

Introduction

The following survey was developed by the Portage Research Intelligence Expert Group (RIEG) to gather information on Canadian research institutions' existing services and capacity to support research data management within the context of a rapidly evolving national and international movement towards making research data findable, accessible, interoperable, and reusable.

This bilingual survey includes questions on how Canadian research institutions are developing and allocating human, organizational, infrastructure, and fiscal resources to develop and support research data management services that could be coordinated by multiple units within the institution as well as regional and national efforts. Institutions will also have the opportunity to identify barriers, challenges, and accelerators to further improve their research data management services.

Benefits to participating in the survey include: (a) establishing at individual research institutions the current scope and status of their research data management services; (b) results to inform future policy and operational development in RDM services; and (c) a benchmark for Canadian research institution stakeholders for which to develop national and related policy and infrastructure.

To ensure accuracy and representativeness of survey responses, we encourage either a collaborative submission of the most informed individuals regarding RDM capacity at a given institution and/or the responder at a given institution seek out appropriate responses from the respective units as identified in the survey. This survey will take approximately 20-30 minutes to complete.

A report summarizing our survey results will be shared publicly with the research community soon after the survey closes. Individual survey responses will not be shared publicly.

About Us:

The Research Intelligence Expert Group (RIEG) is working to gather evidence to guide the development of best practices in RDM in Canada, and inform stakeholder communities about issues in related policy and practices. This questionnaire was developed by members of RIEG's RDM Capacity Working Group:

Andrea Szwajcer (Chair) - Research Services Librarian, University of Manitoba
Alexandra Cooper - Data Services Coordinator, Queen's University
Carol Perry - Research and Scholarship Librarian, University of Guelph
Minglu Wang - Research Data Management/ Science Librarian, York University

For more information on the objectives and membership of this expert group, please consult the [Portage website](#).

If you have any comments or questions about this survey, please contact portage@carl-abrc.ca

General questions about the institution

1. Name of institution _____
2. Location of institution (province)
3. Type of institution (select most appropriate)
 - a. Medical/Doctoral
 - b. Comprehensive
 - c. Primarily Undergraduate
 - d. Other, _____
4. Number of research faculty (FTE) at the institution
 - a. <100
 - b. 100-499
 - c. 500-1000
 - d. >1000
5. What are the affiliation(s) of respondents to this survey? Check all that apply.
 - e. Library
 - f. Research Office
 - g. CIO
 - h. Ethics Board
 - i. Researchers
 - j. IT
 - k. Other, _____
6. What is your position title?

Organization

7. Which department(s) is/are involved in leading and participating in research data management at your institution?

| | Leading | Participating | Not participating | Don't know |
|--|---------|---------------|-------------------|------------|
| Faculty of Graduate Studies | | | | |
| Institutional big data initiatives/data science center | | | | |
| Institutional IT department | | | | |
| Legal department | | | | |
| Library | | | | |
| Senior institutional leadership or management | | | | |
| Research administration bodies | | | | |
| Research Ethics Review Board | | | | |
| Representatives of faculties | | | | |
| Other | | | | |

If you selected 'Other' above, please elaborate as appropriate _____

8. What data management positions (if any) have your institution created or reassigned (please provide associated job titles)?

 (for example, data management coordinator, data protection officer, data management librarian, data curation specialist, data managers, or data scientists)

9. How are different stakeholders within your institution working collaboratively to tackle research data management challenges?

 (for example, cross-campus working group, Research Data Management steering committee, responsibility is spread across multiple departments, etc.)

Infrastructure

What research data management infrastructure does your institution have access to? Check all that apply

10A. Active data storage services (storage used during the actual research process)

- a. Researchers are responsible for their own projects/labs
- b. Departments/faculties have the infrastructure to support researchers
- c. The institution has a centralized infrastructure to support researchers
- d. There is infrastructure support at the regional/consortial level
- e. Researchers have access to commercial active data storage services
- f. Other, _____
- g. Don't know

10B. Data repository (where data are deposited/published for discovery and/or appropriate access)

- a. There is an institutional data repository
- b. Researchers use disciplinary/multidisciplinary data repositories
- c. Researchers use regional or consortial data repositories
- d. Researchers use a national level data repository
- e. Researchers use journal repositories
- f. Other, _____
- g. Don't know

10C. Long term data preservation (the process through which some data may be stored for the longer term post project)

