The following report summarizes Portage activities and accomplishments in the first quarter of 2018, corresponding to the goals outlined in the Portage Business Plan: 2017 - 2018, and provides an update on Portage operations and communications undertaken in this period.

Reporting areas include work undertaken towards:

1. Fostering a community of practice for research data management (RDM);
2. Facilitating and providing leadership in the development of RDM infrastructure;
3. Engaging and advocating for RDM with stakeholder communities; and
4. Developing Portage operations and communications.

The mission of Portage is to contribute actively to RDM in Canada through a sustainable network of library-based services and collaborative infrastructure. The following report aims to communicate our progress towards the development of this envisioned national community of practice.

Report prepared by:

Jeffrey Moon (Director, Portage)
Shahira Khair (Project Officer, CARL/Portage)
Julie Morin (Project Officer, CARL)
Lee Wilson (Service Manager, Portage/ACENET)

April 26, 2018
1. Fostering a community of practice for RDM

A primary objective of Portage is to build a network of expertise for RDM. Critical aspects of this objective are to coordinate and expand on expertise and services within Canadian academic libraries and to build capacity in specific areas of RDM.

Activities and Accomplishments

The following update is centered on the work of the Portage Network of Experts.

Portage Council of Chairs:

- The Council of Chairs convened a meeting on February 5th to discuss and coordinate responses from their Expert and Working Groups to the CANARIE RDM Community Consultation. Submissions are described under section 3.
- The Portage Council of Chairs met for a two-hour teleconference on April 4th, where they had the opportunity to discuss updates presented by members of the Portage Secretariat. Each of the Expert Group Chairs also provided a detailed update on the progress of their respective groups. Planning has also begun for an in-person meeting at UBC on June 4th.

Curation Expert Group (CEG):

- The objective of CEG is to identify, evaluate and promote best practices, resources and workflows that support data sharing and reusability for researchers within projects, as well as data within repositories.
- Lee Wilson (Portage Service Manager) joined the CEG membership to strengthen its ongoing collaboration with FRDR to provide and scope future data curation services.
- CEG is developing a briefing document on data curation targeting a broad audience.
- CEG continues its work towards the development of a Data Curation Survival Guide, as well as a survey of individuals who perform data curation across Canada.

Data Discovery Expert Group (DDEG):

- DDEG contributes expertise to the Portage network around the discovery of Canadian research data and the development of a national data discovery service.
- The FRDR Discovery Service Working Group continues its work on identifying repositories for integration with FRDR, and providing subject heading and controlled vocabulary recommendations. They are also investigating opportunities for integration and reuse of metadata for FRDR and SHARE. They also continue work on outreach and communications strategies to engage various repository communities and stakeholders.
Data Management Planning Expert Group (DMPEG):
- DMPEG continues their work overseeing the development of the Portage national data management planning platform, the DMP Assistant.
- Carla Graebner (Simon Fraser University) was appointed as Chair of the DMPEG in January.
- A Call for participation was completed, resulting in the addition of new members to the Working Group with a range of library and discipline-specific RDM backgrounds.
- Two targeted sub-groups were formed. The first will undertake an environmental scan of practices for evaluating DMPs. The second will compile example DMPs to support the development of discipline-specific templates.
- The new code base for version 2.0 of the DMP Assistant was released in late February. Weiwei Shi (University of Alberta) has created a sandbox for the DMP Expert Group to test run the new platform. A 4-month timeframe is predicted for project implementation.

Preservation Expert Group (PEG):
- PEG provides Portage with advice on RDM infrastructure developments supporting long term stewardship and access of research data and metadata.
- PEG completed the final draft of their White Paper that articulates a model for a national digital data preservation network, scheduled for release in May.

Research Intelligence Expert Group (RIEG):
- RIEG provides Portage with intelligence on RDM in Canada and are responsible for managing materials and outputs of the Canadian RDM Survey Consortium.
- RIEG completed its third-reviewer process for its environmental scan, and a gap analysis is underway.
- Recruitment and clearinghouse development work continues on behalf of the Canadian RDM Survey Consortium

Training Expert Group (TEG):
- The primary objective of TEG is the development and maintenance of a high-level program for supporting RDM training across Canada.
- TEG led the organization and development of the Portage and RDM in Canada event held at Ryerson University on January 29th (described under section 3).
- Their “good enough” guide to RDM was released, with future subjects planned to develop a series of related briefing documents.
- The RDM-101 and DMP online training module Working Groups completed the content development phase of their work. Scholars Portal has provided ongoing access to a learning management system, where the modules are currently being developed.
2. Facilitating and providing leadership in the development of RDM infrastructure

Portage seeks to advance the development of national platforms for planning, curating, preserving and discovering research data. This will require working with infrastructure providers - both in the library community and elsewhere - to develop new tools where gaps exist and to bridge systems where interoperability is needed.

