portage
SERVICES PARTAGÉS POUR LES DONNÉES DE RECHERCHE
SHARED STEWARDSHIP OF RESEARCH DATA

Guidance Document

INSTITUTIONAL RESEARCH DATA MANAGEMENT STRATEGY GUIDANCE V. 2.0

1. RAISE AWARENESS

Institutions should develop a communication plan highlighting the benefits of and requirements for research data management (RDM) to all campus stakeholders, taking into consideration factors such as discipline, career level, and department. This plan should address relevant issues through a range of outreach activities including but not limited to:

1.1. **Identifying stakeholder communities on campus**
1.2. **Recruiting local champions to help promote the value of RDM and engage with various communities**
1.3. **Developing awareness materials and resources for different communities**
1.4. **Determining and implementing appropriate delivery mechanisms for outreach**
1.5. **Participating in any future Tri-Agency RDM consultations**
1.6. **Approaches and methods may vary depending on the nature and size of the institution.**

Resources:

- Investigating the Link between Research Data and Impact. Australian Research Data Commons (2019)
- Research Data Management in Canada: A Backgrounder. CARL, CASRAI, LCDRI and RDC (2019). http://doi.org/10.5281/zenodo.3574685
- How and why you should manage your research data: a guide for researchers. JISC (2019)

- Starting the Conversation: University-wide Research Data Management Policy. OCLC (2013)
- Portage Training Resources

2. ASSESS INSTITUTIONAL READINESS

Institutions should undertake a review of the current data landscape on campus and assess existing capacity and resources for managing the research data produced.

2.1. Define the ideal state for RDM on campus

Define the ideal state for RDM on campus

- Defining an ideal state for RDM on campus can involve:
- identifying best practices across various departments and research communities
- identifying appropriate service models
- determining the costs and funding mechanisms necessary for comprehensive RDM services on campus.

Resources:

- Directions for Research Data Management in UK Universities. JISC (2015)
- Research Vision. JISC (2015)
- Using RISE, the Research Infrastructure Self-Evaluation Framework. DCC (2017)

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

In order to develop an accurate picture of institutional RDM readiness, it is necessary to engage in a period of information gathering and analysis. Institutions should be aware of the scale and nature of research data being produced and current data management practices among their researchers. By engaging with researchers in this way, institutions can understand the key RDM issues they face, and identify potential gaps in infrastructure and support.

Resources:

- Data inventory for research centres. Jisc and UK Data Archive (2012)
- Data Asset Framework. JISC, DCC and University of Glasgow

- Creating a data management framework. ANDS (2017)

2.3. Evaluate existing RDM services

Institutions should be aware of their own capacity to manage data, as well as current and possible future data storage needs. Assessing existing service provision and comparing it to the ideal state as defined in 2.1 will help institutions have a better understanding of their capacity to support good data management practices. The aim is to identify current data management services on campus and those available by other means (e.g. through external providers such as Portage, and/or domain-based RDM services), and to identify any potential gaps. This information could be gathered in conjunction with a survey of institutional data assets. We suggest that institutions focus on assessing four fundamental areas of good RDM:

1) **Data management plans (DMPs):** DMPs are formal documents that state what data will be created and how, and outline the plans for sharing and preservation, noting what is appropriate given the nature of the data and any restrictions that may need to be applied. DMPs are a way of improving data management practices and are increasingly expected by funders. DMPs are considered best practice for managing research data, and institutions are encouraged to assess the current level of awareness and use of DMPs by researchers on campus.

2) **Institutional support and training:** Local support and training for researchers, and those who support researchers, on campus is important, as RDM needs and requirements are very diverse based on the differing natures of research projects. Responsibility for RDM services on campus is often shared across departments. Key areas of support and training that should be assessed include:
    - Advocacy and outreach
    - Data management plans
    - Data and metadata standards
    - Reference support for finding and citing data
    - Finding aids for data, datasets, and/or data repositories
    - Preparing data and/or datasets for deposit into a repository
    - Privacy, ethical and IP issues

3) **Data repositories and archiving:** Research data need to be managed over the long term, so that they can be accessed and reused (when appropriate) in the

context of a formal data repository. There are a variety of repositories available for researchers, including domain repositories, and shared national and regional repositories (see Portage's repository options guide). It is important to understand whether the research community is served through existing resources or whether there is a need for new or additional local repository services on campus.

4) **Institutional policies, guidelines and/or procedures:** Most research institutions have some type of procedures, guidelines, and/or policies that touch on RDM issues, such as those dealing with ethics, data retention, and intellectual property. In addition, there may be external policies or requirements related to data management that impact researchers, such as funder, journal, or project-related policies. Documenting all the internal and external policies, guidelines, and/or procedures that relate to RDM practices will help the institution understand existing requirements for affiliated researchers.

Resources:

- Collaborative Assessment of Research Data Infrastructure and Objectives (CARDIO). DCC
  A tool for institutions to assess their data management support and infrastructure and to collaboratively plan for improvement.
- The Portage DMP Assistant. Portage
  A bilingual tool for preparing data management plans (DMPs). The tool follows best practices in data stewardship and walks researchers step-by-step through key questions about RDM and will include specific templates related to funders' requirements as they are adopted.
- Canadian RDM Survey Consortium. Portage
  Consult reports and data associated with surveys of researchers on their needs and practices related to RDM
- Research Data Repositories. Portage
  A brief guide to discipline-based, institutional and national repository platforms existing or in development for storing research data produced within Canadian research institutions.

2.4. Identify gaps in the existing RDM environment

This step is closely related to 2.2 and 2.3 and involves assessing gaps in the current RDM environment (infrastructure, support, and services) against the ideal state as

defined in 2.1. This will help the institution identify areas where RDM needs are not yet being well served: i.e., those to which more resources and support need to be directed.

3. FORMALIZE RDM PRACTICES

Formalizing the expected practices around research data management through the adoption of guidelines, procedures and/or policies is an important step in establishing an effective and sustainable approach to RDM at the institution. This will underscore institutional commitment and expectations surrounding RDM and set the tone for research conducted at the institution. Depending on the institution, these practices could be implemented through a set of coherent guidelines or procedures, or through the implementation of a cohesive policy. Community engagement and consultation are key aspects for getting buy-in for any new requirements.

3.1. Adopt policies, guidelines and/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
- Consideration of Indigenous data sovereignty
- Other aspects: monitoring and rewarding compliance; articulating and promoting RDM principles and scope for the institution.

Resources:

- UK Institutional Data Policies. DCC
- Model Language for Research Data Management Policies. ASERL/SURA Research Data Coordinating Committee (2013)
- Five Steps to Developing a Research Data Policy. Digital Curation Centre (2014)
- Starting the Conversation: University-wide Research Data Management Policy. OCLC (2013)

- Guidance for Developing a RDM Policy. In LEARN Toolkit of Best Practice for Research Data Management (pp. 137-140). LEARN (2017): https://doi.org/10.14324/000.learn.27

4. DEFINE A ROADMAP

Based on the information gathered in the previous components of the strategy, a roadmap should include 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?**

Resources:

- How to Develop RDM Services - a guide for HEIs. DCC (2015)
- Research Data Management Roadmap: Version 3, 2017-2020. University of Edinburgh (2017)

Last updated: March 2020