- a. Departments/faculties have the infrastructure to support long term data preservation
- b. The institution has the infrastructure to support long term data preservation
- c. Researchers use regional consortial infrastructure for long term data preservation
- d. Researchers use national infrastructure for long term data preservation
- e. Researchers use commercial infrastructure for long term data preservation
- f. Other, _____
- g. Don't know

10D. Data transfer (for data size up to 5 GB)

- a. The institution has an internal data transfer mechanism
- b. Researchers have access to an external data transfer mechanism, _____
- c. Other, _____
- d. Don't know

10E. Data transfer (for data size over 5 GB)

- a. The institution has an internal data transfer mechanism
- b. Researchers have access to an external data transfer mechanism, _____
- c. Other, _____
- d. Don't know

10F. Infrastructure for sensitive data

- a. The institution has internal supports in place
- b. Researchers have access to external support, _____
- c. Other, _____
- d. No known support
- e. Don't know

10G. Other research data management infrastructures

- a. Researchers have access to institutional High-Performance Computing infrastructure
- b. The institution supports research collaboration tools (for example, institutional OSF, GitHub, etc.)
- c. The institution supports researchers' access to Electronic Lab Notebooks (for example, LabArchives, LabGuru, etc.)
- d. The institution supports researchers' access to electronic data collection tools (for example, Qualtrics, RedCap, etc.)

- e. The institution supports researchers' access to commercial quantitative research software (for example, SPSS, Stata, etc.)
- f. The institution supports researchers' access to commercial qualitative research software (for example, Nvivo, Dedoose, etc.)
- g. Other: _____
- h. Don't know

Resources

11. What resources are required at this time to streamline research data management at your institutional level? Please rank them in order of priority.

| | 1 - highest priority | 2 | 3 | 4 | 5 | 6 - lowest priority |
|-----------------------------------|----------------------|---|---|---|---|---------------------|
| Human resources | | | | | | |
| Policy guidance | | | | | | |
| Legal guidance | | | | | | |
| Financial resources | | | | | | |
| Technical resources | | | | | | |
| Other, ___[add text box for this] | | | | | | |

Skills

12. (A) Different skills are needed to further support research data management. At what level are the following skills available at your institution? Check all that apply.

| | Fully available | Partially available, but more needed | Not available, but needed | Don't know |
|--|-----------------|--------------------------------------|---------------------------|------------|
| Legal skills (licensing, Intellectual Property, etc.) | | | | |
| Technical skills in managing sensitive data | | | | |
| Data security and risk management skills | | | | |
| Data analysis and visualization skills | | | | |
| Metadata creation skills | | | | |
| Data curation skills | | | | |
| Data preservation skills | | | | |
| Technical skills in the area of e-infrastructures | | | | |
| Research software development skills | | | | |
| Researchers' operational data management skills | | | | |
| Knowledge of national policies | | | | |
| Advisory skills on technical, organizational and operational matters | | | | |
| Other | | | | |

12 (B) If you selected 'Other' above, please elaborate _____

| | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| workshops covering data management planning, RDM best practices, etc. | | | | | | | | |
| Curation support (e.g. where to deposit data, how to create metadata, etc.) | | | | | | | | |
| Specific financial support to researchers (for example, support researchers to use publishers' data management services) | | | | | | | | |
| Other | | | | | | | | |

13 (B) If you selected 'Other' above, please elaborate _____

Institutional Strategy and Policies [logic sequence] [check box]

Strategy: a guidance or principles, and required by the emerging Tri-Agency policy

Policy: a more formal and comprehensive requirements directing institutional actions

14a. Does your institution currently have a research data management strategy?

- a. Yes
- b. No
- c. Under development
- d. Don't know

14b. If you selected 'a' or 'c' in Question 14 (A), what elements are covered by your institutional strategy on research data management? Check all that apply.

- a. Make research data [FAIR](#) (findable, accessible, interoperable and reusable)
- b. Specific guidelines for sensitive data
- c. Provisions for data storage

- d. Provisions for specific disciplinary areas
- e. Provision for handling personal data
- f. Legal support
- g. Licenses
- h. Other, _____

15a. Does your institution currently have a research data management policy?

- a. Yes
- b. No
- c. Under development
- d. Don't know

[15b only show up if 'yes' or 'under development' were chosen in 15a]

15b. If you selected response 'a' or 'c' in Question 15 (A), what elements are covered by your institutional policy on research data management? Check all that apply.

