Research Data Management (RDM) Brown Bag Information Series

Developing a Data Management Plan

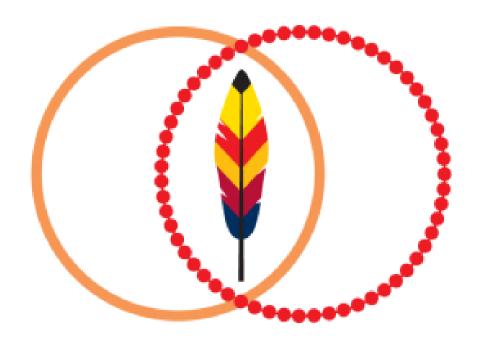
February 15, 2023





Land acknowledgement

Queen's University is situated on traditional Anishinaabe and Haudenosaunee Territory. I am grateful to live, learn and play on these lands. I acknowledge and respect, the Anishinaabe and Haudenosaunee peoples and I am committed to taking responsibility for redressing the injustices that enabled me to be here today.



Hello! Meet the Queen's Data Champions



Alicia Cappello Engineering & Science Librarian, Queen's University Library



Meghan Goodchild Research Data Management Librarian, Queen's University Library



Elise Degen Communications & Relations, Centre for **Advanced Computing**



Matt Clapp Manager, Data Platform Services, Information **Technology Services**

Rebecca Pero Information and Project Coordinator, Vice-Principal Research Portfolio

Agenda

1. Recap:

- a. Research Data Management (RDM)
- b. Tri-Agency RDM Policy
- c. Queen's Institutional Strategy

2. Data Management Plans (DMP):

- a. What is a DMP?
- b. DMP Components
- c. DMP Assistant
- 3. Resources
- 4. Q&A

Recap of Research Data Management



Research Data Management (RDM)

Processes applied throughout the **lifecycle of a research project** to guide the collection, documentation, storage, sharing, and preservation of research data.



Why is RDM important?

RDM practices are integral to conducting responsible research and can help you save resources by ensuring your data are complete, understandable, and secure.

Tri-Agency RDM Policy Pillars







Institutional Strategy

Completed by March 2023

Data Management Plans

Implementation begins Spring 2022

Data deposit

Phased implementation beginning March 2023







Queen's University

Dataverse Collection

Queen's and KHSC Institutional RDM Strategy











The first draft of Queen's Institutional Strategy is now available, and we invite feedback from the research community.



www.queensu.ca/vpr/resources/RDM/strategy

Data Management Plans



Grants Requiring a Data Management Plan (DMP)

Data management plans (DMPs) are required for <u>applications to the following Tri-Agency grants</u>, starting in late 2022:

CIHR

- Network Grants in Skin Health and Muscular Dystrophy [NOW CLOSED]
- Virtual Care/Digital Health Team Grants [EARLY 2023]
- Data Science for Equity [EARLY 2023]

NSERC

<u>Subatomic Physics Discovery Grants</u> (individual and project) [SUMMER 2023]

SSHRC

Partnership Grants Stage 2 [SUMMER 2023]

Data Management Plans - Lifecycle



What is a **Data Management Plan** or DMP?

It's a formal, but living, document that outlines:

- 1. The strategies and tools being used to manage data during the active phases of research, AND
- 2. The mechanisms to be used to preserve and share research data once the project is completed.

The DMP is considered a **living** document because it can, and should, be modified throughout the life a project when changes occur. It is **not** set in stone.

Sources: Portage DMP Primer

BENEFITS

Data Management Plans - Benefits/Considerations



- Compliance with policy
- Proactive / Forward-thinking
- Identify opportunities, challenges, and risks
- Engage partners
- Improved efficiency / increased productivity
- Documentation everyone is on the same page

CONSIDERATIONS

May take more time at the start (but saves time later)

- Should review DMP throughout project
- Considered as an "administrative" exercise
- No guarantee of good data management
- Often not required after funding received

Data Management Plans - Indigenous Data Sovereignty

"The agencies recognize that a <u>distinctions-based approach</u> is needed to ensure that the <u>unique rights, interests, and circumstances</u> of the First Nations, Métis, and Inuit are acknowledged, affirmed, and implemented."

