

Digital Research Alliance of Canada

COLLABORATING ON AN INTEGRATED DIGITAL RESEARCH INFRASTRUCTURE LANDSCAPE

ANNUAL REPORT 2022-2023

Funded by the Government of Canada



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A MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

I am pleased to present the Digital Research Alliance of Canada's 2022-23 Annual Report.

As a member-based, nonprofit organization, the Alliance supports thousands of researchers across Canada in every field of research, by integrating, championing and funding infrastructure and activities in advanced research computing, research data management and research software.

In 2022-23, the Alliance accomplished several milestones defined in its contribution agreement with the Government of Canada.

In April 2022, the Alliance assumed leadership of funding advanced research computing infrastructure and operations from the Canada Foundation for Innovation (CFI) and Compute Canada, as well as leadership of research data management and research software from CANARIE.

In September 2022, the Alliance submitted New Service Delivery and Funding Models as well as a Multi-Year Funding Proposal for 2023-25 to Innovation, Science and Economic Development Canada (ISED) following the development of the Canadian Digital Research Infrastructure Needs Assessments and extensive collaboration with Canada's digital research infrastructure ecosystem.

That same month, the Alliance entered into an agreement with ISED regarding the Pan-Canadian Artificial Intelligence Strategy. In March 2023, ISED awarded funding of up to \$228.3 million for the 2023-25 period for digital research infrastructure initiatives that will directly benefit Canada's researchers.

The Alliance's work would not be possible without the support of our Members and funding from the Government of Canada through ISED. Their support allows the Alliance to continue working towards an integrated, equitable and sustainable digital research infrastructure ecosystem for all researchers.



George Ross Chief Executive Officer Digital Research Alliance of Canada

A MESSAGE FROM THE CHAIR OF THE BOARD



On behalf of the Board of Directors, it is my pleasure to present the Digital Research Alliance of Canada's 2022-23 Annual Report.

As part of the Government of Canada's national Digital Research Infrastructure Strategy, the Alliance is committed to fostering excellence in digital research infrastructure for the benefit all of researchers in Canada.

The Alliance works with ecosystem partners and stakeholders across the country to provide Canadian researchers with the tools they need to conduct leadingedge research, develop a cohesive national vision for future investments, and create an agile digital research infrastructure ecosystem that responds to emerging research needs and opportunities. The past year has been a formative period of intense activity. Throughout 2022-23, the Alliance focused on providing quality service to all researchers, optimizing organizational structure and enhancing capacity, working with partners for an integrated digital research infrastructure landscape, and maximizing public investments to accelerate innovation.

I invite you to read the report and learn more about the work of the Alliance. The future is bright for researchers in Canada, and the Alliance is here to support them and position Canada as a global leader in innovation.

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Martha Whitehead Chair, Board of Directors

ABOUT THE ALLIANCE

The Digital Research Alliance of Canada (the Alliance) is a national not-forprofit membership-based organization playing a critical role in helping to advance the establishment of a researcherfocused, accountable, agile, strategic and sustainable digital research infrastructure (DRI) ecosystem for Canadian researchers.

Established in 2019, the Alliance works with other DRI ecosystem partners and stakeholders across the country to fulfill its mandate to coordinate and fund activities related to advanced research computing (ARC), research data management (RDM) and research software (RS), and to advance the national DRI Strategy. The Alliance's membership is composed of more than 140 of Canada's top universities, colleges, research hospitals and institutes, and other leading organizations in the DRI space. By working closely with local, regional and national stakeholders, the Alliance will ensure that researchers across disciplines have access to the digital tools, services and infrastructure they need to conduct cutting-edge research.

The Alliance is funded by the Government of Canada through ISED.

VISION, MISSION, VALUES AND GUIDING PRINCIPLES

Our vision

To catalyze world-class Canadian research for the benefit of all.

Our mission

As a trusted and inclusive partner, the Digital Research Alliance of Canada fosters national and global collaboration to provide researcher-centric, sustainable and integrated digital research infrastructure.

Our values

- Heartfelt Humility We cultivate safe spaces through mutual recognition and respect.
- Fearless Engagement
 We seek out new perspectives and celebrate alternate viewpoints.
- Unwavering Honesty We act with integrity.
- Steadfast Accountability We honour our commitments and outcomes.
- Authentic Collaboration We build dynamic relationships.

Guiding principles

To ensure we meet the longterm DRI needs of Canada and to help deliver on our mission, we are guided by six principles:

- Researcher-Centric
- Striving for Excellence
- Collaborative
- Service-Oriented
- Accountable and Transparent
- Diverse and Inclusive



BOARD OF DIRECTORS

The Alliance Board of Directors plays a fundamental role in the governance of the organization. The Directors reflect the geographic and linguistic diversity of the country as well as the complexity of the DRI ecosystem. Directors have extensive experience and expertise in DRI domains including ARC, RDM and RS. The Board is committed to the principles of equity, diversity, inclusion and accessibility (EDIA) as fundamental to all aspects of the Alliance's operations, including its hiring processes and interactions.



MARTHA WHITEHEAD Chair



GAIL C. MURPHY Vice-Chair



DALE ASKEY Director



CONNIE BONELLO Director



DONNA BOURNE-TYSON Director



GUILLAUME BOURQUE Director



JENNIFER DOYLE Director



MELISSA JUST Director



CHRIS LUMB Director



DAVID MAGEE Director



KELLEY MCKINNON Director



ROYA REZAIE Director



RANDALL SOBIE



JEFFREY TAYLOR Director



DENIS THÉRIEN Director

RESEARCHER COUNCIL

The Alliance Researcher Council was established in 2020 to facilitate regular consultation between the Alliance and researchers across Canada, and to help the Alliance in establishing a researcher centric DRI ecosystem. Members of the Researcher Council represent a range of cultures, languages, identities, expertise and regions, as well as a broad array of academic disciplines and institutions, ensuring that the diversity of researcher voices is represented to the Alliance.

As a key component of the Alliance, the Researcher Council provides advice to the Alliance Management and Board of Directors on researcher needs for digital research infrastructure and services. The Researcher Council also advises the Alliance on the development of its strategic vision and priorities to best serve the Canadian research community.



RANDALL SOBIE Chair University of Victoria



MARIE-JEAN MEURS Vice-Chair Université du Québec à Montréal



WAHAB ALMUHTADI Algonquin College



GIRMA BITSUAMLAK Western University



AMOL VERMA Vice-Chair Unity Health Toronto



BRUNO BLAIS Polytechnique Montréal



SUSAN BROWN University of Guelph



EMMANUEL CHÂTEAU-DUTIER Université de Montréal



CONSTANCE CROMPTON University of Ottawa



CARL D'ARCY University of Saskatchewan



CAROLYN

CÔTÉ-LUSSIER

Institut national de la

recherche scientifique

REBECCA DAVIS University of Manitoba



PHILIPPE DESPRÉS Université Laval



CATHERINE LOVEKIN Mount Allison University



ERIN DICKIE Centre for Addiction and Mental Health



ANNE MARTEL Sunnybrook Research Institute



BENOÎT DUPONT Université de Montréal



TERRY PECKHAM Saskatchewan Polytechnic



LAURA ESTILL St. Francis Xavier University



REBECCA PILLAI RIDDELL York University



BENJAMIN FUNG McGill University



PEKKA SINERVO University of Toronto

DIGITAL RESEARCH INFRASTRUCTURE BY THE NUMBERS









+500 DATASET SUBMISSIONS

174 TB VOLUME

9 SPECIAL COLLECTIONS

+800 REGISTERED RESEARCHERS

+85,000

TOTAL DATASETS

98 SOURCE REPOSITORIES

+18,000 片

MAPPED DATASETS







Top subject categories

- Earth and Environmental Sciences (47%)
- Social Sciences (23%)



+15,600 REGISTERED RESEARCHERS +11,000 DATA MANAGEMENT PLANS CREATED

Digital Research Alliance of Canada | Annual Report 2022–2023



NATIONAL ARC PLATFORM





Active users by discipline

- Biological and Life Sciences — 4,235
- Engineering 3,876
- Computer and Information Science — 3,601
- Physics 1,904
- Medical Science 1,855
- Chemistry and Biochemistry — 1,796

- Environmental and Earth Science — 1,290
- Mathematics and Statistics — 1,037
- Astronomy 651
- Social Science 450
- Psychology 358
- Business 223
- Humanities 217