Activities and Accomplishments

DMP Assistant:
- Planning for migration of the Portage DMP Assistant to a new merged Digital Curation Centre (DCC) and California Digital Library (DCL) codebase (known as DMP Roadmap) is underway, thanks to the in-kind support of the University of Alberta, and specifically, the work of Weiwei Shi at the University of Alberta, in consultation with the DMP Expert Group.
- Version 2.0 of the DMP Assistant promises exciting new features, including a foundation for machine-actionable DMPs, ORCID integration, researcher ‘opt-in’ for DMP sharing, and APIs to facilitate sharing DMPs.

Dataverse North Working Group (DVN):
- DVN was formed to contribute to a community of practice for libraries using or interested in using the Dataverse repository platform for research data in Canada. Work is being advanced by three sub-groups investigating gaps and opportunities that could be addressed by nationally coordinated strategies and services for Dataverse; including, the Business Models Sub-Group, the Training Sub-Group, and the Metadata Sub-Group.
- In March, the three sub-groups completed their reports providing recommendations on the development of a common business model for Dataverse, Dataverse training needs, and a common Dataverse metadata template. The reports are currently being reviewed by the Portage Secretariat and the CDPSC.

Federated Research Data Repository (FRDR):
- FRDR is a joint project between CARL/Portage and Compute Canada to create a national discovery layer for Canadian research data and a scalable repository platform capable of handling large data files easily.
- As of fall 2017, FRDR became operational in a “Limited Production” capacity, which means that FRDR is offering repository services to a growing list of Canadian researchers. Research projects vary widely in both scope and discipline, and include:
  - The Global Institute for Water Security (University of Saskatchewan)
  - The Mountain Legacy Project (University of Victoria)
- Stone Tools, Diet and Sociality at the Dawn of Humanity (University of Calgary)
- Diversity Cape Breton (Cape Breton University)
- The Water Institute (University of Waterloo)
- Mapping the Acoustic Space of Live Electronic Music (University of Calgary)
- Ocean Networks Canada-DFO (University of Victoria)
- Deep learning and the Schrödinger equation (National Research Council of Canada)

- FRDR was awarded resources in Compute Canada's Research Platforms and Portals (RPP) Competition, which will allow for continued growth of the service in a Limited Production capacity.
- FRDR continues to work closely with the Portage EGs and WGs, most notably the PEG, CEG, DDEG, TEG, and FRDR-SM WG in the development of a suite of national data services.

**FRDR Service Model Working Group (FRDR-SM):**
- The FRDR-SM WG was formed to draw on community expertise in the development of service and business models, policies, and user experience and operational workflows for a federated research data repository platform.
- The Policy Subgroup has undertaken the development of several policies in support of operating a national-scale data repository service.
- The Workflows, User Experience, and Training Subgroup has conducted a review of the FRDR user interface and delivered feedback to the development team. Work on reviewing and revising end-user documentation is well underway.
- The Workflows, User Experience, and Training Subgroup has also begun working with the Training Expert Group on the development of a training brief for FRDR.
3. Engaging and advocating for RDM with stakeholder communities

Portage seeks to advance the development of national platforms for planning, curating, preserving and discovering research data. This will require working with infrastructure providers - both in the library community and elsewhere - to develop new tools where gaps exist and to bridge systems where interoperability is needed.

Activities and Accomplishments

Leadership Council for Digital Research Infrastructure (LCDRI):
- CARL-Portage’s response to ISED related to the LCDRI DM report was finalized and submitted in early January. The CARL Executive Director and the Portage Director met with ISED representatives, including Nipun Vats, Assistant Deputy Minister, Science and Research - Innovation, Science and Economic Development. This meeting, held one week before the Federal Budget was announced on February 27th, provided an excellent opportunity for CARL and Portage to share our achievements and future plans with ISED.

