UVic RDM Strategy 2023

Developed by cross-campus working group:

- Office of Research Services
- Research Ethics
- UVic Libraries
- UVic Systems
- Privacy and Access Information Office

Consultations 2021-2022:

- Research Computing Advisory Committee
- Office of the VP Research and Innovation
- General Researcher Town Hall
- Faculty Grants Officers
Data Curation

**Tri-Agency Requirement:** Researchers should describe, organize, and document data in ways that can be understood beyond a given research team. Data Curation is the documentation, description, and management of research data that adds value to research by optimizing datasets for current use and future discovery and reuse.

**Institutional support:** UVic Libraries will provide curation training for research teams, including guidance on file naming, file organization, file versioning, and discipline-specific metadata schemas. When depositing research data into Dataverse, the Data Curation Librarian will curate and review the dataset according to the [Dataverse Deposit Guidelines](#). For more information see the UVic Libraries’ [RDM Guide](#).
RECOMMENDATIONS FOR BUILDING RDM CAPACITY

1. We recommend that the VPRI and the VP Indigenous work together to lead the implementation of structures and processes to improve support and clarity for researchers working with Indigenous data, and to forward the goals of Indigenous Data Sovereignty.
UVIC RDM SERVICE PROVIDERS

- Data Management Plans - Libraries, Research Computing
- Managing Indigenous Data - Ethics, CIRCLE
- Managing Sensitive Data - Ethics, Research Partnerships, RC
- Data Licensing Agreements - Research Partnerships
- Data Storage - Research Computing
- Data Curation - Libraries
- Data Analysis - Research Computing
- Data Deposit - Libraries
- Data Publishing & Sharing - Libraries, Research Computing
GRANTS REQUIRING DATA MANAGEMENT PLANS

• **CIHR:** Network Grants in Skin Health and Muscular Dystrophy; Data Science for Equity; Virtual Care/Digital Health Team Grants (launch fall 2022, application deadline winter 2023)

• **NSERC:** Subatomic Physics Discovery Grants (Individual and Project, 2023)

• **SSHRC:** Partnership Grants Phase 2 (2023)
### ELEMENTS OF A DATA MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>Data Collection</th>
<th>Documentation and Metadata</th>
<th>Storage and Backup</th>
<th>Preservation</th>
<th>Sharing and Reuse</th>
<th>Sensitive Data and Legal Compliance</th>
<th>Responsibilities and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>what formats of data are you generating?</td>
<td>what metadata standards or tools will you use to describe your data?</td>
<td>where will you store and backup your data?</td>
<td>how will you preserve your data?</td>
<td>how will you make your data available to others?</td>
<td>how will you manage legal, ethical, and intellectual property issues?</td>
<td>what resources are needed to carry out these element?</td>
</tr>
<tr>
<td>how will you structure, name and version-control your files?</td>
<td>how will documentation be captured consistently?</td>
<td>what security elements are required?</td>
<td>where will you deposit your data for long-term storage?</td>
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</tr>
</tbody>
</table>

See the UVic DMP Template (LINK) for full list of questions
NATIONAL DATA MANAGEMENT PLANNING TOOL

Key features of the tool:

• Freely available to end users
• Shared access
• Supports cross institutional research collaborations
• Endorsed by the Tri-Agencies
• Expert guidance and examples
• “Clone” DMPs for similar projects
• Exportable (e.g. pdf, text, MS Word)
• Institution and discipline specific templates
UVic-specific guidance is embedded within the DMP Assistant when you login with UVic credentials.
LIBRARY SUPPORT FOR DATA MANAGEMENT PLANNING

Data Management Plans (DMP)

- **Online guide** that includes examples of DMPs from different disciplines
- Workshops offered twice a month, campus wide, through the Digital Scholarship Commons
- Asynchronous version available online ([LINK](#))
- Teaching DMP workshops upon invitation to faculty and department classes
- Consultations with Data Curation Librarian
ACTIVE DATA SUPPORT RESEARCH COMPUTING SERVICES

We consult on data management issues including:

• Storage
• Transferring and sharing data
• Machine learning and big data
• Versioning and updating datasets
• Complex data pipelines
• Data security requirements
• Data I/O
Canada’s Advanced Research Computing Platform

Digital Research Alliance of Canada

National Host Sites
- SFU
- University of Victoria
- Simon Fraser University
- University of Ontario
- University of Waterloo
- University of Toronto

Support Sites
- Calcul Québec
- ACENET
- McGill
STORING AND SECURING RESEARCH DATA

• Many different free storage resources available
  ▪ National resources: cluster, cloud, platform
  ▪ Local resources: share, cloud, and platform
• Connect with compute resources
• Secure digital and physical environments for your data
HELP WITH GRANT WRITING

Our team can advise on research project computing needs and costs.

- Available in-kind contributions
- Hiring personnel (e.g. for software development)
- Anticipating research computing needs
- Computing equipment purchases
- Software choices and licensing
- Language you can copy and paste
- Help with Data Management Plans
LEARNING OPPORTUNITIES

• Summer office hours: June and July, 10am-11:30am Wednesdays in CLE A025

• Training sessions:
  • Topics across advanced research computing
  • Getting started sessions for your research group
NEW RCS WEBSITE (LINK)

Research computing at UVic
Our team provides advanced research computing (ARC) services and infrastructure to UVic researchers across all disciplines. We also support researchers at institutions across the country and through international collaboration.
Storage overview

Finding storage for your research data can be overwhelming. You have so many things to consider and the options all vary. Don’t worry, we can help!

The best storage location for your research data depends on several factors, including:

- Size
- Sensitivity
- Access requirements
- Who it’s shared with

Plan a consultation to help you choose data storage solutions best suited for your research project.