RESOURCE ALLOCATION COMPETITION

467,999 CPU CORE YEARS REQUESTED 216,164 CPU CORE YEARS ALLOCATED

192,363 TB STORAGE REQUESTED 153,639 TB STORAGE ALLOCATED

9,826 GPU YEARS REQUESTED 2,012 GPU YEARS ALLOCATED

35,618 VIRTUAL CPU YEARS REQUESTED **27,313** VIRTUAL CPU YEARS ALLOCATED



DATACITE CANADA CONSORTIUM

+660,000 TOTAL DOIS REGISTERED

64 TOTAL CURRENT MEMBER ORGANIZATIONS

- 74 TOTAL CURRENT REPOSITORIES
- 25,794 DOIS REGISTERED IN 2022-23

NATIONAL AND INTERNATIONAL ENGAGEMENT

Formal Canadian partners

- Alberta Machine Intelligence Institute (AMII)
- Canadian Institute for Health Research (CIHR)
- Canadian Research Knowledge Network (CRKN)
- Canadian Institute for Advanced Research (CIFAR)
- Mila Quebec Artificial Intelligence Institute
- National Research Council (NRC)
- Statistics Canada
- Vector Institute

Formal international partners

- CSC Finland
- European Open Science Cloud (EOSC) Association
- Hyperion/HPC User Forum
- Korean Institute for Scientific and Technical Information (KISTI)
- Research Data Alliance (RDA)

- Research Software Alliance (ReSA)
- San Diego Supercomputing Center
- World Data System International Technology Office (WDS-ITO)

In-process international partners

- Australian Research Data Commons (ARDC)
- EGI Federation
- INESC TEC
- La Referencia
- National Center for Supercomputing Applications (NCSA)
- New Zealand eScience Infrastructure (NeSI)
- Open Science Grid (OSG)
- Pittsburgh Supercomputing Center (PSC)
- RedCLARA
- SCALAC (Advanced Computing System for Latin America and the Caribbean)

Canadian partners representing international organizations

- DataCite Canada
- ORCID-CA
- RDA in Canada

International initiatives

- CODATA
- DataCite
- Global Biodata Coalition (GBC)
- National Institute for Standards and Technology (NIST)
- Research Activity iD (RaID) Organization
- Society of Research Software Engineering (SocRSE)
- WDS International Program Office (WDS-IPO)

FINANCIAL MATTERS



Audited financial statements for the year ended March 31, 2023, have been prepared in accordance with generally accepted accounting principles and have been approved by the Board of Directors. For the audited financial statements, please refer to <u>Appendix C</u>.

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STATEMENT OF TOTAL FUNDING RECEIVED

The total funding received by the Recipient from all sources in the previous fiscal year, including all Canadian government assistance, to support Eligible Activities is presented in the table below.

| | (in \$K) |
|-----------------|----------|
| Source | Amount |
| ISED | \$31,512 |
| Membership Fees | \$618 |
| Interest Income | \$221 |
| Other Revenue | \$156 |
| TOTAL | \$32,507 |

In fiscal year 2022-23, the Alliance received \$28,209K in funding from ISED and carried over \$5,121K from the previous fiscal year. Of that amount, \$31,512K was spent on eligible costs and thus recognized into revenue

EXPENSES

The following is the amount of the Contribution directed towards Eligible Costs in the previous fiscal year, detailed by category of Eligible Activities.

| | (in \$K) | | | |
|---|--------------------------|--------------------------------------|---------------------------|----------|
| Eligible Activities | Programs Expenditures | National Services Expenditures | Operating Expenditures | Total |
| Leading and Coordinating the Governance of the DRI Ecosystem | | \$2,176 | \$563 | \$2,739 |
| ARC Infrastructure Acquisitions and Operations | \$9,791 | \$998 | _ | \$10,789 |
| ARC Resource Allocations | | \$444 | | \$444 |
| Support for Highly Qualified Personnel | \$6,688 | \$259 | | \$6,947 |
| National Data Management Activities | \$3,172 | \$1,663 | | \$4,835 |
| National Research Software Activities | | | | — |
| Cybersecurity | \$451 | \$776 | | \$1,227 |
| Management and Administration | | \$218 | \$4,314 | \$4,532 |
| TOTAL | \$20,102 | \$6,533 | \$4,877 | \$31,512 |

LEVERAGED FUNDING

Presented in the table below is the funding leveraged from other sources (if applicable) in the previous fiscal year to support Eligible Activities and Eligible Projects.

| | (in \$K) | | |
|-----------------------------------|--------------|----------------------|----------|
| | Expenditures | Leveraged funding | Total |
| Programs Expenditures | \$20,102 | \$14,963 | \$35,064 |
| National Services Expenditures | \$6,533 | | \$6,533 |
| Operating Expenditures | \$4,877 | | \$4,877 |
| TOTAL | \$31,512 | \$14,963 | \$46,475 |



STATEMENT OF THE OBJECTIVES FOR THE 2022–23 FISCAL YEAR

The following were the Alliance's objectives from April 1, 2022, to March 31, 2023, presented by strategic theme. The focus was on transitioning into the new role as service provider, service coordinator and funder in DRI.

Advanced Research Computing

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|---|--|---|
| Design and implement risk mitigation measures to prevent service disruption for ARC services. | Funded critical maintenance at three host sites. | Develop a risk mitigation plan to address key services and operations across the ARC National Platforms. |
| Develop a national strategy for the use and support of cloud services. | Drafted a national strategy for the use of cloud services. Investigated, documented and validated research use cases and costs for commercial cloud, vs community cloud, vs traditional ARC services. | Revise the national strategy after consultation with the Researcher Council. |
| Invest in additional traditional and cloud computing and storage resources, and develop a sustainable financial plan for its maintenance and continual renewal. | Evaluated the demand of traditional and cloud computing resources and existing research infrastructure assets. Developed a proposal for multi- year investments in research infrastructure including high performance computing and storage resources with sustainability plans built in. | Collaborate with the host sites to launch the procurement process. |

Equity, Diversity, Inclusion and Accessibility

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|--|--|--|
| Establish guidelines, policies, practices and metrics to ensure compliance with the Alliance's foundational EDIA principles in all decisions and activities. | Formed a working group that focuses on establishing guidelines and metrics. Developed EDIA benchmarks for continuous evaluation of service provision to different research segments. | Develop a plan of activities to increase awareness and alignment of foundational EDIA principles. |
| National DRI | | |
| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
| Improve the current resource allocation competition (RAC) process for DRI resources to better meet the needs of researchers. | Launched RAC 2023, which includes changes to address key operational issues based on previously conducted analysis. | |
| Review the current risks of the existing user database from Compute Canada. | | Identify the current risks and enhancement opportunities within the system and develop a plan to implement enhancements. |
| Improve the security and protection of DRI systems and services. | Completed the Vulnerability Management Project. Offered Cybersecurity Training and Awareness workshops and resources for the Alliance and the Federation. | Implement Multi-Factor Authorization across all users in the Federation. |

National Service Delivery Model and Funding Model

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|--|---|---|
| Establish a service classification model to identify the scope of services at each layer (national, regional and local) along with the responsibility and funding requirements and effective service delivery. | Developed a service classification framework to determine DRI service offerings. Developed an evidence-based cost eligibility framework for cost matching of ARC, RDM and RS activities within DRI. Developed a funding model that informs how investments in service delivery are shared across funders. Develop Service Level Agreements with each service provider funded by the Alliance. | |
| Promote access to and awareness of DRI tools and services. | Leveraged user experience best practices in the design of services and workflows. | Develop and launch a DRI service catalogue. Create awareness campaigns to increase use of national DRI services. |
| Develop formal funding processes and agreements between federal and provincial funders for national, regional and local services. | Through the 2023-25 Multi-Year Funding Proposal, created a harmonized approach to funding both capital expenditures and operating expenditures. Working with ecosystem partners, developed a plan to implement the interim service delivery model and funding model. Further define roles and responsibilities across different service layers in the ecosystem. | Engage with ecosystem partners to plan the next stages of the service delivery model and funding model. Partner for long-term investment into DRI from provincial governments and institutional funders. |
| Develop a portfolio of partnerships and create a model for selection and assessment of partner performance to maximize the DRI service offering across the ecosystem. | Developed an initial set of partnership agreements and memberships with international organizations that will be foundational as we further build a portfolio of partnership opportunities. Working with DRI ecosystem partners, complete the design of a new decision and information workflow model across the DRI ecosystem. Formalize an Investment Governance Framework to co-decide, co- prioritize and co-approve future DRI investments. | |

