

Western University Draft Institutional Strategy on Research Data Management

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Importance of Research Data and Research Data Management

Western University recognizes the importance of research data as a key research resource, and an integral part of the generation of new knowledge and insight. Data should be managed securely, ethically, and in a way which facilitates transparency of research results and replicability of research.

In addition, Western University recognizes that well-managed research data can be a significant research *output*. Research data that have been published with standards-compliant documentation serve as direct documentation of research results and can provide an important teaching tool and a cost-effective input for further research.

Western University recognizes that the [Tri-Agency Research Data Management Policy](#) is a significant and positive step towards research excellence through the promotion of sound research data management and stewardship practices. 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.¹

Background

Broadly defined, RDM refers to the activities researchers perform while working with research data, here defined as data collected and/or used as a part of the research process. It includes activities such as collecting, organizing, documenting and backing up data during a research project, preserving, archiving and sharing data after the research project is completed, and developing plans and processes to carry out these activities. Sound research data management means collecting, documenting, backing up and preserving data in a way that facilitates reproducible research, data security, and long-term usability of data.

In March 2021, the Tri-Agency adopted a [Research Data Management Policy](#) that requires institutions eligible to administer Tri-Agency funds to create an [Institutional Strategy on Research Data Management](#), publicly post the strategy and notify the agencies when completed.

In anticipation of this requirement Western University assembled a Research Data Infrastructures Working Group that commenced discussion in Spring of 2020. Our discussions and consultations have led to the development of this draft Institutional Strategy.

The vision of this strategy is to provide Western researchers with tools, infrastructure, support and policies that will enable them to conduct research to the “highest professional and disciplinary standards²” across the research life cycle. This includes ensuring that research data is managed in a way that is responsible, secure, allows for replication of research results, and follows the FAIR Guiding Principles³ for scientific data management and stewardship. The FAIR Principles specify that data should be Findable, Accessible, Interoperable, and Reusable, while also acknowledging that data should be “as open as possible and as closed as necessary⁴”.

Scope

Western University’s Institutional Strategy on RDM is intended to enable research data management excellence at all levels and across all disciplines. The strategy applies to members of the Western University community who conduct research that involves the collection and use of data as part of their role at Western University. The strategy acknowledges the diversity of models of research inquiry that exist and respects that there are legitimate differences in standards and needs for RDM across disciplines.

Data from or about human subjects needs to be treated with respect and ethical and confidentiality considerations will generally override other RDM concerns in the case of a conflict.

We also recognize that data related to research by and with Indigenous peoples needs to be managed in a way that reflects their sovereignty and right to self-determination. In agreement with the Tri-Agencies,

¹ <https://science.gc.ca/site/science/en/interagency-research-funding/policies-and-guidelines/research-data-management/tri-agency-research-data-management-policy>

² https://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html

³ <https://www.go-fair.org/fair-principles/>

⁴ <https://direct.mit.edu/dint/article/2/1-2/47/9998/The-A-of-FAIR-As-Open-as-Possible-as-Closed-as>

we believe that “a distinctions-based approach is needed to ensure that the unique rights, interests and circumstances of the First Nations, Métis and Inuit are acknowledged, affirmed, and implemented.”⁵

Development of Research Data Management Services at Western

RDM has been an issue of concern at Western for some time. In 2017, Western Libraries and Western Research established a RDM subcommittee, which issued a [report](#) in February of 2018. In this report the subcommittee published a [survey of RDM practices](#) by Western faculty, which demonstrated a clear need for better institutional support for RDM, particularly in the face of an emerging Tri-Agency RDM mandate. Furthermore, the subcommittee identified a few specific areas of need: education on data management plans, software and hardware support for researchers, establishing a data sharing culture at Western, and providing venues for long term data storage.

The work of the subcommittee also revealed that input from additional stakeholders was required to successfully assess and address RDM needs at Western. Extended and/or deepened engagement with Western Research and Western Technology Services (WTS) led to the establishment of the Research Data Infrastructures Working Group dedicated to continuing to investigate RDM matters on behalf of the Vice-President (Research) and the Vice-Provost and Chief Librarian.

Consultation

Stakeholders in RDM at Western include all Western community members who participate in, carry out or support research involving data, as well as members of affiliated colleges, hospitals and community groups who act as research collaborators, research participants, and/or consumers of research.

Stakeholders in supporting and overseeing research management and providing infrastructure include:

- Western Research including the Medical and Non-Medical Research Ethics Boards
- Western Libraries
- Western Technology Services
- Chief Data Officer
- Chief Digital Officer
- Legal Counsel at Western University

This strategy has been shared for feedback and comment from the Western community. Formal and informal consultation processes will continue to gather input from various stakeholder groups. The University has retained a consulting firm to manage and guide this process and the results will inform the development of this strategy.