"For research conducted by and with First Nations, Métis, and Inuit communities..., <u>DMPs must</u>

<u>be co-developed with these communities</u>..., in accordance with RDM principles and DMP

formats that they accept. <u>DMPs...should recognize Indigenous data sovereignty</u> and include options for renegotiation of the DMP."

Sources: <u>Tri-Agency RDM Policy</u>

Data Management Plans - Components

What are the components of a Data Management Plan (DMP)?

- 1. Data Collection
- 2. Documentation and Metadata
- 3. Storage and Backup
- 4. Preservation
- 5. Sharing and Reuse
- 6. Responsibilities and Resources
- 7. Ethical and Legal Compliance

DMP Assistant





Home

Public DMPs

DMP Templates

About

Welcome to DMP Assistant.

The DMP Assistant is a national, online, bilingual data management planning tool developed by the Digital Research Alliance of Canada (the Alliance) in collaboration with host institution University of Alberta to assist researchers in preparing data management plans (DMPs). This tool is freely available to all researchers, and develops a DMP through a series of key data management questions, supported by best-practice guidance and examples.

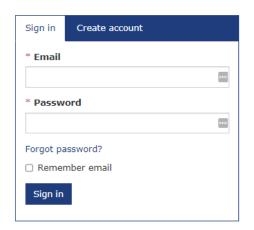
DMPs are one of the foundations of good research data management (RDM), an international best practice, and increasingly required by institutions and funders, including the Canadian Tri-Agencies as outlined in their Research Data Management Policy.

Getting started:

- Brief Guide Data Management Plans
- . Brief Guide Create an Effective Data Management Plan
- Primer Data Management Plan
- How to Manage Your Data
- Tutorial Videos:
 - Introduction to Data Management Plans (DMPs)
 - Introduction to DMP Assistant
 - · Managing DMPs with DMP Assistant
- Webinars:
 - Support Your Research with DMP Assistant 2.0
 - Support Your Research with Data Management Planning

For more resources and training materials spanning the entire research data life cycle, see the Portage Network Training Resources.

The DMP Assistant was adapted from the Digital Curation Centre (DCC)'s DMPonline tool, and uses the DMP Roadmap codebase developed by DCC and the University of California Curation Center (UC3).



A型 Language ▼

- Free and easy to use
- Uses Canadian terminology
- Maintained by University of Alberta
- Can share with others
- Export options
- Can access anywhere
- Public DMPs & templates

Note: DMP Assistant will be unavailable Feb 22nd from 8am-5pm EST for upgrade to version 3.1.0.

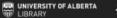


Digital Research **Alliance** of Canada

Alliance de recherche numérique du Canada











DMP Assistant – Exemplars & Templates

A

Digital Research Alliance of Canada

Alliance de recherche numérique du Canada

Exemplars and Templates for the DMP Assistant are available on the Digital Research Alliance of Canada's website and Zenodo.



Data Management Plan Exemplar #3: Mixed Methods

Fictional Exemplar

Administrative Details

Project Name: Portage DMP Exemplar - "Mixed Methods"

Project Identifier: 8675309

Grant Title: 12345

Principal Investigator / Researcher: James Doiron

Project Data Contact: James Doiron (jdoiron@ualberta.ca)

Description:

This is a fictional exemplar data management plan focusing on mixed methods research (survey & interviews/focus groups). This exemplar DMP was developed in February 2020 by James Doiron (Co-chair, Portage DMP Expert Group) for educational and guidance purposes. For these purposes, the premise of the project being described is that the study topic of interest is not sensitive in nature, and that participants are consenting for their de-identified information (data) to be deposited for long-term preservation, discoverability, and open access.

Institution: University of Alberta



Data Management Plan Template:

Mixed Methods (Surveys & Qualitative Research)

Abstract

This mixed methods data management plan template was developed for use within the Portage DMP Assistant and is meant to assist researchers conducting mixed methods research (e.g., surveys and qualitative interviews/focus groups) in developing high quality data management plans to support their research. The template consists of a number of categories, questions, and customized guidance that relate directly to mixed methods research.