Research Data Management

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|---|--|-----------------|
| Develop programs to support the adoption of best practices for RDM throughout the research lifecycle. | Data Champions program was completed. FRDR Sensitive Data Pilot Project was launched. Discovery Service was redesigned to improve the user experience. New redesigned Discovery Service (Lunaris) launched. | |

Research Software

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|--|---|-----------------|
| Develop programs to support the adoption of best practices for RS management. | Promoted the application of FAIR4RS principles in RS-related engagements. | |

Self-determination and data sovereignty for Indigenous Peoples in Canada

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|--|--|-----------------|
| Introduce measures supporting Indigenous data sovereignty and advance access and use of DRI. | Provided access to OCAP® training for Alliance employees, Board members and Researcher Council members. The training is now embedded in orientation of new hires. | |
| | Developed a plan for engagement to ensure appropriate identification and understanding of First Nations, Métis and Inuit researcher priorities. | |
| | Ongoing work to advance access and use of DRI for Indigenous Peoples in Canada across all programs delivered by the Alliance. | |

The Alliance's Transition into DRI

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|--|--|---|
| Develop, communicate and execute the Alliance's transition into the role of a DRI service provider, service coordinator and investor in DRI, including the responsibilities held by Compute Canada and the Federation. | Communicated updates and changes to the impacted stakeholders as the transition progressed. Developed processes and procedures internally to support the Alliance's role as an investor in DRI. | Assess the current structure of ARC, RS and RDM groups, teams and committees to align towards a DRI focus. |

Training and Development

| OBJECTIVE | ACCOMPLISHED IN 2022-23 | TO BE COMPLETED |
|---|---|-----------------|
| Develop a unified DRI training platform and programming in partnership with regional organizations to promote the programs and tools available to researchers across Canada. | Working with national and regional training providers, compiled a list of training requirements for researchers across Canada. An approach for the development of a national DRI training platform was submitted with the Multi-Year Funding Proposal. | |

DEDICATED COMPUTING CAPACITY FOR ARTIFICIAL INTELLIGENCE CONTRIBUTION PROGRAM

In September 2022, the Alliance entered into an agreement with ISED in relation to the Pan-Canadian Artificial Intelligence Strategy.

Under this agreement, ISED will provide up to \$38,999K to the Alliance to fund computing capacity for artificial intelligence researchers. In turn, the Alliance will work collaboratively with partners that include Al institutes and CIFAR to achieve the following objectives:

 Align investments and maximize impact in terms of increasing capacity and availability of dedicated AI ARC.

- Support the retention and development of highly qualified personnel (HQP) necessary to operate and access dedicated AI ARC.
- Safeguard dedicated Al ARC resources.
- Demonstrate benefits for the broader research community.

The activities from October 2022 to March 2023 have predominantly consisted of planning and coordinating procurement of the new systems, as well as preparing for coordinated operation as an integrated national platform. The activities planned for April 2023 to March 2024 will focus on coordinating procurement, installation and initial operations of the new compute resources for AI researchers. The Alliance, AI Institutes, host sites and federation national teams will work on multiple operational components to ensure that the new national AI platform can deliver a coordinated service to AI researchers once the new hardware is installed.



A STATEMENT OF OBJECTIVES FOR THE CURRENT FISCAL YEAR AND FOR THE FORESEEABLE FUTURE



and 2024–25. First, deliver on the initiatives presented in the Muti-Year Funding Proposal (MYFP) that were approved and funded by ISED. These are mainly focused on maintaining and improving the services offered to the research community with a refresh of the compute and storage infrastructure, improvements to various services and the development of a Research Software Strategy. Second, review and improve our governance and funding models. Finally, prepare a funding proposal for the years 2025-30.

In addition to the activities being carried over from the previous year, the Alliance plans to advance several initiatives that address critical needs, service provision and upskilling. These initiatives are presented by strategic theme.

ADVANCED RESEARCH COMPUTING

Renewal of Aging ARC/HPC Infrastructure

Current compute capacity only covers 50% of CPU and 25% GPU of Canadian researchers' annual requests. The Alliance will replace node-for-node compute resources and a capacity replacement for storage on the four national high performance computing (HPC) systems nearing endof-life. Fach Host Site will undertake a competitive procurement process for its respective funding envelope. In this way, the overall ARC capacity will keep pace with the estimated growth of researchers' annual requests.

Renewal of Aging Cloud Infrastructure

Expiring community cloud compute, storage and network equipment need to be replaced to maintain current levels of service and avoid unrecoverable loss of highly valuable research data due to aging systems and cybersecurity threats.

Data Centre Capacity Upgrade

The electrical capacity of the data centre hosting the national systems Béluga, Béluga-cloud and Narval is now nearly maxed out, limiting Calcul Québec's ability to accept additional systems. The Alliance will support the expansion of the electrical capacity up to 5.0 MW, including the installation and connection of an additional transformer, switchboard and cooling units, among others.

Supporting Researchers Using Quantum Computers

Quantum computing is a priority for our regional partner organizations. The Alliance will support them in increasing the access and use of Canadian researchers who want to test and apply quantum technologies. Staff will be onboarded at participating institutions to assist researchers in framing research problems and developing quantum-enabled RS, and to provide overall assistance to researchers who are innovating on quantum devices.

5.0 MW ELECTRICAL CAPACITY EXPANSION

EQUITY, DIVERSITY, INCLUSION AND ACCESSIBILITY

The Alliance has established a framework that promotes and advances EDIA within the organization. As it moves forward, it will continue to align learning, processes and practices to its EDIA framework.

The Alliance incorporates an EDIA outlook into its stakeholder and community interactions to reach across the DRI ecosystem. The goal is to provide equitable access to the resources, tools and services that the Alliance provides to the diverse researchers and organizations it serves.

SERVICE AND FUNDING MODEL

Funding Model

The Alliance has developed an interim funding model that reflects the shared responsibility of funding DRI activities and services between the federal government, provinces and institutions. Under this cofunding model, the Alliance acknowledges the expectations for a clear and accountable governance structure that ensures that regional and institutional priorities are reflected in any initiatives that require co-funding. This will be a priority for the Alliance for the 2023–24 period.

Service Model

Better integration among new and existing DRI services and infrastructure is also a priority for the next year. The Alliance will collaborate with service delivery partners and establish clear roles and responsibilities, avoiding overlap as much as possible. In this way, the Alliance aims to facilitate researchers' timely access to the tools they need to conduct their work. This will require the adoption of shared standards, schemas and certifications for trusted interoperability.

"... the Alliance aims to facilitate researchers' timely access to the tools they need to conduct their work."

NATIONAL AND INTERNATIONAL ENGAGEMENT

National

The Alliance maintains three types of relations at the national level. First, with CANARIE, the Alliance's partner in the DRI ecosystem with which it does joint planning and reporting to ISED. Second, with other funding agencies, mainly CFI, the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council of Canada (SSHRC). Genome Canada and the Canadian Institute for Advanced Research, to harmonize funding programs and to partner in joint initiatives, such as the Pan-Canadian Al Compute Environment, the Pan-Canadian Human Genome Library and CFI contributed systems. Third, with other national organizations working on joint initiatives and participating in working groups on topics of mutual interest, including the AI institutes, National Research Council Canada, Statistics Canada, Canadian Research Data Centre Network (CRDCN). Canadian Research Knowledge Network (CRKN) and the **Business Development Bank** of Canada (BDC).

International

Engaging with international organizations is key to the success of the Alliance, and by extension Canada, in the DRI ecosystem. Developing international partnerships positions the Alliance as a leader on the global stage, facilitates the adoption of best practices on multiple levels, and enables the integration of national and international processes and requirements into service offerings. The Alliance has developed key international partnerships in all three DRI areas with organizations including the Research Data Alliance, World Data System, Research Software Alliance, CSC Finland and the San Diego Supercomputing Center. The focus will be on reviewing progress, refining some partnerships with focused initiatives and developing new partnerships that will directly benefit Canadian researchers. With these as a foundational framework of international collaboration, the Alliance will develop a longterm International Relations Strategy, along with key deliverables for the remainder of the current mandate.