Collaboration with Regional Library Councils:
- A Memorandum of Understanding (MOU) was announced between Portage and the Bureau de coopération interuniversitaire (BCI) on February 22nd.
- Regularly held group teleconferences between the Portage Director and representatives from all 4 regional library councils began in January and have continued monthly.
- Jeff Moon participated in a CAUL (Council of Atlantic University Libraries) webinar in February.

Outreach to Non-CARL Libraries:
- The Portage Director was approached by Wilfrid Laurier University regarding a half-day RDM Workshop targeting non-CARL libraries in Canada. Sponsored by Wilfrid Laurier Libraries, planning started for this event in March 2018. The event is scheduled for May 15, 2018 in Waterloo, Ontario.

Institutional RDM Strategy Working Group:
- The focus of this working group is to provide institutions with a resource for facilitating discussions and processes for preparing an institutional strategy for RDM.
- The Working Group completed a draft template and associated guidance document, which were released in March. Both documents will exist as ‘living’ documents, to be updated on an as-needed basis, as institutions gain insight and experience working with the template in their own institutional efforts to develop RDM strategies.
Working Group on Responsible RDM Practices for Sensitive Data:

- The focus of this working group is to provide practical guidance in managing sensitive data by identifying best practices from both the international community and Canadian experiences.
- The Working Group held their first monthly meeting on January 24th.
- A new government of Canada initiative on ‘de-identification and anonymization’ has been launched -- a collaboration between the Office of the Privacy Commissioner and Statistics Canada. The Working Group is considering means of possible collaboration.
- Specific outcomes proposed include: 1) developing deliverables to support the completion of ethics applications and data access agreements; 2) developing training materials, such as decision-making trees, to help various stakeholders navigate key considerations related to sensitive data; and 3) conducting an environmental scan of best-practices for the management of Indigenous data.

Portage and RDM in Canada - Toronto, January 30:

- Portage held a free day of information sessions on January 30th, at Ryerson University in Toronto, as a pre-OLA Super Conference Workshop. The event drew more than 80 participants representing over 30 organization from across Canada.
- The morning session included presentations on the Tri-Agency data management policy initiative, and an update on the development of the Portage network. A panel discussion followed, which brought together researchers and university administrators to speak to the topic of RDM best-practices and the need for coordinated institutional, domain, and national data management services in Canada.
- Reprisal of afternoon workshops offered at a similar Portage event in Montreal covered the DMP Assistant and Portage Supported RDM Platforms - FRDR and Dataverse.

Other Engagements:

- Jeff Moon (Director, Portage) participated in a cross-country stakeholder tour with the Tri-Agency in January and February, making stops in Vancouver, Calgary, Toronto, and Halifax. This outreach opportunity provided an excellent chance for the Tri-Agency and Portage to work collaboratively and synergistically to inform, engage, and seek feedback from a broad range of RDM stakeholder groups, including representatives from the Libraries, IT, Ethics, Research Offices, Graduate Studies, and more.
- Jeff Moon co-presented at the DLI Ontario Training session at Ryerson University, highlighting the work of Portage to Data Librarians from the Ontario region.
• Lee Wilson (Service Manager, Portage/ACENET) delivered a FRDR progress update at Compute Canada’s Winter TECC in Montréal, QC.
• Susan Haigh (Executive Director, CARL) and Jeff Moon were invited to meetings in Ottawa with Library and Archives Canada, and the National Research Council of Canada to discuss intersecting interests in RDM and how best to support all researchers in Canada.
• Susan Haigh and Jeff Moon met with ISED representatives, including Nipun Vats, Assistant Deputy Minister, Science and Research - Innovation, Science and Economic Development. This meeting, held one week before the Federal Budget was announced on February 27th, provided an excellent opportunity for CARL and Portage to share our achievements and future plans with ISED.
• Shahira Khair (Project Officer, CARL) represented Portage at the World Data System International Technology Office Inaugural Workshop in Victoria, BC.
• Jeff Moon attended CODATA, in Gottingen, Germany and gave a presentation titled ‘Portaging Through Change -- The Canadian RDM Experience’
• Jeff Moon attended the RDA 11th Plenary, in Berlin, giving three presentations:
  1) Long-tail of data Interest Group presentation
  2) National Data Services Interest Group presentation - Portage Update
  3) National Data Services Interest Group presentation - Federated Repositories

