Summary

It is recommended that the Government of Canada:

1. Expand the granting councils’ total base budgets by at least 10% annually for five years to address the effects of inflation and the need for a globally competitive research enterprise in Canada.

2. Raise the Digital Research Alliance of Canada funding allocation for 2025-2030 from $572.5M to $1B to enhance high-performance computing infrastructure, harness research software innovation, implement a national PIDs Strategy, deliver networked pan-Canadian data stewardship services, and expand training capacity in the Canadian DRI ecosystem.

3. Increase Library and Archives Canada’s base budget by $35M to accelerate transition of documentary heritage and federal government record-keeping to the digital environment.

4. Extend the Accessible Digital Books—Support for Organizations program within the Canada Book Fund for another 5 years at the same level of $22.8M to assist the Canadian publishing industry to create born-accessible materials for people with print disabilities.

5. Provide new funding of $20M divided into two $10M funding initiatives spread over three years through targeted federal agencies, to foster increased production and use of Open Educational Resources in post-secondary education. In addition, assign $10M of the $1.4B already allocated to the Action Plan for Official Languages: 2023-2028 to support bilingual OER and the advancement of Official Languages.

6. Ensure that an AI and Data Commissioner is sufficiently resourced to monitor developments, respond to issues in an expedient and effective manner, and support AI literacy and training in Canada.
Introduction

The Canadian Association of Research Libraries (CARL) is the leadership organization for Canada’s research library community. The Association includes the 29 largest 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.

Recommendations

Expand investment in Canada’s granting councils
Supporting the development and delivery of a strong research agenda is necessary to ensure Canadians benefit from advances in research and innovation to compete globally.

The 2023 Report of the Advisory Panel on the Federal Research Support System (The Bouchard Report) states “…Canada will fall behind if we cannot evolve our research support to ensure that it continues to meet the needs of the modern research enterprise in a world where countries use their own scientific potential as a national strategic asset. We must continue to examine ways to enhance the system of supports to ensure that Canada’s research and talent remain among the best in the world and that we are positioned to tackle challenges and seize opportunities facing us today and in the future.” ¹

The federal granting councils are a crucial component of university research in Canada, and these agencies are key to driving research innovation and development. Unfortunately, Canada is falling behind our peer nations by continually underfunding research and science.

As noted in The Bouchard Report, the US, Japan, Australia, UK, and Germany (Canada’s peers) have invested significantly in research and science as a national pillar of interest. The US has committed US$200 billion over ten years for science; Japan created a US$87 billion fund devoted to science leadership, and the UK increased its annual government investment in R&D to £20 billion by 2024-25.² However, in

² Ibid https://ISED-ISDE.canada.ca/site/panel-federal-research-support/en/report-advisory-panel-federal-research-support-system#70
Canada, increased demand, stagnant funding, and soaring inflation, have resulted in reduced budgets for critical research, which in turn, further lowering already low success rates for funded research applications.

**Recommendation:** Expand the granting councils’ total base budgets by at least 10% annually for five years to address the effects of inflation and the need for a globally competitive research enterprise in Canada.

**Advancing Canada’s Research Capacity by Supporting a National Digital Research Infrastructure**

To stay competitive in a big challenges/big data global context, Canada needs to plan for the intense research required for a sustainable and successful future. We must invest with a vision to improve access to integrated digital research infrastructure.

The [Digital Research Alliance of Canada](#) (the Alliance) brings together experts in advanced research computing, research data management and research software to accelerate discovery by transforming how digital research infrastructure is designed, managed, sustained and delivered to Canada’s researchers and their global collaborators.

In March 2023, Innovation, Science and Economic Development Canada (ISED) approved funding of up to $228.3 million over fiscal years 2023-25 for digital research infrastructure (DRI) initiatives, which was good news for Canada’s researchers. Like CANARIE and the Canada Foundation for Innovation – both of which fund other parts of research infrastructure – it is imperative that Alliance funding be continued with a stable, increased allocation beyond 2025.