NATIONAL DRI

Cybersecurity

Canadian researchers depend on critical infrastructure functioning reliably, and cybersecurity threats can impact a researcher's ability to innovate. To gain and maintain effective work, a strong cybersecurity strategy, with layered security controls for technology, processes and people to detect, prevent and respond to cybersecurity events, is required. The Alliance will hire additional staff to support the development and delivery of the Cybersecurity Roadmap and Program.



RESEARCH DATA MANAGEMENT

Stabilization and Growth of the DMP Assistant

The DMP Assistant is an essential tool to assist researchers in preparing data management plans (DMPs) and fulfilling RDM requirements for Tri-Agency funding. The Alliance will provide extensions to the DMP Assistant to support machine-actionability and linkages, an improved user experience and interface, and explore its migration into Alliance infrastructure. These improvements will support the transition of the service to national infrastructure thereby making the platform more stable, secure and scalable.

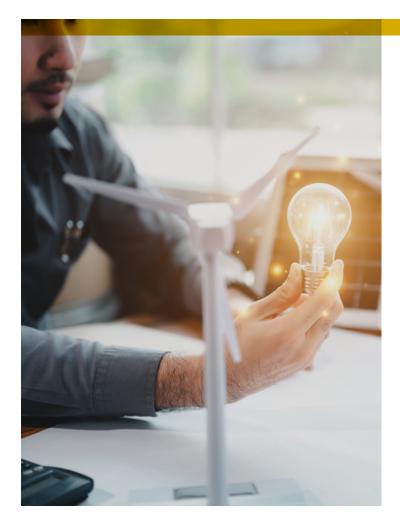
Expansion of Lunaris

The Alliance will hire two new staff for the RDM service team to expand the service of Lunaris, the national platform that indexes datasets from over 100 Canadian repositories, offering both text- and map-based search to over 80,000 datasets. Additional discovery capabilities will also be enhanced to continue to de-silo data found in local and regional repositories and expand partnerships with other research organizations.

Controlled Access Management for Research Data Initiative

This project will address infrastructure and policy barriers to allow for appropriate and secure data deposit and re-use, and prevent unnecessary research data destruction. The Alliance will achieve this through a collaboration among service providers. researchers and institutions aimed at aligning and co-developing service policies and institutional processes that optimize sensitive research data workflows. Two new positions will support this collaboration and the pilot test of new encryption software. The technology and harmonized policies, processes and workflows will be available for adoption by other repositories and services, and will provide a common foundation upon which future sensitive data services may be built.

+85,000



RESEARCH SOFTWARE

The Alliance will work with its partners to develop a national Research Software Strategy that addresses the pressing needs of this emerging DRI pillar. An Open Source Program Office (OSPO) to support RS activities will further advance this objective. The Alliance will also leverage new and existing partnerships to develop a strong RS community in Canada, such as contributing to the activities of the Research Software Alliance (ReSA), the International RS Funders Forum, as well as the creation of a Canadian Research Software Engineering (RSE) Chapter.

SELF-DETERMINATION AND DATA SOVEREIGNTY FOR INDIGENOUS PEOPLES IN CANADA

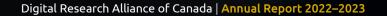
The Alliance recognizes the unique rights and needs of Indigenous Peoples in Canada and that it has a role to play in DRI as it pertains to data sovereignty and supporting researchers. As a first step towards efforts of reconciliation with First Nations, Inuit and Métis, the Alliance has made training on the First Nations principles of ownership, control, access and possession (OCAP[®]) available to all Alliance employees, the Board of Directors and Researcher Council. These are only the first steps of a long journey of learning and collaboration towards engagement with Indigenous partners.

TRAINING AND DEVELOPMENT

The Alliance will provide coordination, logistical support and strategic guidance to the training activities advanced in collaboration with the National Training Expert Group (NTEG) of the RDM Network of Experts. In this regard, the Alliance will lead the development and implementation of processes for publishing and disseminating training materials to the Canadian DRI community. The Alliance will similarly support training sessions (English and French) in collaboration with its DRI partners.

STATEMENT OF INVESTMENT POLICIES, STANDARDS AND PROCEDURES

For the Statement of Investment Strategy and the Investment Policy, as approved by the Board of Directors, please refer to <u>Appendix A</u> and <u>Appendix B</u> respectively.



A STATEMENT ON THE CRITERIA APPLIED TO SELECT ELIGIBLE PROJECTS

Project proposals are reviewed relative to the mandatory and the evaluative criteria for each program. These criteria are approved by the Board of Directors. Evaluation of proposals relative to these criteria constitute the basis for the decision of whether a project receives funding from the Alliance. Projects that fail to meet the mandatory criteria or fail to meet the evaluative criteria to an acceptable degree are not funded.

The Alliance's program guide for contribution funding details eligibility requirements, application and evaluation processes, and the administration and oversight of projects that are awarded funding.

ELIGIBLE PROJECTS AND FUNDING

| ΑCTIVITY | PROGRAM | INSTITUTION | AWARDED IN 2022-23 | | | | |
|--|--------------|---------------------------------|--------------------|--|--|--|--|
| ARC Infrastructure Acquisitions and Operations / Support for Highly Qualified Personnel / Cybersecurity | | | | | | | |
| | ARC Regional | l Support | | | | | |
| | | Brock University | \$113,220 | | | | |
| | | Calcul Québec | \$32,340 | | | | |
| | | Concordia University | \$97,643 | | | | |
| | | Dalhousie University | \$327,062 | | | | |
| | | HEC Montréal | \$46,000 | | | | |
| | | McGill University | \$2,939,386 | | | | |
| | | McMaster University | \$287,040 | | | | |
| | | Memorial University | \$332,093 | | | | |
| | | Ontario Tech University | \$64,410 | | | | |
| | | Polytechnique Montréal | \$48,040 | | | | |
| | | Queen's University | \$451,975 | | | | |
| | | Saint Mary's University | \$78,764 | | | | |
| | | SickKids | \$381,620 | | | | |
| | | Simon Fraser University | \$2,110,639 | | | | |
| | | St. Francis Xavier University | \$387,676 | | | | |
| | | Université de Montréal | \$567,842 | | | | |
| | | Université de Sherbrooke | \$671,783 | | | | |
| | | Université du Québec à Montréal | \$71,000 | | | | |
| | | Université Laval | \$444,352 | | | | |
| | | University Health Network | \$441,492 | | | | |
| | | University of Alberta | \$332,260 | | | | |
| | | University of British Columbia | \$655,645 | | | | |
| | | University of Calgary | \$234,250 | | | | |
| | | University of Guelph | \$264,840 | | | | |

| ΑCTIVITY | PROGRAM | INSTITUTION | AWARDED IN 2022-23 |
|----------|---------------|------------------------------------|--------------------|
| | | University of Manitoba | \$138,200 |
| | | University of New Brunswick | \$116,010 |
| | | University of Prince Edward Island | \$85,533 |
| | | University of Saskatchewan | \$159,522 |
| | | University of Toronto | \$2,862,656 |
| | | University of Victoria | \$1,262,800 |
| | | University of Waterloo | \$702,060 |
| | | University of Western Ontario | \$727,800 |
| | | University of Windsor | \$56,610 |
| | | Wilfrid Laurier University | \$67,410 |
| | | York University | \$64,410 |
| | | | \$17,624,381 |
| | ARC Infrastru | cture Critical Needs | |
| | | Simon Fraser University | \$467,000 |
| | | University of Victoria | \$125,000 |
| | | University of Waterloo | \$50,000 |
| | | | \$642,000 |

National Data Management Activities

| FRDR and Lur | naris | |
|---------------|---|-----------|
| | \$118,916 | |
| | University of British Columbia | \$224,100 |
| | University of Saskatchewan | \$615,779 |
| | University of Waterloo | \$4,800 |
| | | \$963,595 |
| Borealis | | |
| | University of Toronto | \$250,000 |
| DMP Assistan | t | |
| | University of Alberta | \$200,000 |
| Canadian Per | sistent Identifier Consortia | |
| | Canadian Research Knowledge Network | \$350,000 |
| World Data Sy | ystem - International Technology Office | |
| | University of Victoria | \$575,293 |

SUMMARY OF RESULTS OF ANY PROGRAM EVALUATIONS, AUDITS OR RISK ASSESSMENTS

FINANCIAL AUDIT

The Alliance undergoes an annual financial audit undertaken by independent auditors. These auditors are approved annually by the Board of Directors, and overseen by the Audit, Finance, Risk and Investment Committee of the Board. The financial audit for 2022-23 was completed in June 2023 by KPMG LLP. The audited financial statements are presented in Appendix C.