Storage options

We partner with the Digital Research Alliance of Canada (the Alliance) to support research computing. Many services we offer are through the Alliance.

Here are some options available for UVic researchers to store their research data:

- UVic Research file shares are ideal for storing sensitive information and day-to-day work, up to 2TB.
- Nextcloud is great for sharing data with colleagues outside of UVic, up to 100GB.
- Research backup service lets you create archives of your valuable data.
Consultation

A consultation is the best starting point for anyone looking for research computing options. Whether you're just looking for data storage or you need custom research solutions, we can help. Consultation is free for UVic researchers across all disciplines.

How it works:

- You contact us and explain the computing needs for your research project.
- We meet with you and ask any follow-up questions necessary to determine the best available options.
- We explore these and return to you with our recommendations.

Consultation topics

Our team provides consultation on anything related to research computing. Some of our more common consultation topics are outlined below, but feel free to get in touch if you have different questions.

- Grant application review and in-kind contributions
- Research data management
- Recommending equipment and software
- Custom software development
- Sensitive data and security
Acknowledgements

We appreciate acknowledgement from projects that have received support from Research Computing Services when research is published. This includes support in the form of:

- Access to computing or storage infrastructure
- Software
- Consultation services

If you’ve published a paper or given a presentation that acknowledges RCS, please let us know! This helps us get funding to support your future research.

Statement of acknowledgement

"This research was enabled in part by support provided by Research Computing Services at the University of Victoria."

If you’ve used Alliance resources, please include them in the acknowledgement as well. You can find acknowledgement information on the Alliance website.

Grant support language

The following language is recommended for describing UVic’s research computing infrastructure and resources:

UVic Research Computing Services (RCS) assists researchers with their advanced research computing needs and complex computational workflows. In addition to managing and maintaining ARC systems including HPC clusters and clouds, research software, and ARC platforms and tools, the RCS unit supports, guides, mentors, and collaborates with researchers to excel at their research and push the boundaries of ARC computing. More specifically, RCS assists researchers with their hardware specifications and solutions architecture, data management plans, grant applications, survey and data collection designs, software development, ARC mentoring, and training and support for local, regional, and national digital research infrastructure. RCS also offers consultation services, with topics including data privacy, security, and sharing requirements.
NEWS AND CONTACT

- Events calendar: https://events.uvic.ca/systems/
- RCS mailing list
- arcsupport@uvic.ca
DATA DEPOSIT

• Support researchers with dataset curation
  • File naming, metadata standards, curation of specific file types
• Identify the right data repository for their research
• UVic Dataverse/Borealis - research data, metadata and code
FishSounds Website Data Repository  
April 11, 2023 - UVic Research Data Collection

FishSounds presents a compilation of acoustic recordings and published information on sound production across all extant fish species globally. We hope this information can be used to advance research into fish behavior, passive acoustic monitoring, and human impacts on underwater...

Search strategies for "Street-Involved Youth"  
April 6, 2023 - UVic Research Data Collection

Search strategies for database searches for APA/PsycINFO (EBSCO), Madeline (Oxid), Scopus (Elsevier), and Sociological Abstracts (ProQuest). To accompany the publication titled "Street-involved youth" which incorporated a scoping review methodology. The search strategies contained...

Material decomposition with a prototype photon-counting detector CT system  
March 25, 2023 - UVic Research Data Collection

This dataset contains raw projection and flat field scan data for CT reconstruction, as well as the fully normalized and reconstructed CT data for the manuscript. "Material decomposition with a prototype photon-counting detector CT system: expanding a stoichiometric dual-energy C...
DATA CURATION SUPPORT

When You Submit Dataset for Review:

• Check files, code, documentation
• Review file naming, organization
• Augment documentation and metadata description
• Transformation of file formats
• Review or create terms of use
LIBRARY INSTRUCTION

Data Management Plans (DMP)
• Offered twice a month, campus wide, through the Digital Scholarship Commons
• Teaching DMP workshops upon invitation to faculty and department classes
• Asynchronous version available online (LINK)

Other RDM-Related Workshops:
• Curating Datasets for Reproducibility
• Find a Home for Your Data (Data Repository Introduction)
• Managing Projects with Open Science Framework (OSF)
• NVIVO for Qualitative Research
• OpenRefine for Cleaning Data
• TidyData Workshop
https://libguides.uvic.ca/researchdata

Research Data Services

Guidance, tools, and training to support faculty and students working with research data.

Click the tiles for quick access to find what you need.

UVic Libraries can support your research data needs. Consult with our team to:

- Learn about best practices for managing research data
- Create a data management plan
- Find and access data sources
- Document data so that it is discoverable and reusable
- Store data in a suitable repository
- Share and promote data with DOIs

Please contact askus@uvic.ca with any questions.
March 22, 2023

Campus Strategies for Data Support Services
Welcoming the Second Cohort

Ruby MacDougall

What research data services do campuses currently offer and are researchers aware of them? What funding models can support the costs of centralized data services? Where in the larger organizational structure should these services reside? How can institutions make informed staffing decisions to ensure the expertise needed to support current and future services?

As the need for robust, effective, and coordinated research data services on college campuses grows increasingly acute, these are some of the key questions members in our latest cohort project, Building Campus Strategies for Data Support Services, are currently exploring. The two-year research and consulting project, undertaken in collaboration with 30 higher education institutions, tackles the decentralized nature of current data service offerings and the economic inefficiencies, duplication of services, and programming gaps that emerge as a result. Combining action-oriented research with individualized consulting, the project will develop strategies for coordinating campus data support services to better meet the current and future needs of researchers.
Thank you!