Administrative Details

Template Author(s): James Doiron, University of Alberta

Published: March 2, 2021

DOI: 10.5281/zenodo.4573319

Contact: Portage Network - portage@carl-abrc.ca, portagenetwork.ca

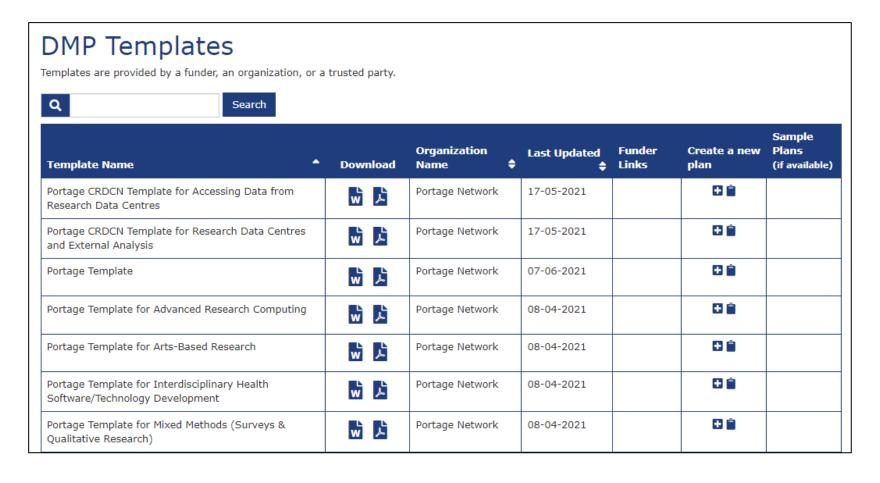
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DMP Assistant – Exemplars & Templates

<u>Templates</u> are also available on the <u>DMP Assistant</u> website and can be used within the tool.





DMP Assistant Demo - Fictional Scenario - Oils Sands & Birds

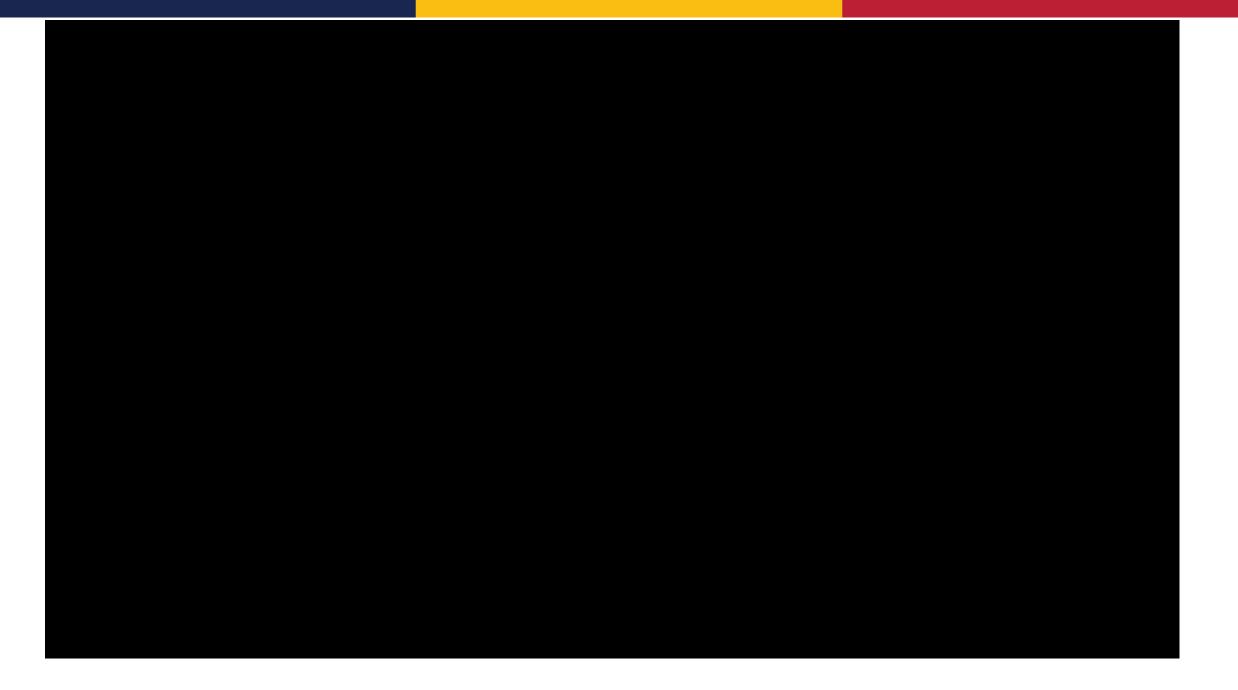
WHAT: Dr. Jasmine Riley is starting a new project to observe the birds in and around the oil sands in Fort McMurray, Alberta. Dr. Riley will be submitted a funding application to NSERC in 2023 for this project and is required to include a DMP.