RECIPIENT AUDIT

No recipient audit was conducted in 2022–23.

PROGRAM EVALUATIONS

To monitor activities related to individual project outputs, a combination of progress and financial reporting was required throughout the duration of the funding period. The interim technical reporting was designed to have both the awardees and the Alliance review project structure and/ or review progress as related to their individual project objectives, so as not to fall behind on fulfilling their project deliverables. The end of grant term reporting ensured that the project deliverables were successfully completed, and the financial report confirmed funds were fully expensed and eligible for reimbursement.

COVID-19 Data Curation Funding Initiative – Pilot (July 2021-December 2022: 1-year project with rolling start/end dates)

From the survey evaluations and reflection on this Pilot, it is clear that awardees were successful in realizing their project deliverables. Awardees (11 in total) worked to curate their datasets while developing the knowledge base of HQP. The COVID-19 (C-19) Data Curation Funding Initiative was an overall success in meeting the two main objectives, including encouraging embedding the FAIR principles into the curation of C-19 related datasets. It has also worked to increase the training and knowledge base of HQP and others at the local level as related to data curation.

This evaluative process was designed collaboratively, and oversight was provided by Alliance RDM, Finance, and Grants and Procurement (Programs).

Data Champions Pilot (March 2022-April 2023)

The survey evaluations for this Pilot demonstrated overall that awardees were successful in fulfilling their project deliverables. Awardees completed a variety of outputs, each unique to their project and objectives. These outputs included training sessions/workshops/webinars (in person; hybrid; virtual); seminars, FAQs, wiki pages, websites; DMP template development; training HQP; developing project-level networks or communities of practice. The Alliance will work with awardees to make their outputs available to the DRI ecosystem. At the end of the grant term, the evaluation analysis revealed

1) all 18 awardees met their output deliverables and were successful "Data Champions" and 2) while amendments would be necessary for scalability and sustainability long term, these results strongly suggest that this pilot framing would be a successful model to apply to future pilot or project opportunities within the Alliance, including additional Data Champions Program iterations.

This evaluative process was designed collaboratively, and oversight was provided by Alliance RDM, Finance, and Grants and Procurement (Programs).

A STATEMENT OF REMUNERATION

Below is a statement of remuneration setting out the total amount of remuneration paid to each employee, officer and director of the Recipient whose remuneration in that year exceeded \$100,000.

| Position | Annual Salary Range |
|-------------------------|-----------------------|
| Chief Executive Officer | \$243,750 - \$405,250 |
| Vice-Presidents | \$165,000 – \$275,000 |
| Directors | \$120,000 – \$200,000 |
| Managers | \$104,000 – \$156,000 |
| Senior Professionals | Up to \$114,000* |

* market exception for Senior Solutions Architects, up to \$163,200

ADVANCEMENTS IN EQUITY, DIVERSITY, INCLUSION AND ACCESSIBILITY

The principles of EDIA are core to the Alliance's culture. The Alliance's EDIA framework promotes and advances its foundational EDIA principles and ensures that EDIA is integrated into all decisions and activities.

Alliance employees have access through MESH to the Diversity Intelligence Platform for their own learning journey. Alliance leaders are participating in the Inclusive Leadership Program to help achieve an inclusive working environment. Annually, the Alliance executes the Inclusive Culture Benchmark survey, enabling the Alliance to develop a culture of safety, belonging and inclusion for all employees. The First Nations Principles of OCAP[®] training is available to all employees, Board Members and Researcher Council Members to support their knowledge of the First Nations principles of data sovereignty. Further initiatives to support EDIA include participation in the Government of Canada's 50 – 30 Challenge.

The Alliance is committed to ensuring that our services. support and service providers are aligned with our EDIA principles. The Alliance provides digital platforms that are accessible to the widest possible audience and strives to conform to the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0. The DMP Assistant, FRDR and Lunaris meet the WCAG 1.0 and are working towards 2.0 compliance. The FRDR service team launched a user satisfaction survey that helps to assess web accessibility and uses the WAVE web accessibility evaluation tool for all public-facing pages.

As a bilingual organization, the Alliance is committed to serving Canadian researchers using inclusive language in both official languages. Official Languages Communications Guidelines are in development in consultation with stakeholders including the Researcher Council. The Alliance's DRI services are fully bilingual in English and French. Service teams maintain a French glossary for technical terms to ensure standardization, conduct thirdparty French audits during major platform changes, and provide documentation and training content in both official languages.

REPRESENTATION THAT THE RECIPIENT IS NOT IN DEFAULT UNDER THE TERMS OF THIS AGREEMENT

To the knowledge of management, the Alliance is not in default under the terms of its contribution agreements with ISED.

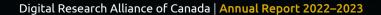


MEMBERSHIP

The Alliance is a member-based organization, with representation from post-secondary institutions, research hospitals, colleges and related organizations across Canada. Members play a vital role in supporting and guiding the work and governance of the Alliance.

45 PRIMARY MEMBERS

88 ASSOCIATE MEMBERS





PRIMARY MEMBERS

- Athabasca University
- Baycrest
- Bow Valley College
- British Columbia Institute of Technology (BCIT)
- Brock University
- Carleton University
- Centre for Addiction and Mental Health
- Concordia University
- Dalhousie University
- École de technologie supérieure (ÉTS)
- HEC Montréal
- Hospital for Sick Children
- Kwantlen Polytechnic University
- Lakehead University
- McGill University
- McMaster University
- Memorial University of Newfoundland
- Queen's University
- Royal Military College of Canada
- Saint Mary's University
- Simon Fraser University

- St. Francis Xavier University
- Sunnybrook Research Institute
- Toronto Metropolitan University
- Université de Montréal
- Université de Sherbrooke
- Université Laval
- University Health Network (UHN)
- University of Alberta
- University of British Columbia
- University of Calgary
- University of Guelph
- University of Manitoba
- University of New Brunswick
- University of Ottawa
- University of Prince Edward Island
- University of Regina
- University of Saskatchewan

- University of Toronto
- University of Victoria
- University of Waterloo
- University of Windsor
- Western University
- Wilfrid Laurier University
- York University

ASSOCIATE MEMBERS

- Acadia University
- ACENET
- Amii (Alberta Machine Intelligence Institute)
- Aurora College
- BCNET
- Brandon University
- Cambrian College of Applied Arts & Technologies
- Canadian Astronomical Society (CASCA)
- Canadian Astronomy Data Centre
- Canadian Federation for the Humanities & Social Sciences
- Canadian Institute for Health Information (CIHI)
- Canadian Research Data Centre Network
- Canadian Research Knowledge Network (CRKN)
- Canadore College
- CANARIE
- Cape Breton University
- CARL
- Centre de documentation collégiale
- Children's Hospital of Eastern Ontario Research Institute (CHEO)
- Compute Ontario

- Concordia University of Edmonton
- Conestoga College
- Council of Prairie and Pacific University Libraries (COPPUL)
- CUCCIO
- Cybera
- Durham College
- École nationale d'administration publique (ENAP)
- École Polytechnique (Polytechnique Montréal)
- Exactis Innovation
- Fanshawe College
- Fraser Health Authority
- George Brown College
- Georgian College
- Grande Prairie Regional College
- ICES
- Institut national de la recherche scientifique (INRS)
- Institute of Particle Physics
- King's University College at Western University
- Laurentian University / Université Laurentienne
- Lawson Health Research

- Lunenfeld-Tanenbaum Research Institute, Sinai Health
- MacEwan University
- McGill Centre for Integrative Neuroscience
- Mila
- Mount Royal University
- Mount Saint Vincent University
- MRnet
- NB/PEI Educational Computer Network
- Niagara College
- Nova Scotia Community College
- NSCAD University
- Ocean Networks Canada
- Ontario Brain Institute
- ORION
- Red Deer Polytechnic (formerly Red Deer College)
- RISQ
- Royal Roads University
- Saskatchewan Polytechnic
- Selkirk College

ASSOCIATE MEMBERS

- Seneca College
- Sheridan College Institute of Technology and Advanced Learning
- SNOLAB
- Southern Alberta Institute of Technology (SAIT)
- SRNet
- Thompson Rivers University
- Trent University
- Trinity Western University
- TRIUMF
- Université de Moncton
- Université du Québec
- Université du Québec à Chicoutimi (UQAC)
- Université du Québec à Montréal (UQAM)
- Université du Québec à Rimouski (UQAR)
- Université du Québec à Trois-Rivières (UQTR)
- Université du Québec en Abitibi-Témiscamingue
- Université du Québec en Outaouais
- Université TÉLUQ
- University of Northern British Columbia

- University of Ontario Institute of Technology
- University of Ottawa Institute of Mental Health Research
- University of the Fraser Valley
- University of Winnipeg
- Vancouver Island Health Authority
- Vancouver Island University
- Vector Institute
- Waypoint Centre for Mental Health Care
- World Data System
- Yukon University
- .



