NWP Research Data Management Strategy

Northwestern Polytechnic (NWP) is committed to supporting research and researchers through responsible research data management practices and through practices that respects Indigenous data sovereignty. The Polytechnics research data management follows the following: the FAIR Principles, the First Nations Principles of OCAP®, and the CARE Principles for Indigenous Data Governance, as well as the principles of the United Nations Declaration on the Rights of Indigenous Peoples.

This Data Management Strategy was developed with the support of members from Applied Research, Learning Commons, the Research Ethics Board, and the National Bee Diagnostics Centre.

Accountability and Implementation

Northwestern Polytechnic acknowledges the importance of setting up institutional supports' researchers can access in order to ensure data is gathered, stored and disseminated in compliance with the Tri-Agency requirements and with the requirements of any funding body. NWP closely follows the follow Tri-Agency documents: the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – 2nd Edition, the Tri-Agency Framework: Responsible Conduct of Research, and the Tri-Agency Statement of Principles on Digital Data Management.

Research Data Management and Related Policies at NWP

Definitions, standards of practice, and procedure for the creation of this plan was completed in accordance with the Government of Canada, Research Data Management.

Research data management (RDM) includes the collection, storage, preservation and, where appropriate, access to data produced from a given investigation. 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, and long-term preservation of data after the research investigation has concluded. (Government of Canada, 2018, *FAQs Tri-Agency research data management policy*, 1)

RDM is important because:
o   It allows Canadian researchers to access the most current research information in their fields
o   It allows for better collaboration
o   Having accessible research data benefits all Canadians (both non-profit and private sectors) because it helps them to advance critical social and commercialization goals
(Government of Canada, 2018, *FAQs Tri-Agency research data management policy*, 1).

The following plan was developed through research of university level and special research institutions which have developed strong research data management practices, as well as the application of such practices at the polytechnic level. The Research Data Management Policy released by the Tri-Agency in 2021 states that each post-secondary institution must provide a plan that includes the following elements: institutional recognition that "data is an important research output", plans to support researchers "that are consistent with ethical, legal and commercial obligations, as well as Tri-Agency requirements"; data management promotional plans to researchers, staff and students; identifying who and how the institution is going to support all researchers in their data management, supporting access to digital repositories, recognition and action towards respectful and collaborative data management when "created in the context of research by and with First Nations, Metis, and Inuit Communities". (Government of Canada, 2018, *FAQs*)

Getting to our Ideal State

Creating Awareness

        Identifying stakeholders and providing appropriate resources and materials is essential in delivering effective RDM services. Northwestern Polytechnic has the pleasure of supporting data from internal researchers, supporting the research and function of the National Bee Diagnostic Centre, and from external stakeholders such as those from Industry.

        The Applied Research Centre is the coordinating unit for research services at this time. The Learning Commons has plans to coordinate with Applied Research to provide increased support for because there are librarians and staff with skills and responsibilities related to: copyright, data, scholarly communications, RDM, and storage and preservation technologies. Our Information Technology department plays a vital role in software and hardware support, and ensuring data storage and other aspects of research are kept inline with the appropriate regulations.

Promotion: Our two new areas, the Centre for Teaching and Learning, and the Centre for Entrepreneurial Excellence are perfectly placed to invite industry researchers to work with NWP and to support Faculty and Staff in all aspects of managing research data

Assessing NWP's readiness and capacity for RDM

Our goal is to ensure that all stakeholders involved in the research process are aware of the supports and services available to them, that the institution has the infrastructure and other resources to ensure ongoing support and the ability to ensure all requirements from funding and regulatory bodies are met.

In order to identify our current state of readiness, librarians will work with Applied Research to identify current partnerships and resources, and consider ways of expanding access and support tailored to our stakeholders. Part of this assessment will be to identify appropriate outreach strategies.

This will take approximately 1-2 years to identify, assess and apply.

Clear and Identifiable RDM practices

RDM is required by some journals and funding agencies. In addition, Research Ethics applications require some components of RDM. NWP has the following policies in place that refer to the secure and legal storage of data at this institution: *Ethics and Accountability, Intellectual Property and Ownership, Integrity in Research and Innovation*

To ensure consistent and quality practices, NWP will want to develop additional policies related to RDM. Some of these policies may be related to the data repository and include data quality and standards, data retention, and long-term data preservation. This needs to take into consideration external researchers, faculty and staff research, as well as unpublished student research created for our Student Research Conference and assignments containing survey information or other sensitive data.

Some gaps in policy can be filled by continuing to work with regional and national groups who are collaboratively developing resources, services, infrastructure and policy related to RDM, and with those leading Indigenous Data Governance initiatives. The Librarians and Research Managers are members of several of these groups and are the institutional representatives.