CANARIE RDM Funding Consultation:
• Portage Expert and Working Groups identified a number of ‘gaps’ in the RDM ecosystem and flagged these to the CANARIE RDM Funding call consultation (to help frame the ultimate funding call, expected in May, 2018). Submissions included:
  o **Dataverse North & FRDR:**
    **Gap:** Not all researchers have access to robust Canadian repository services
  o **Curation Expert Group:**
    **Gap 1:** There is a need to develop a national approach to data curation in Canada
    **Gap 2:** There are challenges associated with deposit and appropriate sharing of sensitive data
○ **Preservation Expert Group:**
  - **Gap 1:** There is no inventory of preserved research datasets across Canada
  - **Gap 2:** There is a need for a national registry of file format and metadata standard policies

○ **Discovery Expert Group:**
  - **Gap:** There are shortcomings in the discovery layer of Canadian RDM ecosystem.

In addition, Portage collaborated on two other gap submissions with CASRAI and Compute Canada:

○ **CASRAI:**
  - **Gap:** Need to better integrate RDM with RMI (Research Management Information).
    - E.g.
      - ‘auto-harvest’ information from CVs
      - the need for portable Data Management Plans (DMPs)
      - interfaces to improve interoperability between RMI and RDM systems
      - need to make the CASRAI Dictionary machine-readable, interoperable, and bilingual
      - need for a federated register of semantic resources to improve system interoperability

○ **Compute Canada:**
  - **Gap:** Need to address management of ‘active data’ in pre-publication phase of research life cycle

**CANARIE RDM Software Funding Call:**
- Portage collaborated on an OCUL Scholars Portal submission to CANARIE Research Software fund (Note: this is separate from the CANARIE RDM fund, which had a call for ‘gap identification’ recently, with a full funding call planned for May, 2018).

Portage is collaborating with OCUL Scholars Portal and Compute Canada on a proposal for the CANARIE Research Software Program: a 4.5M call aimed at modifying and maintaining existing platforms in order to better meet the needs of researchers.

If successful, the proposal will fund the development of increased support for geospatial data in Dataverse and a geo-discovery layer for the CARL/Portage-
Compute Canada Federated Research Data Repository (FRDR), built on the open-source GeoBlacklight platform. Geospatial discovery in FRDR is currently limited, despite growing production and demand for geolocation data and purpose-driven tools for visualization and analysis. The proposed project will enrich the geospatial metadata and search capabilities of both Scholars Portal Dataverse and FRDR. Through this initiative, FRDR will also be able to better display geospatial data harvested from other Canadian repositories (e.g., Open Data Canada and the Polar Data Catalogue) in their native formats, thereby increasing the potential for discovery and reuse.

Through in-kinds support, Portage Network looks forward to collaborating with Scholars Portal on this project as part of our common goal of advancing Research Data Management in Canada. This grant will provide an excellent opportunity for a shared development project between our two organizations.
4. Developing Portage operations and communications

Portage is a CARL initiative and is currently supported through its membership. The goal is to develop a sustainable network built upon the support of the wider research data management ecosystem.

Activities and Accomplishments

CARL Directors Portage Steering Committee (CDPSC):
- The CARL Directors Portage Steering Committee met on March 7th, to discuss updates on the Data Citation Index (DCI) Proposal, Dataverse North’s Business Model Group’s Report, submissions to phase one of the CANARIE RDM Fund, and the response to the formative assessment. They also planned for a ‘Future Direction of Portage’ session at the CARL Spring Meeting. A task group of committee members (Brett Waytuck, Donna Bourne-Tyson, Jeffrey Moon, Martha Whitehead, Beth Namachchivaya, Pascal Calarco, and Susan Haigh) was formed to work on a detailed agenda and an outline of short to medium-term funding options. The agenda and outline were further refined and approved at a special meeting of the CDPSC on April 4th.

Portage Advisory Committee (PAC):
- The Portage Advisory Committee met on February 13th, and discussed the Portage Fall Progress Report and Director updates, administrative deliverables from the Portage Business Plan, and stakeholder engagement activities since the last meeting. Followed by a roundtable discussion about the impact of Portage at stakeholder institutions/organization, and perceived gaps in the RDM community. The PAC is scheduled to meet again on May 22nd.