Digital Research Alliance of Canada

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Funded by the Government of Canada



APPENDICES

APPENDIX A STATEMENT OF INVESTMENT STRATEGY

Purpose

The purpose of this document is to establish a strategy best suited to meet the needs and objectives of the Digital Research Alliance of Canada's ("the Alliance") investment portfolio. This document is specifically intended to meet the requirements of s 5.6.6 (b) of the Contribution Agreement(s) between the Alliance and Her Majesty in Right of Canada.

Strategy

The Alliance's investment strategy is specifically tailored to the duration and quality constraints imposed by the Statement of Investment Policy. These constraints. while deemed appropriate and necessary to meet the overall objectives of the Alliance, preclude adding value through active investment management. This conclusion is reached due to the "tightness" of the constraints. tightness which does not allow enough latitude for active investment management to be effective.

Rather than active investment management, the strategy adopted by the Alliance is "buy and hold", based on the following framework.

 Investment maturities will, wherever possible, match the forecasted cash requirements of the Alliance.

- The quantitative limits on investment holdings provide ample structural liquidity to meet the needs of the Alliance. It is appropriate, therefore, to hold less liquid types of approved investments. Value added will be achieved by moving out the "liquidity curve" when possible.
- At all times the Alliance will hold investments deemed eligible under the Statement of Investment Policy. For greater clarity, the determination of eligibility shall be made at the time of purchase. The Alliance will not be obliged to dispose of investments which become ineligible after the date of purchase but will favour (subject to market conditions) disposing of such securities should assets need to be liquidated. (Refer to the Liquidity policy (s 7) in the Statement of Investment Policy.)

Authority

The Investment Committee shall:

- Establish the Statement of Investment Policy for approval of the Board.
- Recommend to the Board for their approval the appointment of one or more independent, external investment advisors to provide investment advice. The Committee may also recommend to the Board the appointment of one or more professional portfolio managers to invest the Amount in a manner consistent with the approved Statement of Investment Policy and the investment strategy.
- Verify compliance with s 5.6.8 of the Contribution Agreement with respect to conflict of interest as it concerns the Investment Advisor/Manager.
- Ensure that funds are only invested in investments or securities within the terms of the Statement of Investment Policy.
- Ensure that the Board is regularly made aware of any significant financial risks facing the Alliance, including the consequences of significant potential losses of investments of any or all of the amount.

- Report to the Board on the status, operation and annual performance of the investment portfolio.
- Ensure that adequate safekeeping procedures are in effect for all investment instruments.

Committee Membership

The Committee consists of a minimum of five members, all of whom are members of the Board of Directors, are independent of the Alliance's management and are financially literate. At least one member should have an accounting background or related financial management experience. The Board Chair is an ex Officio non-voting member of the Committee.

The Board shall appoint one of the Committee members to be the Committee Chair.

Committee members are appointed for a one-year term with the possibility of renewal.

Meetings, Meeting Schedule and Frequency

The Committee meets a minimum of four times annually. The Committee may choose to hold additional meetings if it considers them necessary for it to carry out its responsibilities effectively. Meetings can be held at any time and place as determined by its members, provided notice of such meeting is given to each member of the Committee. Meetings may be held by teleconference or videoconference, provided members have a means to vote. If members cannot participate in person, they may participate in a meeting that is held in-person via the teleconference or telephone.

A majority of the Committee shall constitute a quorum for the transaction of business at any meeting thereof, and the act of a majority of the members of the Committee present at any meeting at which a quorum is present shall be the act of the Committee. The Chair, or in his or her absence, one of the directors shall preside at all meetings of the committee.

As an ex-officio member of the Committee, the Board Chair has voting rights at the Committee meetings that they attend. The Board Chair's attendance is not counted to determine whether a quorum is present at a meeting.

In the event of a vote that results in a tie, the Chair of the Committee has a casting vote.

At each meeting, the members of the committee may meet in private in in- camera sessions with committee members only.

Minutes of meetings will be available to the Board.

Review

This document will be reviewed and updated (if necessary) no less frequently than annually.

APPENDIX B STATEMENT OF INVESTMENT POLICY

Purpose

The purpose of this document is to establish an investment policy best suited to meet the needs and objectives of the Digital Research Alliance of Canada's ("the Alliance") investment portfolio. This document is specifically intended to meet the requirements of ss 5.6.6 (Statement of Investment Policy) of the Contribution Agreement between the Alliance and Her Majesty in Right of Canada.

All aspects of this Policy are governed by the Prudent Person Principle (refer to ss 5.6.3 of the Contribution Agreement) and the principal objective of investment decisions shall be the preservation of capital to meet future disbursement requirements

Investment Policy

(1) LONG-TERM RETURN OBJECTIVES AND EXPECTATIONS:

The long term objectives of the portfolio are twofold: (a) to provide funds on an "as needed" basis to meet the disbursement needs of the Alliance, (b) to maximize the investment income earned by the Alliance, subject to the Investment Strategy and Investment Policy adopted by the Alliance.

(2) RATINGS OF SECURITIES:

The deemed rating (the "Rating") of any Eligible Security will be established, at the time of the Alliance's acquisition of the Eligible Security.

Reference to the "issuer" shall include the unconditional guarantor, if applicable.

The rating category for Investment Policy purposes shall be based on the ratings of at least two of the following four rating agencies: Dominion Bond Rating Service (DBRS), Standard and Poor's (S&P) Rating Services, Moody's Investors Service and Fitch Rating Ltd.

In the case of Commercial Paper and other short-term investments:

To be included in the AAA category, the security must have at least two of the following, where two are available:

(i) R-1 (high) from DBRS

(ii) A-1+ from S&P and the issuer's bonds are rated "AAA" by S&P

(iii) P-1 from Moody's and the issuer's bonds are rated Aaa by Moody's

(iv) F-1+ from Fitch and the issuer's bonds are rated AAA by Fitch

To be included in the AA category, the security must have at least two of the following, where two are available:

- (i) R-1 (middle) from DBRS
- (ii) A-1+ from S&P
- (iii) F-1+ from Fitch

(iv) P-1 from Moody's and the bonds are rated Aa by Moody's

In the case of bonds and other longer- term investments:

To be included in the AAA category, the security must have at least two of the following:

- (i) AAA from DBRS
- (ii) AAA from S&P
- (iii) AAA from Moody's
- (iv) AAA from Fitch

To be included in the AA category, the security must have at least two of the following:

- (i) AA from DBRS
- (ii) AA from S&P
- (iii) AA from Moody's
- (iv) AA from Fitch

(3) DIVERSIFICATION POLICY OF THE INVESTMENT PORTFOLIO, INCLUDING QUANTITATIVE LIMITS ON INVESTMENTS

Throughout the life of the Alliance's portfolio, Alliance investments in the securities of **any one issuer (or two or more affiliated entities)** will be limited to an aggregate market value limit based on the Rating of the security:

| Rating of Security | АА | ААА |
|---|------------------|------------------|
| Government Securities | no limit | no limit |
| Provincial / Municipal Financing Authority | 10% of portfolio | 10% of portfolio |
| Municipal Securities | 10% of portfolio | 10% of portfolio |
| Other Eligible Securities | 10% of portfolio | 10% of portfolio |

Throughout the life of the Alliance's portfolio, the Alliance's investment in the securities of **any one category** will be limited to an aggregate market value limit of the category, as set out below:

| Rating of Security | AA | AAA |
|---|--------------------|---------------------|
| Government Securities* | 30% of portfolio | no limit |
| Provincial / Municipal Financing Authority | 70% of portfolio** | same 70% |
| Municipal Securities | 70% of portfolio** | same 70% |
| Other Eligible Securities | 70% of portfolio** | 80% of portfolio |

Minimum Government Securities is 10% of the portfolio

*For greater certainty, the phrase "Government Securities" means all securities issued, guaranteed by, or that have the full faith and credit of the federal government or a provincial government.