In addition to the substantial investment needed for networked high-performance computing, national research infrastructure requires effective research data management (RDM) so that data are FAIR (Findable, Accessible, Interoperable and Reusable). Canada can also gain major efficiencies by streamlining the research application, funding, and evaluation ecosystem by implementing a national Persistent Identifiers (PIDs) strategy. Training also remains a critical need; support for the development and delivery of a national curriculum is integral to developing research capacity and strengthening technical knowledge and practice across the entire digital research system.

**Recommendation:** Raise the Digital Research Alliance of Canada funding allocation for 2025-2030 from $572.5M to $1B to enhance high-performance computing infrastructure, harness research software innovation, implement a national PIDs
Increased Funding to Transform Services, Bolster Digital Delivery, and Modernize Digital Record-keeping at Library and Archives Canada

The *Library and Archives Canada Act* stipulates that the institution is “to be the permanent repository of publications of the Government of Canada and of government and ministerial records that are of historical or archival value.” As such, Library and Archives Canada (LAC) holds archival records for 107 active and over 100 defunct government departments. In addition to this archival function, The Act also states that LAC is “(a) to acquire and preserve the documentary heritage” and “(b) to make that heritage known to Canadians and to anyone with an interest in Canada and to facilitate access to it.” But LAC has not been resourced sufficiently to make the requisite shift to a digital delivery environment.

The Treasury Board President’s December 2021 Mandate Letter urges the Minister to find ways “to support the government’s leveraging digital delivery approaches throughout the development of major projects” and “continuing leadership to update and replace outdated IT systems and modernize the way government delivers benefits and services to Canadians.” LAC has had no increase to its base budget for more than a decade yet has seen a significant increase in the number of Access to Information and Privacy (ATIP) requests related to its government records. The *April 2022 Information Commissioner’s report* proposes solutions to LAC’s digital and analogue records operations to help meet the demand for access within reasonable turnaround times. Among the recommendations are increased funding and adopting an open-by-default policy for all but the most sensitive records at the time of records transfer.

Aside from government record-keeping activities, there is important, ongoing development of LAC’s collections to better reflect the great diversity of Canada’s voices. The institution has implemented an *Indigenous Heritage Action Plan* to support reconciliation efforts between the Government of Canada and First Nations, Inuit, and the Métis Nation. LAC is supporting the modernization of the way government delivers benefits and services to Canadians through its *reassessment and reimagining of services that will be focusing on user needs and expectations*, and developing a new delivery model that will demonstrate the vision put forward for the future Ādisōke facility, a joint project between LAC and Ottawa Public Library. These necessary transformations require increased and sustained investment to build the infrastructure.
Recommendation: Increase Library and Archives Canada's base budget by $35M to accelerate transition of documentary heritage and federal government record-keeping to the digital environment.

Continued support for Accessible Publishing

Building on commitments made during the 2021 federal election, the mandate letter for the Minister of Employment, Workforce Development and Disability asks the Minister to prioritize the government’s “commitment to support national disability organizations to build capacity and partner in efforts to eliminate systemic barriers and to permanently fund support services that ensure equitable access to reading and other published works for Canadians with print disabilities.” This directive supports the promises made by the Liberal Party in 2021 “to make permanent funding to support services that ensure equitable access to reading and other published works for Canadians with print disabilities so that more Canadians are able to participate in these activities fully.”

Providing broad and equitable access to information and scholarly knowledge is the core mission of libraries. However, an industry-led solution to providing accessible reading materials will not satisfy the demand of those requiring accessible reading services.

Budget 2019 announced an investment of $22.8 million over five years to develop the sustainable production and distribution of accessible digital books (eBooks and audiobooks) by independent Canadian publishers through the Canada Book Fund. Funding for this program ends in March 2024 – but the problem is not yet solved. Currently, less than one in ten published works in Canada is produced in an accessible format for Canadians with print disabilities, and the percentage of accessible works in French and Indigenous languages is even smaller.

CARL is working to develop broader and more equitable access for these individuals and to contribute to Canada's commitment to the 2030 Sustainable Development Goals. A joint project between CARL and the Association of Research Libraries (ARL) on the implementation of the Marrakesh Treaty in libraries in North American libraries showed that there remains a significant gap in the availability of materials for people with print disabilities. This work must not stop until all born-digital materials are born accessible.

