



Help shape Canada’s Action Plan on Open Government 2016–18 CARL Input

May 25, 2016

Thank you for the opportunity to provide our input to help shape Canada’s Action Plan on Open Government 2016-18.

As an organization representing Canada’s major research libraries, the Canadian Association of Research Libraries (CARL) lauds the government’s wide-ranging efforts to advance a policy and culture of ‘open by default’, and thus to improve information access and transparency across all areas of government. We have a particularly strong interest in the open science aspect of open government, and as such, our comments are mainly focused within the theme of “open information.”

Open science is a global trend that aims to ensure publicly funded research results, including publications and data, are shared and made available free-of-charge and without undue restriction to the world. CARL supports the federal government’s efforts towards the adoption of open science through open government on the basis that open access to publications and related data resulting from federally-funded research will accelerate research, drive innovation and benefit the economy.” [\[1\]](#)

In summary, our recommendations are that the federal government should build into its next action plan measures that would see the federal government:

- Adopt a policy that requires all research articles published by government scientists to be made publicly available;
- Adopt a set of principles, harmonized with those recently developed for university-based research, for the management of its own research data;
- Work with Portage and promote the use of the DMP Assistant with government researchers;
- Collaborate with Portage on the development of common metadata standards for datasets;
- Promote the use of unique identifiers by government researchers;
- Create a distributed repository network that is interoperable with the academic network (and globally) through the adoption of common standards; and
- Develop and implement a clear policy on the preservation of its digital material.

Open science impacts both government research and academia. It adds value to research outputs by breaking down silos, accelerating the flow of knowledge into society and facilitating cross sector and cross domain connections. Given our shared vision, it is in the interest of both our sectors to develop shared solutions wherever possible. This will ensure interoperability across our systems and internationally, and enable the greater integration of related content, leading to new discoveries and further innovation. Greater collaboration and shared approaches will also contribute to increased efficiencies and cost savings in research.

In the academic sector, the Tri-Agencies have adopted a policy for open access to publications, which requires the deposit of research articles into repositories or the publication of articles in open access journals. In Canada, the large academic libraries have a network of repositories to support this policy and we have ‘adoptive repository’ agreements in place to ensure that all academic researchers can comply with the Tri-Agency policy and make their articles available via a repository. The Canadian network, in turn, is interoperable and connected to a global network of repositories around the world. **The federal government should adopt a similar policy that requires all research articles published by government scientists to be made publicly available.**

Such a directive would make a strong statement to the community about the commitment of the federal government towards open science and would ensure that requirements are aligned across the two sectors, making it easier for researchers to comply. This policy is in line with government policies around the world, and is highly feasible because the vast majority of journals allow the deposit of articles into an open access repository. In the case where a researcher has no departmental or domain repository, CARL would be happy to extend the academic repository network to support government scientists.

Another valuable and important output of federal government research is the underlying data on which research findings are based. Two largely harmonized sets of principles have recently been produced: the Tri-agency ‘Draft Statement of Principles of Digital Data Management’ and the ‘Statement of Principles for Research Data Management in Canadian Universities.’ **The federal government should adopt a similar set of principles for the management of government-generated research data.** Over time, it should keep step with policy developments affecting the academic sector so that all spheres of research align in sound data management.

In order to share and reuse data, they must be created and maintained in a manner consistent with the goals of long-term preservation and discoverability. This involves proactive data management throughout the life-cycle of the data, beginning at the time they are first envisioned. Data management plans (DMPs) are evolving as good practice in research because they help to organize the research process and provide consistent guidelines for handling data. CARL, through the Portage Network [2], has developed an online tool to support researchers in developing DMPs, called the DMP Assistant [3]. The DMP Assistant is a bilingual tool that is freely

available to all researchers in Canada. **The federal government is welcome to work with Portage and promote the use of the DMP Assistant with government researchers.**

The academic and government sectors also face common challenges around the discovery of research data sets. Both Portage and the federal government are developing guidelines/schemas for metadata elements for scientific data sets. It would be tremendously valuable to both communities to work together on this activity. This would support greater interoperability across government and academic data and lead to new discoveries based on integration of related datasets. **The federal government should collaborate with Portage on the development of common metadata standards for datasets.**

In addition, unique identifiers (IDs) are a critical part of the evolving infrastructure that connects information, systems and processes across the research ecosystem. Research information is often scattered across systems: human resources; student records; grant management; publications databases; repositories and web pages. The adoption of unique identifiers for datasets, authors, publications and institutions allows us to develop machine-readable connections, trace the research outputs, and have a far greater understanding of the impact of the research we fund. **The federal government should promote the use of unique identifiers by government researchers.** As a concrete example, they could be encouraged to register themselves for, and subsequently use on all publications, an ORCID identifier.

There is also a need for further investment in the appropriate infrastructure and services to support long term access to the research datasets produced through publicly funded research. As noted in a recent report published by the Tri-agencies, “Currently, research data infrastructure is targeted at the project level, leaving few avenues to support long term access and reuse to the valuable research data produced in Canada. Internationally, Australia, United Kingdom, Netherlands, and the European Union are investing in such horizontal infrastructures to support leading-edge research in those regions.”^[4] **The federal government should adopt funding mechanisms to support national research data infrastructure for long term access, integration and re-use of data in the academic environment.**

The infrastructure and services for open science are distributed across institutions and departments. In this model, institutions manage content locally, but contribute to a central registry and discovery system through the adoption of common, open standards and the harvesting of metadata. Distributed systems, such as a global network of repositories, have an inherent sustainability. They increase the resilience of infrastructure and foster social and institutional flexibility and innovation. **The federal government should create a distributed repository network that is interoperable with the academic network (and globally) through the adoption of common standards.**

More broadly, open information, of which open science is a component, requires that content endures over time. In the digital realm, preservation is especially challenging as formats become obsolete and web pages come and go. In order to ensure that valuable federal government content is not lost, the federal government should implement a strategy around digital

preservation and provide guidance for federal departments to ensure the Canadian public have access to this content over the long term. As recommended in the Canadian open government assessment published by Mary Francoli from Carleton University, **the federal government should develop and implement a clear policy on the preservation of its digital material.** [5]

In conclusion, we thank the federal government again for the opportunity to participate in this consultation. We also look forward to participating in a number of other open government conversations, including the consultation on Access to Information reform.

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