

# UFV Research Data Management Strategy: Strengthening Research Excellence

2023-2026

*The University of the Fraser Valley acknowledges that we are situated on the unceded and traditional territory of the Stó:lō peoples upon whose lands we have the privilege to work, live, and share knowledge.*

## Background

In January 2021 the Tri-Agency released its Statement on the Principles on Digital Data Management<sup>1</sup> with the intent of making publicly funded research results as accessible as possible and to promote excellence in digital data management practices and data stewardship. In 2021, the UFV Research Data Management Working Group was created to respond to the requirements of the new Tri-Agency Research Data Management Statement. The Working Group is comprised of representatives from the Research Office, Library, and the Office of the Chief Information Officer. The Working Group used both the RDM Maturity Assessment Model in Canada and the UK Digital Curation Centre's Research Infrastructure to assess our institutional strategy.

## Purpose

The purpose of the UFV Research Data Management Strategy is to foster a culture that values RDM and develop capacity that supports researchers in adopting RDM best practices. UFV's initial focus will be to ensure that all Tri-Agency funded researchers have the tools and support to develop and implement data management plans that conform to the best practices of research data management.

## Importance of the UFV RDM Strategy

Best practices of research data management benefits researchers and students by increasing competitiveness in granting applications, safeguarding long-term preservation of data, ensuring consistency in data deposition and sharing, and increased accountability and transparency of data creation through the inclusion of metadata best practices.

As per UFV's Integrated Strategic Plan and the Strategic Research Plan, UFV is committed to:

1. The creation of knowledge and sharing that knowledge with the region's communities that we serve and knowledge seekers beyond our region.
2. The development of tools and infrastructure essential for researchers to conduct their activities in compliance with RDM best practices.
3. Ensure that students that engage in research and experiential learning are exposed to the best practices in RDM.

Research Data Management Plans enable data to be FAIR - findable, accessible, interoperable, and reusable.

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

## Scope of RDM Strategy

This strategy applies to all research and scholarly activities undertaken by employees and students of UFV and research conducted under the auspices of the University. The Strategy complements existing University policies including:

- Responsible Conduct of Research and Scholarship
- Human Research Ethics
- Intellectual Property
- Conflict of Interest

## Principles

This Strategy is aligned with UFV's values of Integrity, Inclusivity, Community, and Excellence and supports the FAIR Principles<sup>2</sup> to make research data Findable, Accessible, Interoperable, and Reusable.

In addition, UFV recognizes the internationally endorsed CARE Principles for Indigenous Data Governance (Collective benefit, Authority to control, Responsibility, and Ethics), the First Nations Principles of OCAP<sup>3</sup> (Ownership, Control, Access, and Possession) and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) with particular emphasis on intellectual property as described in Article 31. UFV acknowledges Indigenous data sovereignty whereby research that is “conducted by and with First Nations, Metis, and Inuit communities, collectives, and organizations, these communities, collectives or organizations will guide and ultimately determine how the data are collected, used and preserved, and have the right to repatriate the data”.

This Strategy also supports the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans<sup>4</sup>.

## Oversight and Review

The RDM Strategy will be held by the Research Office and implemented by the Research Data Management Advisory Committee chaired by the Director of Research Services and Industry Engagement. The RDMAC will be comprised of representatives from faculty on the Research Advisory Council, the Library, and the Office of the Chief Information Officer. Progress of the strategy implementation will be reviewed three times each year by the RDMAC who will provide recommendations to the Associate Vice President of Research and Graduate Studies.

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<sup>2</sup> 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](http://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html)

<sup>3</sup> First Nations Information Governance Centre. The First Nations Principles of OCAP. Retrieved from <https://fnigc.ca/ocap-training/>

<sup>4</sup> [https://ethics.gc.ca/eng/policy-politique\\_tcps2-eptc2\\_2022.html](https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2022.html)

## The RDM Strategy Roadmap

### 1. Raise Awareness

- 1.1 Initiate the RDM Advisory Committee by recruiting faculty champions from the Research Advisory Council to join the current RDM Working Group and develop a Terms of Reference.
- 1.2 Develop awareness materials and resources for different research communities.
- 1.3 Facilitate information sharing meetings at Faculty Councils and Research Advisory Council.
- 1.4 Participate in Tri-Council and national consultations and events.

### 2. Building Capacity and Training

- 2.1 Provide tools and resources for researchers on Research Data Management available on the Library's LibGuide<sup>5</sup> for Research Data Management.
- 2.2 Facilitate training workshops for researchers and students.
- 2.3 Coach researchers in data management during grant applications.
- 2.4 Identify gaps through consultation on a regular basis.

### 3. Formalizing Research Data Management

- 3.1 Integrate RDM Plans with Research Ethics applications process.
- 3.2 Create streamlined processes for accessing archives and depositories.
- 3.3 Update policies, processes, and procedures to support research data management.

## Definitions

The following definitions are useful to ensure a shared understanding of the key terms in this Strategy and commonly used in supporting documents. The definitions were obtained from the Tri-Agency Research Data Management Policy.

### Data

Data are facts, measurements, recordings, records, or observations collected by researchers and others, with a minimum of contextual interpretation. Data may be in any format or medium taking the form of text, numbers, symbols, images, films, video, sound recordings, pictorial reproductions, drawings, designs or other graphical representations, procedural manuals, forms, diagrams, workflows, equipment descriptions, data files, data processing algorithms, software, programming languages, code or statistical records.

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<sup>5</sup> <https://libguides.ufv.ca/c.php?g=702119&p=4989726>

## **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, 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.

## **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.

## **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.

## **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. Ideally, data deposits will include accompanying documentation, source code, software, metadata, and any supplementary materials that provide additional information about the data, including the context in which it was collected and used to inform the research project. This additional information facilitates curation, discoverability, accessibility, and reuse of the data.

## Metadata

All research data should be accompanied by metadata that accord with international and disciplinary best practices to enable future users to access, understand and reuse the data. Quality metadata are essential for making research data findable, and for the systems that use or mine the data. Standards are diverse and vary across disciplines, but metadata generally state who created the data and when, and include information on how the data were created, their quality, accuracy and precision, as well as other features necessary to enable understanding and reuse. When possible, common metadata standards should be adhered to.