

Template - Institutional Research Data Management Strategy

Draft 4

Prepared by the Portage Institutional RDM Strategy Working Group

There is growing recognition in the research community and beyond of the importance of managing and providing access to research data, both for the purpose of verification and transparency of research as well as for reuse and integration of data for new discoveries and innovation. Over the past decade, the Canadian Association of Research Libraries (CARL) has been expanding its efforts to raise awareness of the benefits of research data management (RDM) and build capacity for research institutions to support RDM activities. In an effort to increase capacity across Canada for RDM, in 2015 CARL launched the Portage initiative, a national, library-based RDM network that is working in the higher education community to coordinate expertise, services, and technology in RDM.

In recognition of the benefits of RDM, organizations around the world are adopting policies and practices to improve the way research data is being managed. In Canada, the Tri-Agency published a [Statement of Principles](#) on Digital Data Management in spring 2016, which outlines expectations and responsibilities for RDM in the academic community. As a follow-up, the agencies are developing a draft RDM policy, for consultation with the community, which will likely propose a requirement that research institutions develop an institutional strategy for RDM.

Institutions play an important and expanding role in supporting RDM. Researchers need local support for the adoption of good data management practices. Additionally, collectively they can provide stable and sustainable solutions for preserving and providing access to research data. The following template has been produced by a multi-stakeholder working group convened by CARL and Portage to assist Canadian institutions in developing a strategy that will improve RDM at both the institution and within the research community more broadly and will lead to greater consistency across institutions. While it is recommended that institutions try to address each of the four major components included in the template, we recognize that each institution may do so with varying levels of depth and detail depending on the size and capacity of the institution.

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Definitions

The CASRAI dictionary provides the basis for a common understanding of the terms and definitions in this template.

CASRAI defines research data as “data that are used as primary sources to support technical or scientific enquiry, research, scholarship, or artistic activity, and that are used as evidence in the research process or are commonly accepted in the research community as necessary to validate research findings and results. All other digital and non-digital content have the potential of becoming research data. Research data may be experimental data, observational data, operational data, third party data, public sector data, monitoring data, processed data or repurposed data.”¹

Please refer to the [CASRAI dictionary](#) for definitions of the other terms used in this document.

Objectives

A RDM strategy will improve the institutional capacity to support researchers in the management of research data and adhere to the emerging Tri-Agency policy requirements. The specific objectives of a strategy are as follows:

- To promote research excellence within the university and research community through the adoption of good data management practices
- To support institutions in evaluating their current capacity in the area of RDM
- To identify what changes are needed in order to comply with funder policies and other RDM requirements
- To define a roadmap to develop institutional capacity for research data stewardship
- To ensure research data storage, retention and availability for access and reuse, where appropriate.

¹ CASRAI http://dictionary.casrai.org/Research_data

Strategy Components

There are four main components of an institutional strategy:

1. **Raise awareness:** Researchers' perspectives towards data sharing are varied, as are levels of expertise in terms of good data management practices. There is a need to raise awareness within the research community about the benefits of and best practices for good data management, as well as impending policy requirements.
2. **Assess institutional readiness:** To effectively manage data holdings and fully realize their potential, an organization must first be aware of the location, condition, estimated growth, and value of those data sets. Institutions can undertake a review the data landscape on campus, using one of a number of existing tools.
3. **Formalize RDM practices:** Formalizing the expected practices around RDM through the adoption of guidelines, procedures or policies is an important step in establishing an effective and sustainable approach to RDM at the institution. This will set the tone and underscore the institutional commitment and expectations. Depending on the institution, this could be implemented through a set of coherent guidelines or procedures, or through the implementation of a cohesive policy. Community engagement and consultation is a key aspect for getting buy-in for any new requirements.
4. **Define a roadmap:** A pragmatic roadmap will help institutions build capacity for RDM over the medium term. Best practices in RDM contribute to research excellence, greater efficiency and greater transparency of research. This will ensure that institutions are able to adhere to RDM requirements and continue to improve institutional capacity for RDM activities.

Template

For each of the four components below, the institution can develop a more detailed and concrete plans, which may include timelines, and the people or departments that will be responsible for carrying out the activities.

The activities in the template can be undertaken concurrently, with the exception of the roadmap, which will be based on information gathered in the assessment of institutional readiness activity.

For more information on each of these sections, please consult the accompanying [guidance document](#).

Institutional Research Data Management Strategy Template
1. Raise awareness
1.1 Identify stakeholder communities on campus
1.2 Recruit local champions to help promote the value of RDM and engage with various communities
1.3 Develop awareness materials and resources for different communities
1.4 Determine and apply the appropriate delivery mechanisms for outreach
1.5 Participate in the Tri-Agency consultations around RDM policy

2. Assess institutional readiness

2.1 Define the ideal state for RDM on campus

2.2 Undertake a survey of institutional data assets and data management practices on campus

2.3 Evaluate existing RDM services:

- Data management plans
- Institutional support and training
- Data repositories and archiving
- Institutional policies and procedures

2.4 Identify gaps in the existing RDM environment

3. Formalize RDM practices

3.1 Adopt policies, guidelines or procedures that advance good practices and assign responsibilities. These may address a variety of aspects of RDM such as:

- Data quality and standards
- Data access and sharing
- Data retention
- Long-term data preservation
- Data management plans
- Privacy ethical issues and intellectual property
- Other aspects: principles, scope, and monitoring and rewarding compliance

4. Define a roadmap

4.1 Based on the information gathered in the previous components of the strategy, a roadmap should include the following information such as:

- What are our current practices and what support do we have in place?
- What are the gaps?
- What must we do to meet any identified gaps?
- When will we do it?
- Who will take responsibility?
- What resources are needed for each item and how will we secure those resources?
- How will the roadmap be assessed over time and success be measured?