Institutional Research Data Management Strategy

I.   Introduction and Background

Saint Mary's University (SMU) is home to a diverse and thriving research culture. Our research activities span a wide range of disciplines and topics within the Social Sciences and Humanities, Natural Sciences and Engineering, Occupational Health and Safety, and Finance and Management. The University is dedicated to a broad spectrum of theoretical and fundamental research endeavours, but also engages in research initiatives that establish connections with communities outside of our campus. These communities encompass provincial government entities, business and industrial associations, not-for-profit and international agencies and organizations.

The University is committed to responsible, safe, and secure research data management practices. Following the adoption of the Tri-Agency's research data management (RDM) policy in March 2021, it is mandatory for every post-secondary institution and research hospital eligible to administer Tri-Agency funds to create and publicly share the RDM strategy and notify the agencies when completed. Saint Mary's University is bound to fulfill these requirements and support its researchers in implementing these practices. The University aims to equip researchers with the best support for project planning, guidelines, policies, and infrastructure to promote research excellence across the institution. In response to the release of the **Tri-Agency Research Data Management Policy (2021)**[1], the University worked closely with the Patrick Power Library, the Faculty of Graduate Studies and Research, the Office of Innovation and Community Engagement, the SMU Research Ethics Board, the SMU Enterprise Information Technology, faculty researchers and staff to develop the Institutional RDM Strategy.

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[1] Government of Canada (2021). *Tri-Agency Research Data Management Policy*. Retrieved from http://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html

II.   Definitions

A.   **Data Lifecycle-** refers to all the stages in the existence of data from creation to destruction. The data lifecycle provides a high-level overview of the stages involved in successfully managing and preserving data for use and reuse. This broadly includes the following stages: Plan, Create, Process, Analyze, Disseminate, Preserve and Reuse.[2]

B.   **Research Data**- Data used as primary sources to support technical or scientific enquiry, research, scholarship, or artistic activity and used as evidence in the research process and/or commonly accepted in the research community as necessary to validate research findings and results. All other digital and non-digital content has the potential to become research data. Research data may be experimental data, observational data, operational data, third-party data, public sector data, monitoring data, processed data, or repurposed data.[3]

C.   **Indigenous data sovereignty** – refers to the right of Indigenous peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and to privacy.[4]

D.   **Research Data Management (RDM)-** The storage of access to and preservation of data produced from one or more investigations or a program of research. Research data management practices cover the entire data lifecycle, from planning the investigation to conducting it and backing up data as it is created and used to preserve data for the long term after the research has concluded. It also includes data-sharing, where applicable. [5]

E.   **Data Management Plan (DMP)-** A data management plan 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

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[2] Adapted from: CASRAI Definition of Data Lifecycle, DataOne, & Alliance-Portage

[3] Government of Canada (2021). Tri-Agency Research Data Management Policy, Frequently Asked Questions.

[4] Raine, S. C., Kukutai, T., Walter, M., Figueroa-Rodrigues, O. L., Walker, J., & Axelsson, P. (2019). Indigenous data sovereignty. In *The State of Open Data* (p. 300). https://doi.org/10.5281/zenodo.2677801

[5] Government of Canada (2021). Social Sciences and Humanities Research Council Definition of Terms.

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 [6]

F. **Data Management Plan (DMP)-** A data management plan 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.[7]

G. **FAIR**: A set of principles to improve the findability, accessibility, interoperability and re-use of research data.

H. **CARE:** A set of principles for advancing Indigenous innovation and self-determination through collective benefit, authority to control, responsibility and ethics.

I. **OCAP®:** A set of principles specific to First Nations data sovereignty defining ownership, control, access and possession.

J. **TCPS2:** The Tri-Agencies policy statement on Ethical Conduct for Research Involving Humans.

III. Scope

The Institutional RDM Strategy applies to **all** researchers at SMU, including students, staff, and faculty across research disciplines engaged in research.

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[6] Government of Canada (2021). Tri-Agency Research Data Management Policy, Frequently Asked Questions.
[7] Government of Canada (2021). Tri-Agency Research Data Management Policy, Frequently Asked Questions.

The Institutional RDM Strategy is a living document that aims to promote the implementation of [responsible research data management practices](#)[8]. It also seeks to systematically identify and address gaps and challenges in RDM-related infrastructure and practices that will better support researchers and research staff.

IV. Indigenous data sovereignty

Saint Mary's University acknowledges the profound tension between western and Indigenous ways of knowing. The University respects and recognizes the sovereignty of Indigenous Peoples, Nations and communities over research data collected and produced by and with Indigenous researchers and communities. Indigenous peoples and communities have the right to control data from and about them.

According to the Tri-Agency, "data related to research by and with the First Nations, Métis, and/or Inuit whose traditional and ancestral territories are in Canada must be managed in accordance with data management principles developed and approved by these communities, and on the basis of free, prior and informed consent." Saint Mary's University respects and understands that each Indigenous Nation and community will have different requirements regarding research data generated through partnerships. We honour different data management models, such as the First Nations Information Governance Centre's [OCAP® Principles](#), and the Global Indigenous Data Alliance's [CARE Principles](#). We are committed to upholding and respecting Indigenous data sovereignty principles in all facets of our research activities.

V.   Oversight

The Associate Vice-President, Research and Dean of the Faculty of Graduate Studies (FGSR) is responsible for developing and reviewing the Institutional RDM Strategy and implementing responsible research data management policies and processes.