Institutional Support for Research Data Management

Awareness-Raising

Outreach to keep Western community members informed on matters relating to RDM will be done through multiple channels to reach and educate as many constituents as possible.

A central web site (rdm.uwo.ca) will be maintained to share the living Institutional Strategy and inform Western community members of their responsibilities under the [Tri-Agency Research Data Management Policy](#). The website will also provide information on research data management best practices, link to

⁵ https://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html

local resources to support best practices, and allow researchers to book consultations to discuss their data management needs.

Promoting and Supporting RDM Practices

RDM support is provided by multiple groups across campus, including Western Libraries, Western Research, departmental Research Officers, Western Technology Services and the offices of the Chief Digital Officer and Chief Data Officer. To coordinate these groups and to build on and continue the relationships we have developed, we are forming a **Community of Practice on RDM at Western University** with leadership from Western Libraries. The Community of Practice will provide a forum for sharing information on emerging RDM needs and practices and will advise on and help direct the development and deployment of RDM supports, including but not limited to the ones listed here.

- Support for writing Data Management Plans will be provided to researchers through [DMP Assistant](#), with consultation and administrative support from Western Libraries. Templates providing Western-specific guidance to help researchers find appropriate local resources to manage their data are being developed and will be reviewed and updated regularly based on feedback from stakeholders.
- Support for sharing and archiving non-sensitive data is offered through our institutional data archive [Borealis](#), hosted on Canadian servers at Scholar's Portal. Western Libraries will consult on and refer researchers to other options which may better accommodate specific types of data as needed, such as the Federated Research Data Repository for larger datasets ("big data").
- In consultation with Research Ethics, Western Libraries has approved a pilot project to provide local storage for data that needs to be archived without sharing and will develop procedures to provide secure space for long term archiving of sensitive data.
- Infrastructure and support for active data management will be implemented by Western Technology Services under the direction of the Chief Digital Officer.

Staffing

A Research Data Management Librarian role was created and filled to provide leadership within Western Libraries in support of RDM. As demand for data management support grows, staffing needs will be reviewed.

Training

Western Libraries provides training and support for RDM through workshops and consultation. Some workshops are targeted at newer faculty and graduate students and introduce the basic principles of RDM, explain Tri-Agency policy requirements, and demonstrate tools and resources for RDM available at Western. Other specialized workshops on topics including Data Management Plans, Data Archiving, and Active Data Management are offered on a rotating basis. Consultation is available by appointment.

Online, self-paced training modules will be developed and updated to provide point of need education and guidance on specific topics including, but not limited to, the use of specific tools such as DMP Assistant and Borealis.

Indigenous Data Considerations

Western University is located on the traditional territories of the Anishinaabek, Haudenosaunee, Lunaapeewak, and Chonnonton Nations. Western University recognizes the specific rights, interests,

priorities and concerns of all Indigenous peoples with respect to the collection, organization, processing, and preservation of data from or about Indigenous peoples, communities, and lands, and we respect Indigenous data sovereignty with respect to the collection, use, ownership, and storage of these data.

Indigenous research must be grounded in relationships with Indigenous communities and Indigenous peoples, who have been researchers since time immemorial. We acknowledge the validity of Indigenous epistemologies and ontologies and the leadership of Indigenous researchers in conducting research related to Indigenous peoples. We also recognize that there are many Indigenous communities, peoples, cultures, languages, and protocols and therefore no singular approach can be applied. We commit to the recognition of Indigenous Data Sovereignty and recognize that each researcher has an individual responsibility to respect and adhere to nation and community specific protocols.

Western University acknowledges our institutional responsibility to respect and protect Indigenous knowledge and data, and to build capacity for doing this work. We will work with our indigenous partners to explore how we can best support Indigenous Data Sovereignty as this living strategy evolves.

Ethical and Legal Considerations

Western University's two Research Ethics Boards, advised as needed by the Research Data Management Librarian, will continue to oversee all aspects of ethics as they relate to research data. Western Research and WORLDdiscoveries will advise on commercial obligations and any legal questions will be referred to the Office of the University Legal Counsel.

Oversight and Review

This Institutional Strategy is a living document and will be reviewed and updated on a regular basis as needs, practices, research infrastructure and tools and policies evolve. The current version is considered a draft and will not be finalized until consultations with stakeholder groups are completed.

Oversight of this strategy will ultimately rest with both the Vice-President (Research) and Provost & Vice-President (Academic).

Contact

Questions and comments about this strategy should be directed to rdm@uwo.ca.