

2017 Federal Budget

House of Commons' Standing Committee on Finance

JULY 22, 2016

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Executive Summary

The Canadian Association of Research Libraries (CARL) recommends that the federal government:

1. Invest \$3.4 million per year for the next five years (2017-2021) in managing and enabling increased access to research data. This would allow the Canadian research data community to develop the services, skills, and infrastructure to harness and exploit the wealth of research data in Canada, thereby strengthening Canada's competitiveness in the global arena in research, innovation and commercialism.
2. Invest \$3M annually for the next five years (2017-2021) to support a national digital infrastructure of Canada's rich documentary heritage through a nationally coordinated, collaborative digitization program led by Library and Archives Canada under the Canadian National Heritage Digitization Strategy. This initiative would allow Canadians and the world to have online access to Canada's rich cultural history.
3. Invest \$2M annually for the next five years (2017-2021) to support and extend the Federal Science Library as part of Canada's open science commitment. This will enable all federal researchers to gain access to the latest global information resources and research developments and will showcase Canadian science to the world, thereby helping ensure Canada is a leader in scientific, technical, and medical research and development.

We thank you for considering these recommendations.



Introduction

The Canadian Association of Research Libraries (CARL) is the leadership organization for Canada's research library community. The Association's members include the 29 major university libraries across the country. CARL's mission is to enhance the capacity of Canada's research libraries to partner in research and higher education, seeking effective and sustainable scholarly communication and public policy encouraging of research and broad access to scholarly information.

CARL thanks the Standing Committee on Finance for seeking the views of Canadians on their priorities for the 2017 federal budget. We are pleased to submit three recommendations for consideration. This submission focusses on the theme of productivity, although recommendations would also impact communities and jobs.

Recommendations

1. Enabling Access to Research Data

Canada's three major research funding councils invest roughly \$2 billion dollars yearly to support Canadian researchers and their research activities. Research generates a tremendous amount of data and these data are valuable. The Tri-Agency "Statement of Principles on Digital Data Management" acknowledges "The ability to store, access, reuse and build upon digital research data has become critical to the advancement of science, supports innovative solutions to economic and social challenges."¹ This is further supported by the Federal Government's G8 commitment on Open Science "to promote policies that increase access to the results of publicly funded research to spur scientific discovery, enable better international collaboration and coordination of research, enhance the engagement of society and help support economic prosperity.

¹ <http://www.science.gc.ca/default.asp?lang=En&n=547652FB-1>



Accordingly, the Government of Canada will establish a government-wide approach to open science to increase access to federally funded scientific publications and data.”²

The value to Canadians of the research conducted could be considerably increased with sustained investment in a coherent national infrastructure supporting research data management. A national infrastructure provides access to research data that is collected, managed, and preserved digitally across the country. Without this national research data management infrastructure, vast amounts of Canadian research data have been and will continue to be lost.

Both the Social Sciences and Humanities Research Council of Canada (SSHRC) and the Canadian Institutes of Health Research (CIHR) have instituted data archiving policies, but compliance has been hampered by an insufficient number of appropriate repositories and lack of necessary data management services and skills. This need for data management infrastructure was clearly articulated in the 2005 report of the National Consultation on Access to Scientific Research Data (NCASRD) conducted by the National Research Council of Canada.

Research Data Canada (RDC), launched in 2013, began work to develop a shared national strategy to address the challenges and opportunities for maximizing the benefits of Canada’s collective investment in research data. CANARIE currently provides modest funding to this coordinating organization. But now it is imperative that the Government support sustained data services for data management on a national scale. CARL recognizes and thanks the government for its commitment to invest an additional \$95 million per year to Canada’s granting councils, but there is a need for targeted support for research data management specifically.

The Leadership Council for Digital Infrastructure (LCDI) brings together leaders from the academic, research, private, and government sectors with a vision to be “at the forefront of the national effort to build an advanced Digital Infrastructure (DI) ecosystem. By accelerating research, education and innovation in all sectors, and at all levels, an integrated, inclusive, comprehensive, accessible and sustainable advanced DI ecosystem

² <http://open.canada.ca/en/content/canadas-action-plan-open-government-2014-16#ch4-2>



will help ensure that Canada maintains its competitive advantage in the knowledge economy.”³

CARL, through its Portage Network, is a participant in the LCDI, and is working to ensure that the data management practices within the research community will benefit from modernized policies, practices and tools. For example, Portage provides a data management planning tool and expert services supporting its use.

We applaud the government’s commitment to invest in the area of research data access and preservation. Canada is significantly lagging compared to other countries such as Australia and the United States who have invested \$72M and \$100M respectively over a five year period⁴ to support their research data initiatives.

CARL recommends: That the government invest \$2.8 million per year for the next five years (2017-2021) toward a national research data management infrastructure which would help to advance Canada’s position globally.

2. Investing in the digitization of Canada’s documentary heritage

Canada’s major research libraries including Library and Archives Canada (LAC) hold vast documentary collections that are vitally important about the history of our great nation and its people that supports research and learning. Although students and researchers consult physical documents, digitization promotes teaching, learning and research by enabling Canadians anywhere to access historical and cultural documents. The announcement by Library and Archives Canada in June 2016 of the Canadian National Heritage Digitization Strategy (CNHDS) is encouraging and a step forward to building a concrete nationally coordinated digitization program to develop the tools and infrastructure needed so that users from all jurisdictions are able to easily access, and our memory institutions able to properly preserve, valuable Canadian historical records. However, in order for this national strategy to succeed, sufficient and sustained investment is needed.