The FGSR has formed the RDM Strategy Committee comprising members from FGSR, the SMU Patrick Power Library, the OICE, the SMU REB, the SMU ACC, the SMU EIT, and faculty researchers. The SMU Patrick Power Library is the coordinating department for RDM support services, while the other members were consulted in developing the strategy. The FGSR is committed to involving other university

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[8] Government of Canada (2022). Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 (2022). Retrieved from https://ethics.gc.ca/eng/tcps2-eptc2_2022_chapter5-chapitre5.html

departments in implementing RDM practices and recognizing their value and integral role in the process. We will engage additional representatives from the SMU research community as needed.
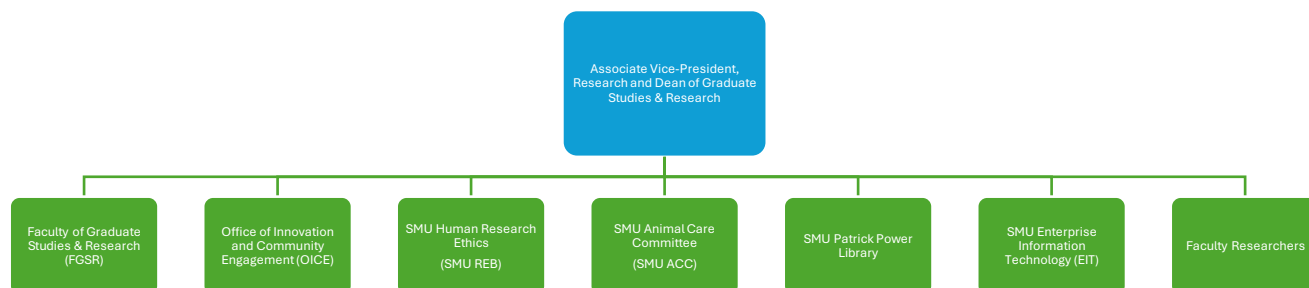
Figure 1. Saint Mary's University RDM Strategy Committee

VI. Strategy and Road Map

1. Raise Awareness				
Goals	**Current Practice & Supports**	**Gaps**	**Timeline**	**Responsibility**
1.1 Identify stakeholder communities on campus	RDM consultations were conducted with representatives from the FGSR, Patrick Power Library, IT, and faculty members.	RDM Advisory/Implementation Committee to be formed.	Ongoing	Patrick Power Library, FGSR to direct researchers to the resources available at the Library.
1.2 Recruit local champions to help promote the value of RDM and engage with various communities	The local champions are representatives from various offices (FGSR, OICE, IT), the Patrick Power Library, and faculty members.	Representation from the Indigenous community, staff of various research institutes, and graduate students.	Ongoing recruitment	Library, FGSR
1.3 Develop awareness materials and resources for different communities	[RDM website](#) and subject guide available with links to Portage resources, video for the DMP Assistant, Dataverse resources.	Provide centralized support to help researchers determine what they need and where they can get RDM support.		Library
1.4 Determine and apply the appropriate delivery mechanisms for outreach	Currently provide outreach when requested and during regular events held by the Library.	Articulate support unit roles in RDM, e.g. SMU Library, FGSR, and IT.		Library, FGSR (to post RDM information in the monthly newsletter linking the RDM resources on the FGSR website)
1.5 Participate in the Tri-Agency consultations around RDM	Representatives from the Library and FGSR participated in the Tri-Agency consultations around RDM.	None identified.	Completed and ongoing as required.	Library, FGSR

1.6 Participate in national RDM consultations and events	Attendance by Associate Vice-President, Research, and Library representatives.		Ongoing as required.	Library, FGSR, Faculties

2. Assess Institutional Readiness

Goals	Current Practice & Supports	Gaps and Required Resources	Timeline	Responsibility
2.1 Undertake a survey of institutional data assets and data management practices on campus				Library and SMU REB
2.2 Evaluate existing RDM services			Ongoing	Library, FGSR
2.3 Institutional support and training				Library, FGSR/SMU REB
2.4 Data repositories and archiving				Library
2.5 Institutional policies, guidelines and/or procedures	There are policies related to RDM, but not specific to RDM.	Development of RDM policies that are consistent with ethical, legal, and commercial obligations, as well as Tri-Agency requirements and other relevant policies. Ensure RDM policies and practices are respectful and supportive of Indigenous data sovereignty.		FGSR

Appendix A: Relevant Policies and Processes

Internal Policies and Processes

SMU Grants and Research Policies
SMU Research Ethics Board
SMU Animal Care Committee

External Policies and Processes

Bill C-15: An Act respecting the United Nations Declaration on the Rights of Indigenous Peoples, Government of Canada

CARE Principles for Indigenous Data Governance, Global Indigenous Data Alliance

CIHR Research Data Management Learning Module, Government of Canada

National Inuit Strategy on Research, Inuit Tapiriit Kanatami

Principles of Ethical Métis Research, National Aboriginal Health Organization Métis Centre

SSHRC Research Data Archiving Policy, Government of Canada

The First Nations Principles of OCAP, First Nations Information Governance Centre

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2), Government of Canada

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2) Chapter 9, Government of Canada

Tri-Agency Framework: Responsible Conduct of Research, Government of Canada

Tri-Agency Research Data Management Policy, Government of Canada

Tri-Agency Statement of Principles on Digital Data Management, Government of Canada