- a. Make research data [FAIR](#) (findable, accessible, interoperable and reusable)
 - i. Specific guidelines for sensitive data
 - j. Provisions for data storage
 - k. Provisions for specific disciplinary areas
 - l. Provision for handling personal data
 - m. Legal support
 - n. Licenses
 - o. Other, _____

16. Is there a guideline/policy at your institution on the ownership of research data?

- a. No
- b. Yes, researcher owns the data
- c. Yes, the institution owns the data
- d. Other, _____
- e. Don't know

17. Is there a guideline/policy at your institution on the minimum retention period for research data?

- a. No
- b. Yes
- c. Don't know

17B. If you responded 'Yes' to Question 17 (A), please indicate the length of the retention period.

18. Is there a guideline/policy at your institution on how researchers should license their research data?

- a. No
- b. Yes
- c. Other, _____
- d. Don't know

Business plans and sustainability

19. How does your institution budget for research data management services?

20. How is your institution planning to invest in research data management technology? (check all that apply)

- a. Base level of investment in technical infrastructure
- b. Coordinate institutional investment through centralized IT services
- c. Prioritize selected stages of the data life cycle
- d. Dedicated to support all aspects of the data life cycle
- e. Investment will be adapted to meet researchers' needs
- f. Don't know
- g. Other _____

21. What data management positions (if any) is your institution planning to create within the next 2 years (please provide associated job titles)?

(for example, data management coordinator, data protection officer, data management librarian, data curation specialist, data managers, or data scientists)

22. Does your institution currently have a professional development program focusing on research data management for staff (for example, reskilling or new skill development)?

- a. Yes,
- b. No
- c. Don't know

22B. If you responded 'Yes' to Q.22, how (what program / curriculum / pedagogical framework is implemented?)

23. Does your institution currently have a professional development program focusing on research data management for researchers (graduate students, post-docs, and faculty members)?

- a. Yes
- b. No
- c. Don't know

22B. If you responded 'Yes' to Q.23, how (what program / curriculum / pedagogical framework is implemented?)

Collaboration

24. Does your institution partner with or contribute to any of the following research data management initiatives?

- a. Regional research data management initiative/network/collaboration
- b. National research data management initiative/network/collaboration, for example, Portage Network
- c. International research data management initiative/network/collaboration
- d. Disciplinary research data management initiative/network/collaboration
- e. Other, _____

Awareness

25. Rate the level of awareness of each of the following stakeholder groups at your institution regarding Tri-Agency research data management policy development:

| | Don't know | Very low | Low | Neither high or low | High | Very high |
|--|------------|----------|-----|---------------------|------|-----------|
| Institutional leadership | | | | | | |
| Librarians | | | | | | |
| Early-stage researchers (graduate students, Postdocs, new faculty members) | | | | | | |
| Mid-career researchers | | | | | | |
| Senior researchers | | | | | | |

Barriers and challenges

26. What are the barriers/challenges for your institution to support research data management and adherence to [FAIR principles](#) (i.e. making data Findable, Accessible, Interoperable, and Reusable)? Check all that apply.

- a. Limited awareness of the benefits of research data management
- b. Resistance to making data available or to share data
- c. Concerns over legal frameworks

- d. Concerns over increased costs
- e. Technical complexity
- f. Limitations imposed by confidentiality clauses in public-private research contracts
- g. Different disciplinary practices
- h. Lack of time to clean and prepare data and metadata
- i. Absence of incentives to promote research data management
- j. Absence of policies or guidelines at the national level
- k. Lack of skilled staff with expertise on the topic
- l. Lack of support for researchers
- m. Lack of coordination among the relevant actors within the institution
- n. Lack of coordination at the regional or national level
- o. Lack of funding
- p. Lack of awareness raising, including training opportunities
- q. Other, _____

Potential accelerator

27. What are the most important actions that could help promote research data management and adherence to [FAIR principles](#) (Findability, Accessibility, Interoperability, and Reusability) of research data at your institution?

- 27A. At your institution _____
- 27B. Regionally _____
- 27C. Nationally _____
- 27D. Internationally _____
- 27E. Within disciplines _____
- 27F. Other, _____

“Thank you for completing this survey. For any comments or questions, please contact portage@carl-abrc.ca.”