous Initiatives Coordinator and Indigenous elders, knowledge keepers and communities to ensure that data are managed in close partnership with Indigenous communities

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[4] See Huron University College, Academic Integrity in Research Policies and Procedures.

IX. Looking Ahead

Huron's largest faculty, the Faculty of Arts and Social Science is about to launch a strategic planning exercise to develop its next five-year Academic Plan (2024-2029). The Faculty of Theology will embark on a similar process next year. It is anticipated that our institutional RDM strategy over the next five years will be informed by this work.

APPENDIX A: DEFINITIONS

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 (Tri-Agency Research Data Management Policy - Frequently Asked Questions).

Research Data Management

Research data management (RDM) refers to the processes applied through the lifecycle of a research project to guide the collection, documentation, storage, sharing and preservation of research data. RDM is essential throughout the data lifecycle—from data creation, processing, analysis, preservation, storage and access, to sharing and reuse (where appropriate), at which point the cycle begins again. Data management should be practiced over the entire lifecycle of the data, including planning the investigation, conducting the research, backing up data as it is created and used, disseminating data, and preserving data for the long term after the research investigation has concluded (Tri-Agency Research Data Management Policy - Frequently Asked Questions).

Data Management Plan

A "data management plan" (DMP) is "a living document, typically associated with an individual research project or program that consists of the practices, processes and strategies that pertain to a set of specified topics related to data management and curation. DMPs should be modified throughout the course of a research project to reflect changes in project design, methods, or other considerations. DMPs guide researchers in articulating their plans for managing data; they do not necessarily compel researchers to manage data differently" (Tri-Agency Research Data Management Policy, Frequently Asked Questions, Government of Canada 2021).

Data Deposit

"Data deposit" refers to when the research data collected as part of a research project are transferred to a research data repository. The repository should have easily accessible policies describing deposit and user licenses, access control, preservation procedures, storage and backup practices, and sustainability and succession plans. The deposit of research data into appropriate repositories supports ongoing data-retention and, where appropriate, access to the data. (Tri-Agency Research Data Management Policy, Frequently Asked Questions, Government of Canada 2021).

APPENDIX B: POLICIES AND RESOURCES

1) External Policies

- Tri-Agency Research Data Management Policy:
  https://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html

- Tri-Agency Statement of Principles on Digital Data Management:
  https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/research-data-management/tri-agency-statement-principles-digital-data-management

- Tri-Agency Framework: Responsible Conduct of Research:
  https://rcr.ethics.gc.ca/eng/framework-cadre-2021.html

- Tri-Agency Open Access Policy on Publications:
  https://science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html

- TCPS 2 (2022) – Chapter 9: Research Involving the First Nations, Inuit, and Métis Peoples of Canada: https://ethics.gc.ca/eng/tcps2-eptc2_2022_chapter9-chapitre9.html

2) External Resources

- Digital Research Alliance of Canada, Research Data Management
  https://alliancecan.ca/en/services/research-data-management

- The First Nations Principles of OCAP®
  https://fnigc.ca/ocap-training/

- The CARE Principles for Indigenous Data Governance:
  https://datascience.codata.org/articles/10.5334/dsj-2020-043/

- Research Data Management Terminology:
  https://codata.org/initiatives/data-science-and-stewardship/rdm-terminology-wg/

3) Internal Policies

- Academic Integrity in Research Policies and Procedures

- Information Technology Policy

- Intellectual Property Policy

- Statement of Principles on Research Involving Indigenous Communities

- Statement of Principles on Equity, Diversity, and Inclusion in Research

- Research Ethics Board Policy and Procedures