Facilitation, Coordination and Cooperation:
A Proposal for a Canadian Research Data Management Network

To the Board of the Canadian Association of Research Libraries
from the Data Management Subcommittee of the Committee on Research Dissemination

*Endorsed by the CARL Board, September 13, 2013*

Introduction: the issue

There is tremendous momentum around the world for improving the stewardship of research data in order to allow for verification of research results and enable access to and re-use of data in the future. The UK, Australia, European Commission, US and other countries and regions are putting into place the policies, infrastructure and services that will support widespread and comprehensive sharing of data produced through their publicly funded research. In addition, international efforts are underway to ensure that the various national and regional initiatives are interoperable globally (e.g. Research Data Alliance).

Currently in Canada there are large well-acknowledged gaps in research data stewardship and only a small proportion of researchers are able to deposit and share their data widely. All stakeholders, including those involved in Research Data Canada and the Digital Infrastructure Leadership Council, recognize that to remain a leader in research, Canada must implement the means to support widespread data re-use and data-intensive research practices.

Research libraries are just one of several key stakeholders involved in the management of research data. Most often, libraries have been service providers that work closely with the research community to provide guidance, identify standards, assign metadata, and ensure data is appropriately formatted for preservation and re-use. Libraries have new and emerging roles in the complex area of research data management. It is essential that libraries carefully align, enhance and partner with related services and infrastructures such as high performance computing, storage facilities, and high-speed networks.
Leveraging recent developments

Recent activities suggest that the essential elements of a national research data management network are incubating in various ways. There are several key developments:

- Under the auspices of the Canada Polar Data Network, the University of Alberta Libraries, University of Waterloo, and OCUL’s Scholars Portal are involved in storing and managing the data produced from the Canadian International Polar Year program.

- OCUL (Ontario Council of University Libraries) is developing a community cloud storage network to address members’ data storage needs in a collaborative way. In doing so, OCUL members are intentionally creating a critical element of the digital infrastructure necessary for national digital preservation and research data initiatives. The recent certification of Scholars Portal as a trustworthy digital repository for e-journals affirms OCUL’s experience with and dedication to digital preservation.

- The University of Alberta Libraries, Simon Fraser University Library and the University of British Columbia Library have begun to work together on a collaborative project to develop a research data management infrastructure that could serve as the regional preservation backbone in Western Canada, and could become a component of a national digital preservation network.

- The Council of Atlantic University Libraries (CAUL) is seeking to develop a regional research data management infrastructure.

- Research Data Canada (RDC), a multi-sector group aiming to improve research data sharing in Canada, has struck working groups that are exploring issues of standards and interoperability, infrastructure, education and training, policy and international liaison. Members of the CARL community are actively involved with researchers and other stakeholders in these working groups and the RDC steering committee.

Other examples speak to capacity building across the country. NRC Knowledge Management (formerly CISTI) is the Canadian node for DataCite and acts as chair for Research Data Canada. Several university libraries are ingesting locally-produced research data and a few are also active in the area of training and education in research data management for researchers and students. The existing networks of Research Data Centres, Geographic Information Centres, and Institutional Repositories have nurtured expertise in the area of repository management and data access services within libraries. A Community of Practice for research data management has emerged out of the CARL Introduction to Research Data Management Services course to facilitate the exchange of information amongst librarians.
Recently promoted collaborations such as the Digital Preservation Network, the SHARE Proposal and the Academic Partners Trust in the United States demonstrate ways that institutions can work together to build capacity. Within Canada, we already have collaborations that have advanced beyond such developments, and we are well positioned to leverage them further.

A national approach

A national network will extend services to a greater number of researchers and address many of the existing gaps in Canada. There is also a strong willingness to collaborate across Canada. For example, regional activities, such as the digital preservation initiatives being developing in the west and in Ontario, are being designed with the expectation that they could lead to a national research data management network.

A national network must be highly collaborative. Not only will it involve research libraries, but the participation of research services and VPs Research, IT departments and CUCCIO, as well as the high performance computing community (Compute Canada) will be essential. The network will also leverage the high-speed network managed by CANARIE. Perhaps most critically, researchers will be key stakeholders in identifying data of value, as well as in describing and depositing the data they produce.

A vision for such a network was articulated in 2011 for the CNCDI project¹ and is still of interest to those involved in developing regional initiatives. The aim of this project is not to revive this previous project but rather espouse its collaborative vision and build on all of the progress that has been made since then.

CARL’s role

CARL’s role will be to facilitate the creation of a collaborative network for collecting, preserving and providing access to valuable research data produced in Canada, a network that builds upon emerging initiatives. A project team supported by CARL will involve key individuals engaged in regional and local initiatives as well as coordinate and liaise with other related national initiatives such as the Digital infrastructure Leadership Council, CRKN, Canadiana.org and the Canadian Research Data Centre Network.

Building upon regional initiatives will be an effective way to grow a national network and fill existing gaps. Some CARL members are involved in the regional initiatives, but there are others whose research data management needs are not yet being addressed. Although the current focus of regional activities must be

their regional constituents, the individuals involved have the knowledge, experience and vision needed to develop a national network and they would like to collaborate.

CARL itself does not provide infrastructure or services, but it can help to launch a collaborative network that does. CARL is known to funding agencies, university administrators and other stakeholders as the leadership organization for Canadian research libraries and is involved in discussions of research data management through Research Data Canada and other national and international organizations.

This national network will benefit CARL members’ institutions, as well as serve institutions outside of CARL. For example, by building on the work of OCUL, the network will include all universities in Ontario.

Proposal to the CARL Board

On behalf of the CARL Committee on Research Dissemination, the CARL Data Management Subcommittee is proposing that CARL facilitate the creation of a collaborative network for collecting, preserving and providing access to valuable research data produced in Canada, a network that builds upon emerging initiatives and fills existing gaps. The subcommittee will convene a working group, with financial support from its program budget. The working group will include representatives of the research data management initiatives already in development in Alberta, British Columbia and Ontario, and representatives of other organizations interested in developing the national network, including Quebec and the Atlantic region. It is anticipated that this initiative will require a dedicated project manager with knowledge of the field. One of the first tasks of the group will be to identify and address such needs.

Key tasks for the group will be to develop a detailed service model and business plan that acknowledge the existing investment of the regional networks and provide opportunities for institutions outside those regions. These will outline the division of services and infrastructure across institutions, develop research data management collection policies and identify funding required to build capacity and sustain operations. Funding opportunities will be explored concurrently with other aspects of the planning, as a top priority. The group will also propose a model for ongoing management of the network. The working group will be dissolved once ongoing collaborative agreements and roles are in place.

Upon agreement in principle with this approach, a more detailed project charter for the working group will be developed.