** The 70% constraint applies to the aggregate of AA securities

(4) ASSET ALLOCATION STRATEGY:

The portfolio will, at all times, be invested in Eligible Securities (refer to (5) below).

(5) PERMITTED INVESTMENT INSTRUMENTS AND TRADING ACTIVITIES:

The Alliance shall invest in Eligible Securities. Eligible Securities are defined as: bank certificates of deposit: banker's acceptances; treasury bills, commercial paper and other short-term securities, bonds and notes issued by the federal government, provincial governments, municipal governments and corporations; cash deposits in banks identified in Schedule I of the Bank Act; guaranteed investment certificates; and other fixed-income securities that carry the full faith and credit of the Government of Canada. For greater certainty, the Alliance shall not invest in derivatives, swaps, options or futures.

Any securities acquired shall have a Rating of at least AA.

All securities will be denominated in Canadian dollars. The Investment Advisors/ Managers will have authorized power to recommend and execute all trades on behalf of the Alliance. The Investment Advisors/Managers will notify the Alliance and include all details of all confirmations of trades.

The Board's Audit and Investment Committee will be advised of the transaction details by email or facsimile the same week that the transactions are authorized, or as soon as practical thereafter.

(6) PROHIBITED INVESTMENT INSTRUMENTS AND TRADING ACTIVITIES:

Prohibited investments consist of all investments not defined as permitted investment instruments.

(7) LIQUIDITY AND MATURITY OF SECURITIES POLICY:

(a) The maturities and terms of investments shall match the profile of the Alliance's forecasted disbursements. In cases where the timing of disbursements is unknown, investments shall be held in securities with term to maturity of one year or less. (b) Should an unexpected disbursement or series of disbursements made by the Alliance reduce the total market value of the portfolio, the Alliance shall immediately take the steps necessary to comply with the requirements set by the diversification policy (refer to (3) above) within a period of 60 days from the date as of which the Alliance first failed to meet those requirements. Under no circumstances shall the Alliance materially fail to comply with the diversification requirements of section 3 for a period of more than 90 consecutive days.

(8) RISK MANAGEMENT POLICIES:

The purpose of the Alliance's investment portfolio is to earn investment income until such funds are needed to finance the Alliance's objectives. The principal risks therefore are liquidity and capital preservation. Both risks, and steps taken to manage such risks, are specifically addressed in the Alliance's Statement of Investment Policy and Statement of Investment Strategy. In addition to the constraints contained in these documents, certain processes are in place to further manage these risks:

- On a monthly basis the Investment Advisor/ Manager receives reports from the Alliance's management regarding upcoming short- term cash requirements. This is compared to the upcoming maturity schedule with corrective action, if any, being initiated.
- On an annual basis the Investment Advisor/ Manager receives a long term projection of the Alliance's liquidity requirements. This is compared to the long term maturity schedule. Based on the comparison of the two, corrective action, if any, is taken.

Note that corrective action in this instance may be taken over an extended time period.

- On a quarterly basis the Investment Advisor/ Manager reviews the credit ratings of all holdings. This is intended to act as an early warning as to potential, upcoming capital impairment issues.
- On a quarterly basis

 (or more frequently if necessary) the Investment Advisor/Manager
 reports to the Audit and Investment Committee
 on portfolio matters.
 Such matters include
 diversification compliance
 and potential capital
 impairment situations
 and recommended
 corrective actions.

(9) POLICY ON THE LENDING OF CASH OR SECURITIES AND BORROWING

The lending of cash or securities is not permitted.

The borrowing of money, issuing any debt obligations or securities, guaranteeing or securing a debt or other obligation of a person, mortgagor or other entity, pledging all or any portion of the funds received as outlined in the Contribution Agreement by way of security for payment to any creditor or do any other thing that would encumber the funds received as outlined in the Contribution Agreement is not permitted.

(10) PERFORMANCE MEASUREMENT AND MONITORING PROCEDURES:

Performance is measured first by the prime objective of safety of investment and, secondly, by the ability of the investment portfolio to have funds on hand to meet all expenditure requirements. After those considerations in importance comes performance measurement. This will be addressed in ongoing fashion in reporting on new investments and reinvestments in terms of their vield relative to the Canada Curve (the yield that would be achieved from a benchmark Government of Canada bond of similar duration). Less attention will be paid to annual comparisons with other bond managers, unless they operate under similar constraints.

(11) REVIEW:

This Statement of Investment Policy shall be reviewed at least once a year.

APPENDIX C FINANCIAL STATEMENTS

Financial Statements of

DIGITAL RESEARCH ALLIANCE OF CANADA

And Independent Auditor's Report thereon

Year ended March 31, 2023



KPMG LLP 150 Elgin Street, Suite 1800 Ottawa ON K2P 2P8 Canada Tel 613-212-5764 Fax 613-212-2896

INDEPENDENT AUDITOR'S REPORT

To the Directors of Digital Research Alliance of Canada

Opinion

We have audited the financial statements of Digital Research Alliance of Canada (the "Entity"), which comprise:

- the statement of financial position as at March 31, 2023
- the statement of operations and changes in net assets for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies.

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements, present fairly, in all material respects, the financial position of the Entity as at March 31, 2023, and its results of operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "*Auditor's Responsibilities for the Audit of the Financial Statements*" section of our Auditor's report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KPMG LLP, an Ontario limited liability partnership and member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. KPMG Canada provides services to KPMG LLP.



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Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an Auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

 Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.



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The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our Auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our Auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

Ottawa, Canada June 27, 2023

Statement of Financial Position

March 31, 2023, with comparative information for 2022

| | | 2023 | | 2022 |
|--|----|------------------------|----|------------------------|
| Assets | | | | |
| Current assets: | | | | |
| Cash | \$ | 6,405,903 | \$ | 7,441,777 |
| Accounts receivable | | 139,002 | | 108,567 |
| HST recoverable | | 86,727 | | 90,118 |
| Prepaid expenses | | 266,193 | | 119,379 |
| | | 6,897,825 | | 7,759,841 |
| Capital assets (note 4) | | 98,656 | | - |
| | \$ | 6,996,481 | \$ | 7,759,841 |
| Liabilities and Net Assets Current liabilities: Accounts payable and accrued liabilities | \$ | 2,382,101 | \$ | 1,417,198 |
| Current portion of lease inducement | Ψ | 22,606 | Ψ | - |
| Advances from projects | | 50,320 | | |
| Deferred funding (note 2) | | | | _ |
| Deletted funding (note 2) | | 2,437,007 | | |
| Deletted funding (hole 2) | | 2,437,007 4,892,034 | | 5,121,311 6,538,509 |
| Deferred lease inducement | | | | |
| | | 4,892,034 | | |
| Deferred lease inducement | | 4,892,034 119,480 | | 6,538,509 – |

See accompanying notes to financial statements.

On behalf of the Board:

2 hrei

Statement of Operations and Changes in Net Assets

Year ended March 31, 2023, with comparative information for 2022

| | 2023 | 2022 |
|--|------------------|---------------|
| Revenue: | | |
| Ministry of Innovation, Science and | | |
| Industry/Economic Development | | |
| Canada funding | \$ 31,511,921 | \$ 11,247,353 |
| Membership fees | 618,500 | 635,000 |
| Interest income | 220,721 | 40,518 |
| Other revenue | 156,156 | 39,056 |
| | 32,507,298 | 11,961,927 |
| Expenses: | | |
| Program expenses: | | |
| Salaries and benefits | 14,643,792 | 1,884,187 |
| Services | 3,096,879 | - |
| Equipment | 648,036 | 33,107 |
| Maintenance and repairs | 1,118,007 | 1,129 |
| General and administration | 595,162 | 283,277 |
| | 20,101,876 | 2,201,700 |
| Operating, general and administration: | | |
| Salaries | 7,437,973 | 5,815,740 |
| Benefits | 1,376,210 | 853,573 |
| Services | 2,391,199 | 2,247,694 |
| Transportation and communication | 318,514 | 85,371 |
| Supplies | 77,918 | 42,358 |
| Miscellaneous expenses | 17,826 | 916 |
| Amortization of capital assets | 22,147 | |
| | 11,641,787 | 9,045,652 |
| Total expenses | 31,743,663 | 11,247,352 |
| Excess of revenue over expenses | 763,635 | 714,575 |
| Net assets, beginning of year | 1,221,332 | 506,757 |
| Net assets, end of year | \$ 1,984,967 | \$ 1,221,332 |

See accompanying notes to financial statements.