³ <http://digitalleadership.ca/>

⁴ See the Australian National Data Service page “ANDS attracts new funding” at <http://ands.org.au/ardc.html> and On the Sustainable Digital Data Preservation and Access Network Partners (DataNet) program, see http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12557



Other countries around the world have recognized, and are investing in, national strategies to digitize and preserve items of national importance. The Koninklijke Bibliotheek's (Netherlands) states that it will digitize 90% of all books published in the Netherlands, as well as the 'most relevant' magazines and newspapers from before 1940.⁵ Digital NZ is an initiative of the New Zealand National Library that became part of the Government's Digital Content Strategy (September 2007). Digital NZ serves as a single entry point to digitized national content from organizations such as Archives New Zealand, the Auckland University of Technology, New Zealand Government data, plus international content. Digital NZ also provides guidance and stewardship on digitization.⁶ Digisam is a Swedish coordinating secretariat for cultural heritage. It assists national heritage institutions in the development of digitization strategies to manage digitization, digital preservation, and digital access in a balanced and structured way.⁷ Launched in April 2013, the Digital Public Library of America is a non-profit entity funded by multiple foundations and government agencies in the US. It brings together the riches of America's libraries, archives, and museums, and makes them freely available to the world. It includes all forms of human expression, from the written word, to works of art and culture, to records of America's heritage, to the efforts and data of science.⁸

Unfortunately, owing to the lack of comprehensive data, it is unknown what the current status of the percentage of Canada's heritage is digitized and in the public domain. Persistent underfunding to libraries, archives, and museums in Canada have left these institutions in a state where many cannot properly measure and assess their own collections' status. According to a 2011 survey conducted by the Canadian Heritage Information Network, many respondents indicated they do not have the resources to complete an inventory.⁹

These two points alone indicate the need for a national strategy to prevent any future loss or degradation of our heritage. This is a significant undertaking in terms of

⁵ <https://www.kb.nl/sites/default/files/docs/strategicplan-2015-2018.pdf>

⁶ <http://www.digitalnz.org/>

⁷ <http://www.digisam.se/>

⁸ <https://dp.la/info/>

⁹ <http://canada.pch.gc.ca/eng/1443452309968>



resources (financial, human and technical). The CNHDS will include members from the “creators, writers and cultural communities, end users, as well as representatives from libraries, archives, historical societies, museums/galleries, universities, and the private and not-for-profit sectors.”¹⁰

While the CNHDS will seek out financial partners for support, a national initiative such as this requires critical foundational funding from the federal government to ensure this important work is not undertaken piecemeal.

Providing funding to this initiative would also provide a means for both the federal government, and Library and Archives Canada to address *Call to Action Item 69*¹¹ of the Truth and Reconciliation Commission’s report.

CARL recommends: That the government invest \$3M annually for the next five years (2017-2021) to support a national digital infrastructure of Canada’s rich documentary heritage through a nationally coordinated, collaborative digitization program led by Library and Archives Canada.

3. Open Government / Open Science

As mentioned in our recent submission to the Canada’s Action Plan on Open Government 2016–18, 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. 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. 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. CARL supports the federal government’s efforts towards the adoption of open science through open government on the basis

¹⁰ <http://www.bac-lac.gc.ca/eng/about-us/Pages/national-heritage-digitization-strategy.aspx>

¹¹ http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf



that open access to publications and related data resulting from federally-funded research will accelerate research, drive innovation and benefit the economy.¹²

This movement is of great importance to the research enterprise, but the publishing of results is only one part of the research cycle. Earlier in the process, researchers must have access to the latest global information and publications in their professional field. Such resources are critical to identifying, scoping, and undertaking new research projects.

The 2014-16 Open Government report recommended to “Develop and pilot a single online discovery and access platform for federal science library services and collections.”¹³ The Federal Science Library (FSL) is the key to making government research and resources available to researchers everywhere. A partnership of seven government departments,¹⁴ the FSL provides a single portal where users can find scientific information far beyond the holdings of their individual departmental library. The portal makes the print collections and repositories of these seven federal libraries easily searchable through a single point of entry. It puts global science, technology and health information at the fingertips of users.

This existing infrastructure can be expanded to build, migrate, and licence all government departments to make government research and information available, but this requires sufficient investment to ensure this complex suite of software, systems, and platforms are properly integrated throughout the whole-of-government.

CARL recommends: That the Government invest \$2M annually for the next five years (2017-2021) to support and extend the Federal Science Library as part of Canada’s open science commitment. This will enable federal researchers to gain access to the latest global information resources and research developments and will showcase Canadian

¹² <http://open.canada.ca/en/content/canadas-action-plan-open-government-2014-16>

¹³ <http://open.canada.ca/en/content/canadas-action-plan-open-government-2014-16-0>

¹⁴ Agriculture and Agri-Food Canada (AAFC), Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Health Canada (HC) / Public Health Agency of Canada (PHAC), National Research Council Canada (NRC), Natural Resources Canada (NRCan), Health Canada (HC) / Public Health Agency of Canada (PHAC)



science to the world, thereby helping ensure Canada is a leader in scientific, technical, and medical research and development.

Conclusion

We thank the Committee for this opportunity and would be pleased to expand upon any or all of these matters if invited to do so. For further information, please contact Susan Haigh, Executive Director, Canadian Association of Research Libraries.