By continuing to fund the production of born-accessible works, the Canadian government will be committing to its goals under the Marrakesh Treaty and will address the commitments made in both the Minister's letter and the Liberal Party of Canada's Disability Statement.
**Recommendation:** Extend the *Accessible Digital Books—Support for Organizations* program within the Canada Book Fund for another 5 years at the same level of $22.8M to assist the Canadian publishing industry to create born-accessible materials for people with print disabilities.

**Federal Support for Canadian Open Educational Resources (OER)**

Academic libraries recognize that the use of OER in educational contexts provides numerous benefits to both students and instructors. The cost of textbooks and other course materials can present major financial hurdles for students. With textbooks costing students between $800-$1,000 per year, some students are forced to make difficult financial choices, especially now with inflation and cost of living increases.\(^3\) For post-secondary students and faculty, the primary benefit of OER is access to cost-free learning materials, as well as access to online resources that are created with pedagogical innovation in mind. Investment in OER has repeatedly been found to produce savings for students and their families: estimated student savings from British Columbia exceed $31.5 million, and eCampus Ontario notes an average of $101 in savings for each student for each course they take that uses an OER.

While we recognize that education is largely a provincial and territorial jurisdiction, CARL and other post-secondary education stakeholders believe there remains an important responsibility for the federal government to foster national initiatives to support OER. As a founding UNESCO member, Canada is responsible for upholding and advancing the principles outlined in the *UNESCO Recommendation on OER* (UNESCO, 2019). It calls for building supportive policies for OER, which happens most effectively at the federal level.

We propose that a federal commitment to OER be administered through several federal departments or agencies in a funding cycle of a three-year pilot funding:

- A $10M pilot program to foster OER creation and enable deployment of common production and discovery infrastructure, administered through the Social Sciences and Humanities Research Council on behalf of the tri-agencies.
- An additional $10M for Indigenous OER to 1) build capacity for Indigenous communities to develop their own OER, including Indigenous language materials, administered by Indigenous Services Canada; and 2) develop OER related to Truth and Reconciliation, relevant to both Indigenous and non-Indigenous Canadian settlers, administered by Crown-Indigenous Relations and Northern Affairs Canada.

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- Out of the existing $1.4B allocated to the Action Plan for Official Languages: 2023-2028\(^4\), earmark $10M under the pillar “Promoting Lifelong Learning Opportunities” to support bilingual OER and the advancement of Official languages, administered by Canadian Heritage.

**Recommendation:** Provide new funding of $20M divided into two $10M funding initiatives spread over three years through targeted federal agencies, to foster increased production and use of Open Educational Resources in post-secondary education. In addition, assign $10M of the $1.4B already allocated to the Action Plan for Official Languages: 2023-2028 to support bilingual OER and the advancement of Official Languages.

**Artificial Intelligence Support**

*Bill C-27*, the Digital Charter Implementation Act is currently under review by the Standing Committee on Industry and Technology. While the Government considers amending or extracting the portion that is the proposed Artificial Intelligence and Data Act - and we agree that hasty legislation could result in over-regulation - we believe it is important to retain two key tenets of the bill:

- Ensuring high-impact AI systems are developed and deployed in a way that identifies, assesses, and mitigates the risks of harm and bias to Canadians; and
- Establishing an AI and Data Commissioner to support the Minister of Innovation, Science and Industry in fulfilling ministerial responsibilities under the Act.

AI brings a host of opportunities and there is a necessity for a balanced approach to the intersection of copyright law and AI. Hasty copyright legislation could negatively impact research endeavours in Canada. These issues are significant from a public policy perspective, and with the speed at which artificial intelligence and machine learning progress, the government must ensure that the office of the AI and Data Commissioner is sufficiently resourced to monitor developments, respond to issues in an expedient and effective manner, and support AI literacy and training in Canada.

**Recommendation:** Ensure that an AI and Data Commissioner is sufficiently resourced to monitor developments, respond to issues in an expedient and effective manner, and support AI literacy and training in Canada.

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