Statement of Cash Flows

Year ended March 31, 2023, with comparative information for 2022

| | 2023 | 2022 |
|--|-----------------|-----------------|
| Cash provided by (used in): | | |
| Operating activities: | | |
| Excess of revenue over expenses Items not involving cash: | \$ 763,635 | \$ 714,575 |
| Amortization of capital assets | 22,147 | _ |
| Amortization of deferred lease inducement Net change in non-cash working capital: | (25,072) | - |
| Accounts receivable | (30,435) | (108,567) |
| HST recoverable | ` 3,391´ | `117,855´ |
| Prepaid expenses | (146,814) | (68,909) |
| Accounts payable and accrued liabilities | 964,903 | 859,643 |
| Advances from projects | 50,320 | - |
| Deferred funding | (2,684,304) | 2,988,647 |
| | (1,082,229) | 4,503,244 |
| Investing activities: | | |
| Purchase of capital assets | (120,803) | - |
| Financing activities: | | |
| Increase in deferred lease inducement | 167,158 | - |
| Increase (decrease) in cash | (1,035,874) | 4,503,244 |
| Cash, beginning of year | 7,441,777 | 2,938,533 |
| Cash, end of year | \$ 6,405,903 | \$ 7,441,777 |

See accompanying notes to financial statements.

Notes to Financial Statements

Year ended March 31, 2023

The Digital Research Alliance of Canada (the "Organization") is a not-for-profit organization that was federally incorporated on August 28, 2019 as a member-based organization with an agreement between Innovation, Science and Economic Development Canada (ISED) and the Organization.

The Organization's mandate is to play a critical role in helping advance the establishment of a researcher-focused, accountable, agile, strategic and sustainable Digital Research Infrastructure ecosystem for Canadian researchers.

1. Significant accounting policies:

The financial statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations and include the following significant accounting policies:

(a) Basis of presentation:

The Organization follows the deferral method of accounting for contributions for not-for-profit organizations.

(b) Revenue recognition:

Contributions and funding designated for the Organization's mandate are recorded as deferred funding and are recognized as revenue when the related expenditure is incurred. Unrestricted contributions are recorded as revenue in the year received.

Membership fees are recognized in the period to which they relate, providing collection is reasonably assured.

(c) Expenses:

In the statement of operations, the Organization presents its expenses by function. Expenses are recognized in the year incurred and recorded in the function to which they are directly related.

(d) Capital assets:

Capital assets are comprised of leasehold improvements, which are recorded at cost. When a leasehold improvement no longer contributes to the Organization's ability to provide services, its carrying amount is written down to its residual value.

Leasehold improvements are amortized over the life of the lease.

(e) Deferred lease inducements:

Deferred lease inducements for leasehold improvements consists of allowances granted to the Organization for the leased offices. The contributions are amortized on a straight-line basis over the term of the lease.

Notes to Financial Statements (continued)

Year ended March 31, 2023

1. Significant accounting policies (continued):

(f) Employee benefit plans:

The Organization is a member of the Colleges of Applied Arts and Technology Pension Plan, which is a multi-employer, defined benefit pension plan. The Organization has adopted defined contribution plan accounting principles for this plan because insufficient information is available to apply defined benefit plan accounting principles.

(g) Use of estimates:

These financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations and accordingly, require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenue and expenditures during the reporting period. Actual results could differ from these estimates. The significant estimates in the financial statements include the collectability of receivables, deferred contributions, and the amount of certain accrued liabilities in the year they become known.

2. Deferred funding:

The Organization received funding from ISED as follows:

| | 2023 | 2022 |
|---|---|--|
| Balance, beginning of year Contributions received Recognized as revenue | \$ 5,121,311 28,827,617 (31,511,921) | \$ 2,132,664 14,236,000 (11,247,353) |
| Balance, end of year | \$ 2,437,007 | \$ 5,121,311 |

3. Contribution agreement:

The Contribution Agreement between ISED and the Organization under the Digital Research Infrastructure Contribution Program was signed on October 31, 2019. The purpose of this agreement is to fund the Organization's activities. The original end date of March 31, 2021 was subsequently extended to March 31, 2023. Subsequent to year-end, an extension to March 31, 2025 was approved by the Board of Directors and submitted to ISED.

The Contribution Agreement between ISED and the Organization under the Dedicated Computing Capacity for Artificial Intelligence Contribution Program was signed on September 28, 2022. The purpose of this agreement is to fund dedicated computing capacity for artificial intelligence researchers, in support of the Pan-Canadian Artificial Intelligence Strategy. The agreement ends on March 31, 2027.

Notes to Financial Statements (continued)

Year ended March 31, 2023

4. Capital assets:

| | Cost | umulated ortization | 2023 Net book value | 2022 Net book value |
|------------------------|---------------|------------------------|---------------------------|---------------------------|
| Leasehold improvements | \$ 120,803 | \$ 22,147 | \$ 98,656 | \$ _ |

5. Commitments:

Under the terms of the operating lease agreement, the Organization is required to make the following payments over the next 4 years:

| 2024 2025 2026 2027 | \$ 152,651 167,861 169,244 169,244 |
|------------------------------|--|
| | \$ 659.000 |

6. Employee benefit plans

Starting on May 1, 2021, the Organization became members of the College of Applied Arts and Technology ("CAAT") Pension Plan, which is a multi-employer defined benefit pension plan available to all eligible employees of the participating members of the CAAT. Plan members will receive benefits based on the length of service and on the average of annualized earnings during the highest five consecutive years prior to retirement, termination or death.

The Organization does not recognize any share of the Plan's pension surplus or deficit as insufficient information is available to identify the Organization's share of the underlying pension assets and liabilities. The regulatory surplus of the Plan as at December 31, 2022 was \$4.71 billion and the most recent actuarial valuation filed with pension regulators was as at January 1, 2023.

Employer contributions to the Plan during the year by the Organization amounted to \$503,576 (2022 – 332,552) and are included in benefits expense on the Statement of Operations.

7. Contingent liabilities:

The Organization is involved in an employment related litigation matter, the outcome of which is not determinable at this time. Any liability or payments resulting from this matter will be recognized in the year when the outcome is reasonably determinable, and the amounts involved can be estimated.

Notes to Financial Statements (continued)

Year ended March 31, 2023

8. Financial risks:

The Organization's financial instruments consist of cash, accounts receivable, and accounts payable and accrued liabilities.

(a) Credit risk:

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss. The Organization is exposed to this risk relating to its cash and accounts receivable. The Organization holds its cash accounts with a federally regulated chartered bank who are insured by the Canadian Deposit Insurance Corporation.

The Organization assesses, on a continuous basis, accounts receivable and provides for any amounts that are not collectible in the allowance for doubtful accounts. At year-end, there were no amounts allowed for in accounts receivable.

(b) Liquidity risk:

Liquidity risk is the risk that the Organization will not be able to meet all cash outflow obligations as they come due. The Organization mitigates this risk by monitoring cash activities and expected outflows through extensive budgeting and keeping accounts payable current throughout the year. The Organization is continuously monitoring its cash flow in order to maintain its liquidity moving forward.

(c) Market risk:

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of market factors.

(i) Foreign currency risk:

Foreign currency risk results from the fluctuation and volatility of exchange rates. The Organization is not exposed to foreign exchange risk.

(ii) Interest rate risk:

Interest rate risk is the risk that the fair value of future cash flows or a financial instrument will fluctuate because of changes in the market interest rates. The Organization is not subject to significant interest rate risk.

(iii) Other price risk:

Other price risk is the uncertainty associated with the valuation of assets arising from changes in equity markets. The Organization is not exposed to other price risk.

9. Comparative information:

Certain 2022 comparative information has been reclassified to conform with the financial statement presentation adopted for the current year.