HOW: Birds will be observed using two methods: (1) visual observations recorded via online form on a tablet, and (2) panoramic photographs taken with a digital SLR camera using specialized equipment. The online form (which has yet to be developed) will be created and maintained by grad students. Both types of observations will be conducted by undergrad and grad students.

WHERE/WHEN: There will be 10 locations within the oil sands where observations will take place over the 5-year project period. Each of the 10 locations will be observed by 2 students for a period of 15 minutes, twice per weekday (AM and PM) over the course of 4 months (May through August) for a total of 10 locations x 2 students x 2 obs/day x 10 weekdays x 8 bi-weekly periods = 3,200 observation **periods** per year, or 16,000 observation **periods** for the life of the project. It is likely that dozens of bird sightings will be observed during each 15-minute period.

WHO: The Principal Investigator is Dr. Riley. Her lab will have 2 grad students per year, 10 undergrad students per year, and 2 lab assistants for the life of the project. Some of the students may return for multiple years.

Dr. Riley, as the PI, is the overall decision-maker for the project. Grad students will develop the observation protocols, the online form, find the observation locations and create the schedule, review the data collected, and troubleshoot data-related problems. Undergrad students will conduct the majority of the visual and photographic observations and may need to make corrections to data they've entered. The lab assistants will be responsible for creating and maintaining access to the data.



Questions, Feedback & Resources



Questions?



Please feel free to contact us if you have additional questions

Alicia Cappello, Engineering & Science Librarian – <u>alicia.cappello@queensu.ca</u>

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Feedback Survey

Your voice matters! Please help us plan for future sessions by telling us how we did today! Click the link below or scan the QR code to provide feedback!

https://tinyurl.com/R4R-RDM-Feedback





RDM Community of Practice

Are you interesting in joining a Community of Practice at Queen's that's focused on research data management?

If so ... please provide your name and email address <u>via this link</u> or by scanning the QR Code to join the community and learn more.







Next in series...

Don't miss the opportunity to join the <u>Queen's Data Champions</u> (qDC) for session 3 of the RDM brown bag informational series.

Register in advance to secure your spot in-person or online:

Session 3: <u>Deposit Your Research Data in a Repository</u> (March 22, 12:00-1:00PM)

Learn about the benefits and considerations around depositing your research data into a repository.

Featuring special guest Dr. Robert Montgomerie, Professor Emeritus of Biology and Data Editor for the American Naturalist

RDM Resources @ Queen's

Policies

- Tri-Agency <u>Research</u>
 <u>Data Management</u>

 <u>Policy</u> (2021)
- Tri-Agency <u>RDM</u>
 <u>Policy FAQs</u>
- Tri-Agency
 <u>Statement of</u>
 <u>Principles on Digital</u>
 <u>Data Management</u>
 (2016)

Tools

- DMP Assistant
- re3data.org
- Queen's Dataverse
 Collection in Borealis
- <u>Borealis Demo</u>– Try it out!
- FRDR

Resources

- Queen's Library RDM Guide
- FAIR principles
- The First Nations
 <u>Principles of OCAP</u>®
- The <u>CARE Principles</u> for Indigenous Data Governance
- <u>CARL YouTube</u> <u>Channel</u>

Summary resource document: https://guides.library.queensu.ca/rdm/

Funding Acknowledgement

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Digital Research Alliance de recherche numérique du Canada